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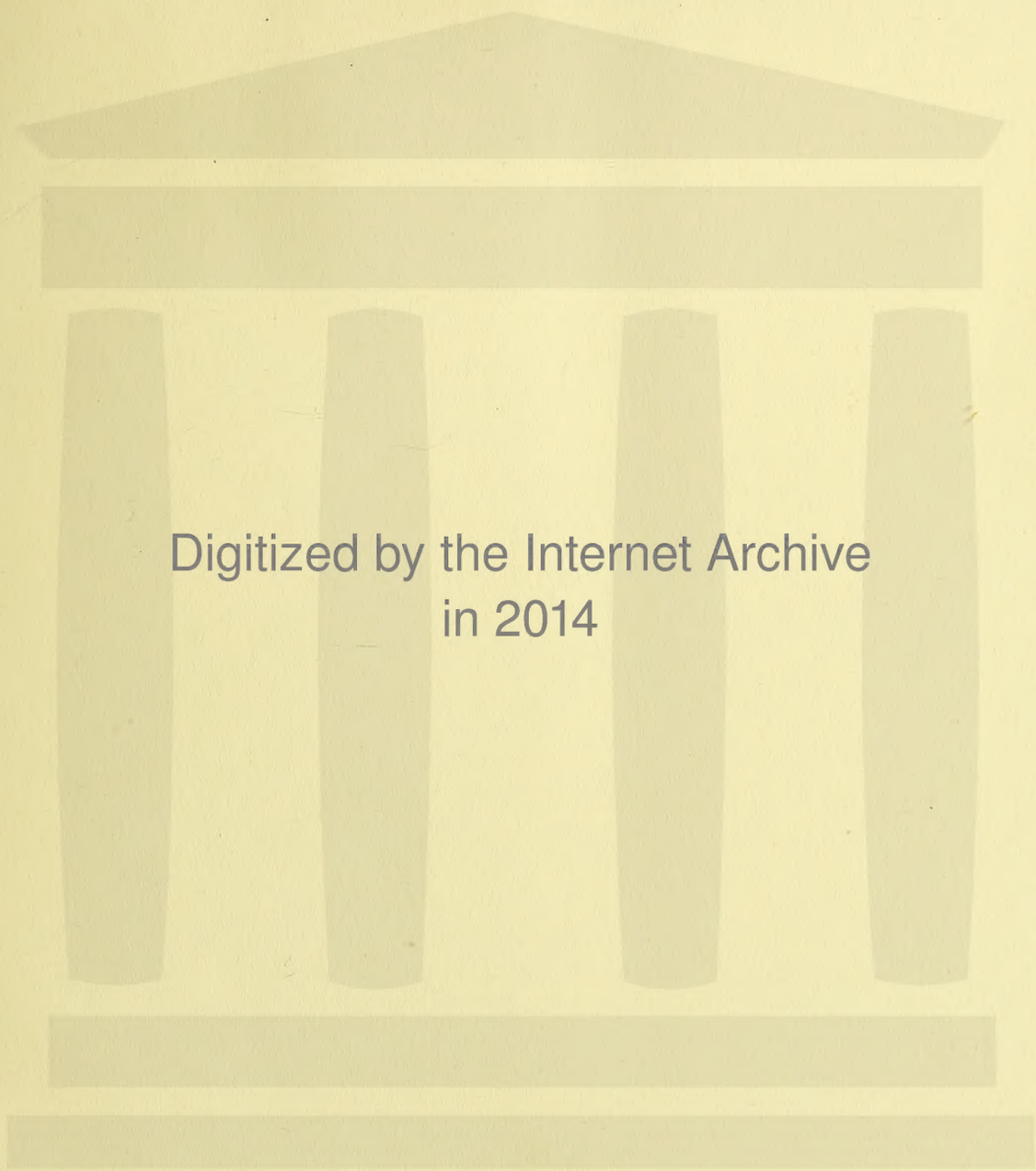

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PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

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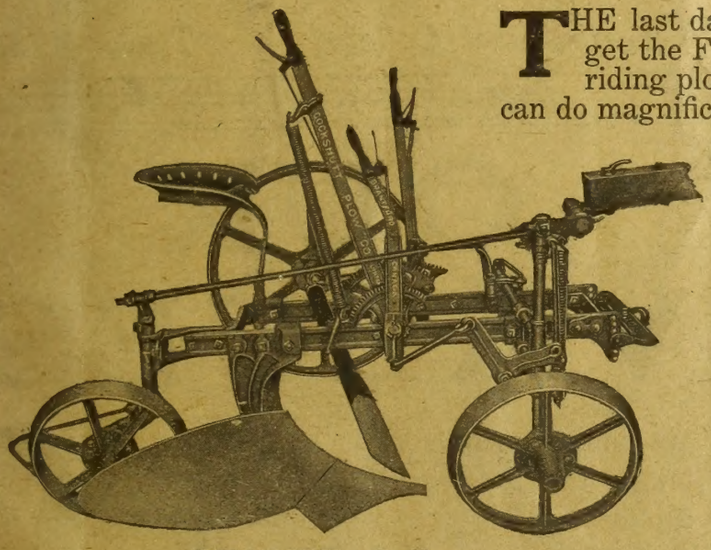
Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 18. SUSSEX, N. B., OCTOBER 8, 1912 No. 1

Rush Your Plowing---Don't Delay!!

THE last days of plowing are on you. You know how it pays to get the Fall Plowing done. Here are two favorite light-draft riding plows that have made great successes in Ontario. You can do magnificent work with these easy-handled Cockshutt designs. We can make prompt delivery. Finish your plowing before frost and snow come.



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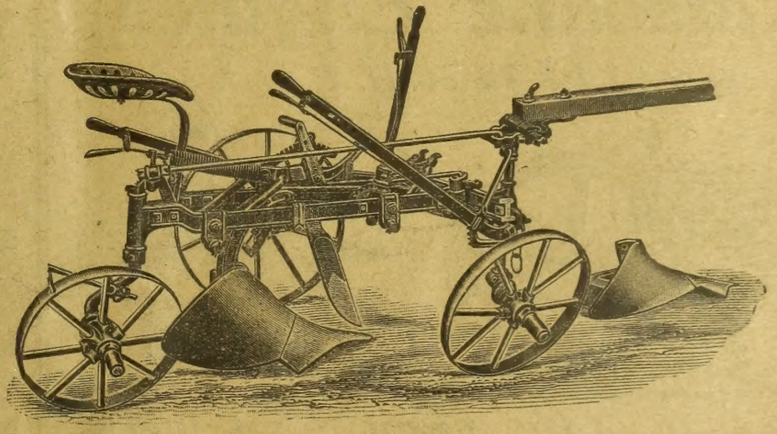
This is one of the best plows for general farming. It does work equal to that of a walking plow. The "Beaver" will plow to seven inches deep, and keeps at even depth in uneven land, owing to the wheel arrangement. Levers are easily reached from the seat, and have coil helper springs. The high beam prevents choking. The dust-proof wheels, furrow-straightener, short-turn, and other features of design are equalled by the quality of material. Fitted with loam or clay bottoms, and with choice of knife or rolling colters.

FOOTLIFT Sulky



has strong steel wheels with dust-proof bearings that need oiling only once a season. The furrow-straightener device makes a straight furrow easy to plow. The levers are in easy reach. Driver's hands need never be off the reins. Choice of Judy bottom for clay or No. 21 bottom for loam, with choice of knife, rolling colter or jointer, as desired. Also steel shares, if desired. The mold-boards are unbreakable soft-center hard-surface steel.

Our Agents have a full line for sale

See our Agent regarding any farm implement you need, or We are always ready to give information and help in regard to any farm implement. A post card will do. **Write Us**

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Give Him An Agricultural Education.---It is the Best Heritage You Can Leave Him.

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Next Session of Full Course begins NOVEMBER 5th, 1912

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Next Short Course in Domestic Science, Dairying, Horticulture and Poultry for Ladies begins JANUARY 7th, 1913

A farmer's son attending the College, can take a full course in the various branches of Agriculture, Horticulture, Dairying, Poultry Raising, Veterinary Science, etc., and at the same time in English, Mathematics, Book-keeping, Political Economy, the various Sciences and other lines regularly studied in High Schools and Colleges.

Requirements for entrance are familiarity with farm practice and an ordinary school education. The College is especially adapted to the needs of farmers' sons who have had an opportunity to acquire a school education and now wish to improve their knowledge in all lines.

Students completing the two years course at Truro can enter the third year at Guelph, St. Anne de Belle Vue or any of the American Agricultural Colleges. For full particulars apply to—

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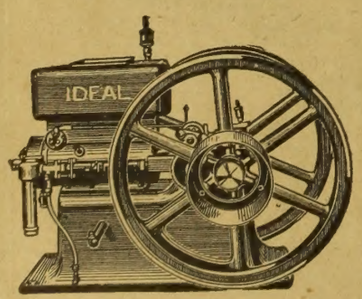

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HALIFAX, N. S.

BUILD YOUR BARN LIKE THIS!

YOUR COWS WILL PRODUCE MORE IN A SANITARY STABLE, AND YOUR WORK WILL BE CUT SQUARELY IN TWO

STEEL STALLS ARE SANITARY

Steel Stalls do not soak up the manure. When used with a cement floor you have a perfectly sanitary stable. The main cause of the spread of tuberculosis in cattle is through urine and manure. No danger with Steel Stalls.

DON'T OBSTRUCT THE SUNLIGHT

Sunlight is the best disinfectant in the world. With steel stalls there are no dark corners. They allow a free movement of air and light. It is easy to keep a stable equipped with BT Steel Stalls clean.

COW COMFORT MEANS INCREASED PRODUCTION

A cow tied in a BT Steel Stall and Stanchion has the maximum freedom consistent with keeping her tied up in her stall. She can card herself on almost any part of the body. Tied centrally in her stall, she is free to lie down on either side. She can freely get up or down, but at the same time she is prevented from moving backward and forward in her stall so that she can be lined up on the cattle stand and all droppings go into the gutter, not on the cattle stand. That means clean cows.

You can build a Modern Sanitary Dairy Barn just like this at a very low cost, and we have figures to prove that the Steel Equipment will pay for itself in a year's use. And the beauty of it is you can do the whole thing yourself if you use BT Steel Stalls. Write us to-day. Our Free Barn Plans will help you.

STEEL STALLS ARE DURABLE

When you put in BT Steel Stalls with a cement floor you have a permanent job—no posts rolling off—no partitions breaking—no repairs to make. Isn't that worth something?

FIRE RISK IS LESSENED

A stable equipped with steel stalls and a cement floor is not nearly as liable to take fire as a wood stable. In fact the lower part of the barn would be almost fireproof. Should fire occur, however, cows tied in BT Stanchions can be let out in half the time required with chain ties. AND THE BEST OF IT IS

You Can Build or Remodel Your Stable Yourself If You Use BT Steel Stalls.

In an hour you can set up twenty BT Steel Stalls, ready to be cemented in, and as soon as the cement is dry, [illegible] is ready for the cattle. No expensive lumber to buy, and get sized and dressed. No high priced carpenters to hire and work for [illegible] they put in your stable. You can [illegible] barn if you use BT Steel Stalls. Our book on Stable Construction [illegible] how to lay cement floors, and [illegible] Stalls quickly and properly. We go further than supplying equipment. We will [illegible] our barn by sending [illegible] set of plans, [illegible] specifications, [illegible] so that you can [illegible] to deal with your stable yourself.

Get Our Free Stall Book

It shows how BT Steel Stalls lessen Abortion, do away with the principal cause of Big Knees, Ruined Udders and many other injures that cows are liable to. You will see how individual mangers save feed—prevents overfeeding and underfeeding. You will also learn how the exclusive features on BT Steel Stalls mean dollars and cents to you by giving greater comfort and protection to your cows. This book costs you nothing. Write us for it.

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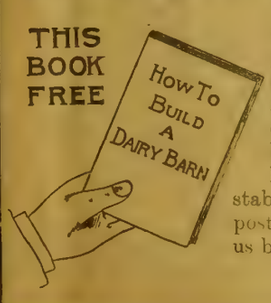

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PLEASE SEND ME FREE your book on Stable Construction, and the free books I have checked below.

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I have.....cows, and.....horses

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P. O. .....

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DE LAVAL CREAM SEPARATORS

"Scrub" Cream Separators as Unprofitable as "Scrub" Cows

173 William Street, MONTREAL, CAN.

This is the good advice one of the big and long experienced American cream buying concerns gives to its farm separator patrons, being taken from a letter to one of them:

"We believe the DE LAVAL is the best separator made. We feel that anyone wishing to purchase a separator makes a great mistake unless he purchases the best machine on the market. No one can make a success of dairying by continuing to use scrub cows. Neither can he make a success of dairying by using scrub separators."

There couldn't well be a more simple, comprehensive and forceful statement of the whole cream separator proposition than this. It's just plain common sense.

DE LAVAL DAIRY SUPPLY CO., Limited.

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Makes Pigs "Stay Put"

The hog never grunted that could get the better of a Maritime Wire Fence. For this springy, taut, vastly strong fence, made of extra-quality hard-drawn coil-spring STEEL wire, has its verticals and cross wires locked together with the death-grip lock that CAN'T loosen or slip under any strain whatever. Your cattle and swine will stay where you put them if you fence with this BETTER fence. Once properly erected, Maritime Wire Fence stays taut, straight, sagless and sightly. It is good for twice the fence service ordinary fence can give. Yet it costs no more

MARITIME WIRE FENCE

Save Yourself Worry and Money

Bid fence worries good-bye, and save money, too, by getting the right fence in the first place. You won't have to be patching your fences every spring if you fence with Maritime Wire Fence. It STAYS put too. Made and sold on honor. Send for the Fence Book and Price Lists. Do this now.

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THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 18. SUSSEX, NEW BRUNSWICK, OCTOBER 8, 1912. Number 1.

The Prince Edward Island Provincial Exhibition

Evidences of Improved Live Stock and Grand Display of Agricultural Products

THE twenty-third Annual Exhibition at Charlottetown was ushered in on Sept. 24th by the finest spell of weather this season has produced, and which fortunately for the Directors and Exhibitors lasted during the entire show.

The President of the Association, Justice Fitzgerald, occupied the chair at the opening by His Honor Governor Rogers.

The addresses of all the speakers were alive with enthusiasm, and the progress made in the quality and the quantity of exhibits year by year, as well as the better farming methods employed were touched upon by more than one speaker.

Hon. M. McKinnon, Commissioner of Agriculture, referred to the weather conditions of this season contrasting them with those of 1911, and remarked that the farmers who were progressive were able, to a great extent, to meet these different conditions successfuliy.

Mayor Lyons, U.S. Consul Frost, and Rev. Dr. Gauthier all spoke on the unlimited possibilities of intensive farming, as one of the best means of inducing the young men of the Province to remain in their own native land.

A number of the speakers suggested that many farmers with 100 acres or more of land could well afford to give their sons 20 acres without sacrificing a great deal; and when the young men were settled down and married it would counteract the desire to leave the country, and incidentally solve the labour question on the farms.

Dr. Gauthier, President of the Central Farmers Institute, said that patriotism like charity begins at home.

He deplored the senselessness of letting our patriotism get tainted with politics. The man who builds up his farm and his home was the best defender of his country, and it was foolishness to raise the cry of annexation, and never raise a finger to prevent the young men and women being absorbed by another nation.

Dr. Andrew McPhail, D. Hughes Charles, and W. F. Stephen of the Ayrshire Breeders Association spoke briefly and optimistically of the present and future prospects of the Garden of the Gulf, that led the other provinces not only in wealth per capita, but yields a greater return per acre than any of them.

BARON KELVIN

Champion Clydesdale Stallion at Charlottetown 1912 Exhibition.

Baron Kelvin was imported from Scotland in 1911 by Graham and Renfrew Co. of Bedford Park, Ontario, who sold him to John Richards, Bideford, P. E. I. Baron Kelvin is considered to be one of the best Clydesdales in America today and judging by his success in the prize ring and in breeding ranks the claim is justifiable. He was shown at the Toronto Industrial Exhibition in 1911 where he won first prize in his class and championship over all ages. Later he competed in the state of New York, against all breeds and again won the championship. At the Winter Fair, Ottawa, last January, he met and defeated the very best stallions in Canada. He sold at perhaps the highest price ever paid for a stallion in Canada, which shows that the breeders of P. E. Island are out for the right kind of stuff.

HORSES

Draught Horses were judged by John Bright of Myrtle Station, Ont.; and the Light Horses by D. Hughes Charles, of Montreal, both awarding the prizes without fear or favor.

The Heavy Draught Horses showed a steady improvement on former years; but despite a number of individuals in the Carriage class, they showed a decided falling off both in size and quality, and in some sections the judge was unable to award more than a second prize.

The aged Clyde class brought out the Champion Toronto winner of 1911, "Baron Kelvin" who won honors at Edinburgh and other places before his importation.

Another Scotch horse with great breeding was "Keppick Prince" son of "Scotland Yet," the noted Cawdor cup winner at Glasgow this year. This horse took first honors over two other beautiful types of Clydes "Labori Again," and "Caspar" owned by Messrs Lea & Clarke, and J. Morris respectively.

Some surprise was shown when "Prairie Jack" first prize winner in the roadster class 1911, took no award this year, and owing to lack of competition "Darkwood" owned by McAfee was handed out the blue ribbon.

During the Exhibition the Island Horse breeders decided to hold a Spring show at Charlottetown next year, and from the quality of the stock, and the grand entries made there this fall should be an unqualified success.

CATTLE

T. P. Cass had nearly all his own way in Shorthorns winning first in aged herd headed by his champion bull "Somerset" that also took first prize in the two-year-old class. The breeder's young herd went to a promising lot owned by Frances Saunders. Lea & Clarke's, Holsteins; and Roper Bros., Guernseys, that won so much distinction on the mainland attracted a lot of attention, the stalls being prettily decorated with their numerous and various prizewinnings.

The judge, Mr. W. F. Stephen conducted the milk test in a higly competitive class of milking beauties, amongst which was a former world's record cow.

As usual the judging competition for farmers sons attracted a lot of attention; by the keenness and intelligence shown by the boys interested in one of the most educative features of the show.

SHEEP.

The sheep classes were well filled, the prize winners in the main being those exhibiting with such success at St. John and Halifax.

Judge, Jno. Millar awarded the prizes in this class.

A. H. Boswall claimed all the red ribbons in Oxford Downs; H. H. Weatherbie all the seconds and thirds.

With Cotswolds, John Tweedy captured all the first and two seconds, Harry Tweedy getting the balance.

All the first prizes in Leicesters were taken by Albert Boswall senior. S. L. Boswall carrying off all seconds and thirds but four sections which went to S. C. Lane.

Albert Boswall gathered in all the red tickets in the Suffolk class, the blues and whites being evenly divided with Almon Boswall.

Cephas Nunn cleared up every prize in the Hampshire Down class except that for aged ram which fell to Oliver Nunn.

Lincoln red ribbons were carried off by Albert Boswall, who divided the second and third place winnings evenly with Ernest Lund.

SWINE.

The Island may well be proud of its pig breeders, and pork producers. The judge, Mr. J. B. Spencer, remarked on the splendid quality in all classes.

The 1911 champion bacon sow at Amherst was here, with her dam and litter, that was champion in 1910, shown by Wm. J. Gibson, who won all prizes in the Tamworth class but one section.

Peter Brodie's Berkshires that have done so much to improve the breed in the Province was to the front with a lot of quality.

The Chester Whites and Yorks were a worthy lot with the prizes very evenly divided.

POULTRY.

White Leghorns and Barred Plymouth Rocks were very much in evidence this year, and the pens contained some fine specimens.

There was a slight falling off in some other sections compared with former years, but the quality was very good expecially in geese.

Seth Jones, of Sussex, N. B., was again the judge.

AGRICULTURAL PRODUCTS.

Many sections in this class showed the result of the off season of 1912. Apples lacked color, and the straw in many of the sheaves revealed the state of the weather during harvest time. However, the turnips, mangels and potatoes were all up to the usual high standard found at Charlottetown. Fewer samples of timothy seed were in evidence than usual, but this product of the farm is still increasing; and it will only be a matter of a year or two when it will be exported in quantities. Garden produce and grains were very attractively displayed and were judged by S. J. Moore of Truro.

Prize Winners at the Prince Edward Island Exhibition.

Horses

THOROUGHBREDS.

Mare, 3 yrs.—1, A. Horne; 2, John Steward; 3, Robt. E. Longworth.

CARRIAGE HORSES.

Stallion, 4 yrs.—1, John Magee.
Stallion, 3 yrs.—1, Byrne Bros.
Stallion, 2 yrs.—1, Henry Gurney; 2, Duncan Robertson.
Filly, 3 yrs.—1, Albert Boswall; 2, Seymour Wood.
Filly, 2 yrs.—1, John Gillis; 2, Geo. L. Boswall; 3, Ira. D. Carr.
Filly, 1 yr.—1, Almon Boswall; 2, Lee Essory; 3, Guy Rodd.
Foal of 1912.—1, Almon Boswall; 2, Ray Horne; 3, John Steward.
Mare with foal.—1, John Cummings; 2, Wm. McEwen; 3, Almon Boswall.
Carriage mare or gelding.—1, W. S. McKie; 2, John Gillis; 3, G. A. Sharpe.
Carriage mare or gelding.—1, Henry Wood; 2, Chas. Chandler; 3, Wm. Bateman.
Champion mare.—1, Albert Boswall Sr.

SADDLE HORSES.

Gent's saddle horses.—3, Wm. Davies.
Ladies saddle horses.—1, Miss Lottie Boswall; 2, Ray Horne.
Brood mare and foal.—2, D. H. White; 3, H. H. Horne.

CLYDESDALES AND SHIRE HORSES.

Stallion, 4 yrs.—1, John Richards; 2, Geo. Dorkendorff.
Stallion, 3 yrs.—1, W. W. Crosby; 2, Lea & Clark; 3, J. P. Morris.
Stallion 2 yrs.—1, P. C. Brown; 2, John Tweedy; 3, Dr. Lockie.
Stallion, 1 yr.—1, John Richards; 2, Wm. A. Godfrey.
Filly, 3 yrs.—1, Edgar Heartz; 2, Alf. Steward; 3, Helen Crosby.
Filly, 2 yrs.—1, W. W. Crosby; 2, John P. Morris.
Filly, 1 yr.—1, W. W. Crosby; 2, John Morris.
Foal of 1912.—1, Wm. McRae; 2, H. Crosby; 3, Dan Taylor.
Mare and foal.—1, Wm. McRae.
Champion stallion.—1, John Richards.
Champion mare.—1, Wm. McRae.

DRAFT HORSES.

Filly, 3 yrs.—1, Lony Bros.
Filly, 2 yrs.—1, Lee Essory.
Filly, 1 yr.—1, A. A. McBeath.
Foal of 1912.—1, J. Stockman; 2, Benj. Rodd; 3, O. Saunders.
Mare and foal.—1, B. Rodd; 2, O. Saunders; 3, J. Stockman.
Pair of draft horses.—1, D. McMillan; 2, Roper Bros.
Draft mare or gelding.—1, C. Byranton; 2, Lony Bros.; 3, J. G. Hughes.

GENERAL PURPOSE.

Mare, 3 yrs.—1, Colin McDonald; 2, S. Prowse; 3, J. B. Roper.
Mare, 2 yrs.—1, J. W. Rodd; 2, R. Lilliphant; 3, R. L. Days.
Brood mare and foal.—1, Geo. Stewart; 2, Lee Sssory; 3, Hood & Sons.
Matched team, geldings or mares. 1, R. Lilliphant.

WALKING HORSES.

Mare or gelding, draft.—1, H. Crosby; 2, R. B. McMillan; 3, H. H. Horne.
Bank of Commerce Medal—John Richards.

Cattle

SHORTHORNS.

Bull, 2 yrs.—1, Thos. P. Cass.
Bull, 1 yr.—1, A. A. McBeath; 2, W. Stead; 3, S. C. Lane.
Bull calf under 1 yr.—1, A. Boswall; 2, A. A. McBeath.
Bull and calf under 6 months.—1, Thos. P. Cass.
Cow in milk or calf 3 yrs.—1, H. F. Sanderson; 2, T. P. Cass; 3, D. Collings.
Cow in milk or calf 2 yrs.—1, T. P. Cass; 2 and 3, H. F. Sanderson.
Heifer, 1 yr.—1, H. F. Sanderson; 2, T. P. Cass; 3, D. Collings.
Heifer and calf under 1 yr.—1, T. P. Cass; 2, H. F. Sanderson.
Heifer calf under 6 months.—1, T. P. Cass; 2, H. F. Sanderson.
Champion bull.—1, T. P. Cass.
Champion female.—1, T. P. Cass.
Breeders' young herd.—1, H. F. Sanderson.
Aged herd.—1, T. P. Cass.

AYRSHIRES.

Bull, 3 yrs.—1, Easton Bros.; 2, C. Lund.
Bull, 1 yr.—1, Easton Bros.; 2, A. McRae & Sons.
Bull calf under 1 yr.—1, A. McRa & Sons; 2, Easton Bros.
Bull calf under 6 months.—1, C. H Robertson; 2, Easton Bros.
Cow in milk, 3 yrs.—1, A. McRae & Sons; 2 and 3, Easton Bros.
Cow in milk, 2 yrs.—1 and 3, Easton Bros.; 2, C. H. Robertson.
Heifer, 1 yr.—1, A. McRae; 2 and 3 Easton Bros.
Heifer calf under 1 yr.—1, E. A. McRae; 2, Easton Bros.
Heifer calf under 6 months.—1, Easton Bros.; 2, W. A. Millar.
Breeders young herd.—1, Easto Bros.
Aged herd.—1, Easton Bros.
Champion bull.—1, Easton Bros.
Champion female.—1, A. McRae & Sons.
Canadian Ayrshire Breeder' Ass'n SPECIALS.
4 animals either sex.—1, Easton
2 animals either sex.—1, A. McRae & Son.

JERSEYS.

Bull, 3 yrs.—1, Wm. Clark & Son.
Bull, 2 yrs.—1, Wm. Clark & Son
Bull, 1 yr.—1, S. Holyroid; 2, S. Warren.
Bull calf under 1 yr.—1, H. Horne.
Cow in milk, 3 yrs.—1 and 3, Wm. Clarke; 2, H. Horne.
Cow in milk, 2 yrs.—1 and 3, Wm. Clarke; 2, H. Horne.
Heifer, 1 yr.—1 and 2, Wm. Clarke; 3, S. Warren.
Heifer calf.—1 and 2, Wm. Clarke; 3, F. A. Calvin.
Aged herd Wm. Clarke.
Breeders young herd.—Wm. Clarke.
Champion Bull.—1, Wm. Clarke.
Champion female.—1, Wm. Clark.

GUERNSEYS.

All prizes were won by Rope Bros.

HOLSTEIN-FREISIANS

Bull, 3 yrs.—1, Lea & Clarke; 2, John Tweedy; 3, A. McDonald.
Bull, 1 yr.—1, John Tweedy; 2, P. Robertson.
Bull calf under 1 yr.—1, A. H. Boswall.
Bull calf under 6 months.—1, Lea & Clarke; 2, W. J. Gibson.
Cow in milk or calf 3 yrs.—1, 2 and 3, Lea & Clarke.
Cow in milk or calf 2 yrs.—1 and 3, Lea & Clarke; 2, E. Heartz.
Heifer, 1 yr.—1 and 2, Lea & Clarke; 3, E. Heartz.
Heifer under 1 yr.—1, Lea & Clarke; 2, P. Robertson.
Heifer calf under 6 months.—1, P. Robertson; 2, Lea & Clarke.
Aged herd.—1, Lea & Clarke.
Breeders young her.—1, Lea & Clarke.

SHORTHORN, HEREFORD, POLLED ANGUS OR GALLOWAY GRADES.

Cow, 4 yrs.—1, Belle View Farm; 2, R. Longworth; 3, S. C. Lane.
Cow in milk or calf 3 yrs.—1, V. McMillan; 2, R. L. Days.
Heifer, 2 yrs.—1, R. Longworth; 2, T. P. Cass; 3, A. H. Boswall.
Heifer, 1 yr.—1, A. Boswall Sr; 2, R. Longworth; 3, H. Crosby.
Heifer calf under 1 yr.—1, J. Praught; 2, A. H. Boswall.
Heifer calf under 6 months.—1, Al. Boswall; 2, T. P. Cass.

AYRSHIRE GRADES.

Cow, 4 yrs.—1, C. H. Robertson; 2, R. Stewart; 3, Wood & Son.
Cow in milk or calf 3 yrs.—1, A. McRae.
Heifer, 2 yrs.—1 and 3, A. McRae; 2, Easton Bros.
Heifer, 1 yr.—1 and 3, A. McRae; 2, H. McRae.
Heifer calf under 1 yr.—1, C. H. Robertson; 2, H. McRae.
Heifer calf under 6 months.—1, C. H. Robertson; 2, R. Stewart.

JERSEY OR GUERNSEY GRADES.

Cow, 4 yrs.—1, Wm. Clarke & Son; 2 and 3, Roper Bros.
Cow in milk or calf 3 yrs.—1, Roper Bros.; 2, Easton Bros.; 3, R. Stewart.
Heifer, 2 yrs.—1, Roper Bros.; 2, R. Stewart; 3, W. T. Stead.
Heifer, 1 yr.—1, A. McRae & Son; 2, F. A. Calvin; 3, J. Pierce.
Heifer calf under 1 yr.—1, John Pierce; 2, Roper Bros.
Heifer calf under 6 months.—1, Roper Bros.; 2, W. Stead.

(Continued on page 8)

Stadacona Lady Mary Stuart, Orange Lily 2nd, Flo's Jean, Morton Mains Lady Nelly and Grange Kelly

First Prize aged Ayrshire herd at the St. John Exhibition. Owned and exhibited by McIntyre Bros., Sussex, N. B.

The Cape Breton Island Exhibition.

After a lapse of twenty-six years the Cape Breton County Farmers' Association organized an exhibition at North Sydney in the fall of 1909.The results accomplished surpassed the most sanguine expectations of the promotors. In 1910 the exhibition was held at Sydney, and in 1911 North Sydney was again the scene of action, the results being very gratifying to the exhibitors, visitors and the management. Although larger premiums were paid year by year, the entries were more numerous and of higher quality and a steady increase in general interest and attendance left handsome balances in the treasurery.

This year an Exhibition Commission has been organized at Sydney, the eastern gateway of Canada, and with the characteristic enthusiasm of true Sydneyites they have gone forward to a successful culminatian with an institution that is destined to bring into prominence the agricultural resources of Cape Breton, the long wharf of the American Continent.

In other years the Cape Breton exhibition was open only to Cape Breton County exhibitors; this year and from hence forth the fair was and will be open to the four Cape Breton counties—Cape Breton, Inverness, Richmond and Victoria.

The association has purchased permanent exhibition grounds and have erected buildings which are fitting tributes to the energy of the management.

By working hand in hand with the Cape Breton County Farmers' Association the Sydney Exhibition Commission has the good will and support of the Cape Breton farmers.

S. P. Chaloner, the untiring Secretary of the Exhibition Commission and R. M. Jackson, Secretary of the County Farmers' Association were at the helm of affairs.. The McQueens, the Munns, the Johnstons, the Jacksons, the Moffats, D. R. Nicholson and various other members of the County Farmers' Association worked with a will and it was a pleasure to note the smoothness with which the various details in the respective departments over which they held sway were conducted.

The weather throughout the entire fair period, September 24th. to 28th. inclusive was, to say the least, delightful and throngs of visitors from city, town and farm flocked to the grounds until the turnstiles at the close of the fair registered an attendance of upwards of 27,000.

The reader, who is not acquainted with Cape Breton conditions will naturally ask: From whence came such a grand attendance? The reply is that from a town of 3,200 inhabitants in 1899, Sydney has risen to an estimated population of 25,000 in 1912 while within a radius of twelve miles no fewer than 75,000 souls inhabit the smaller towns of North Sydney, Sydney mines, Florence, Reserve, Dominion, Glace Bay and the other collieries operated by the Dominion Coal Company, to say nothing of a large population on the fertile areas of farm lands and the other towns that are scattered broadcast all over the four counties.

The person who inquires re the agricultural possibilities and the person who is inclined to think that an abundance of minerals embosomed in mountains high and valleys low constitute Cape Breton's principal resources could get their answer by sauntering on a tour of observation through the various Sydney exhibition buildings.

Encouraged by the best cash market for all agricultural products in eastern Canada the Cape Breton farmers are making rapid strides of progress on their naturally fertile lands, and a $7500 exhibition prize list is bound to lengthen their strides.

The prize list was so arranged that county sweepstakes prizes were offered in the various classes in addition to substantial prizes in the open inter county competitions.

Horses were judged by Mr. E. Watson, Hudson Heights, Que. who was well pleased with the quality of the exhibits.

Draft Horses.—In the draft horse class, H. A. Moffat's Clydesdale stallion, Baron Majestic, was the chief attraction. Baron Majestic is proving a boon to the Cape Breton horse industry. He is a well coupled, trappy mover and both he and his foals in the draft and general purpose classes were much admired. He had no competition in his class, he could have stood a lot of it. Baron Majestic met steel at the Maritime norse show in 1911 and came out of the fray with the championship honors, with a strong class in the ring.

D. R. Nicholson's Clyde mare with her foal by Baron Majestic had no competition in their respective classes but in the'Moffat special for best foal, sired by Baron Majestic, foals out of general purpose mares to the number of nine or ten came forward but the Nicholson foal carried off the "ten spot."

J. S. McLennan had the best draft mare, any age. R. B. McLean showed the only matched pair and a Nicholson horse was sandwiched in between horses shown by J. S. McLennan and Jas. Dunlop in the section for draft mare or gelding, 3 yrs. or older, Michael McSween had the second prize foal.

General Purposes Horses were out in strong numbers. E. J. Johnston had the best brood mare with a splendid type of Baron Majestic foal by her side. This mare captured the county sweepstakes prize for the best mare or gelding from Cape Breton County while the Richmond County honors in the same class went to a four year old mare shown by Geo. E. Bissett, St. Peters. John McQueen had no competition against his trim two-year-old. John Morley, Wood & McConnell and John McMullin came in for first, second and third prize honors in the three-year-old class. H. J. McLeod, Murdo McDonald and Rod McNeil had similar honors with their one-year-olds.

The honors in the foal class were captured in their respective order by E. J. Johnston, J. P. Redmond, Murdo McKenzie and Jas. McKenzie. The second and third prize brood mares were shown by R. Johnston and J. A. McCormack.

Carriage Horses.—Emery Wilkes, shown by Daniel Young was the only carriage stallion. John McQueen, J. T. Burchill and Wm. Andrews held the winners in the mare or gelding, 3 years or over, class. J. A. McCormack and Ira Hughes had no competition against their two-year-old and one-year-old respectively. Geo. L. Lund and J. C. McDonald held first and second winners with their brood mares with foals. John McQueen's mare won first with two of her progeny.

Roadsters.—The battle royal of the horse show was waged in the roadster class. The three-year-old stallion section was represented by three, good, standard breds, Royal Seal, Directum B. and Capt. McCuish winning the honors in the order mentioned for their respective owners, F. C. Redding, G. O. Purnes and A. F. McCuish. J. K. Hill's Colonel Snell, by Allie Snell captured the red ticket in the two-year-old stallion class from a stallion shown by P. Doherty as well as the Richmond County sweepstakes for best stallion, any age. Royal Seal captured the Cape Breton County sweepstakes prize for best stallion, any age. The other prizes in this class were awarded as follows;—

Mare or gelding, any breed, 3 yrs.—1, D. McRae; 2, W. Hood; 3, G. O. Purves; 4, J. H. McDonald.

Mare or gelding, any breed, 2 yrs.—1, H. A. Moffat; 2, Norman McLean; 3, W. S. Musgrave.

Mare or gelding, any breed, 1 yr.—1, Mrs. McKiegan; 2, W. L. Forman; 3, H. C. Musgrave; 4, 5, J. Webster Allen.

Brood mare with foal.—1, Robt. Johnston; 2, Alex McLeod; 3, James Hill.

Matched pair, in harness.—1, Robt. Johnston; 2, Alex McLeod; 3, W. L. Forman.

Brood mare and 2 of her progeny.—1, Robt. Johnston.

BARON MAJESTIC

Champion Clydesdale Stallion at the Sydney Exhibition. Baron Majestic was bred by C. R. H. Starr & Son, Port Williams. N. S., who exhibited him at the Maritime Horse Show, Amherst, N. S., in April 1911, where he won the Clyde Stallion Championship, in stiff competition, after which he was sold to his present owner, H. A. Moffatt, North Sydney, N. S.

CATTLE.

The cattle classes at the Cape Breton exhibition are steadily improving in point of quality and the number of pure breds is showing a decided gain. D. R. Nicholson and Ira Hughes showed fat cows, 3 years old and over and Jas. McKenzie had the only two-year-old fat heifer. C. H. Vail showed a yoke of aged working oxen. W. J. Reid, Instructor in Animal Husbandry, McDonald College, Que., placed the awards in the cattle classes to the utmost satisfaction of all concerned.

Holsteins were exhibited by D. R. Nicholson who captured the lion's share of the awards with a well fitted herd. The Port Hood Agricultural Society showed a two-year-old bull and captured the Inverness County sweepstakes prize for best bull, any age. Nicholson's aged bull, Bob Dorindo, had no competition in his class and captured the Cape Breton County sweepstakes for best Holstein bull. C. A. Nunn had the second prize senior bull calf and second prize dry cow, 4 years old. A. K. Jackson's cow came in for third money in the latter class. The other sections were well filled with good individuals from Nicholson's herd. Nicholson captured the first prize offered by R. H. Butts, M. P. P. for best herd pure bred cattle from any one farm in Cape Breton County.

Ayrshires.—South Bar and Salem Road Agricultural Societies were the only contestants in the aged bull section of the Ayrshire class. Their bulls were out in fine fittle and the first and second prizes were awarded in the order named. The South Bar bull is out of Annie Laurie the crack Ayrshire cow in the Truro College herd. He carried off the Cape Breton County Ayrshire bull sweepstakes prize. John H. Ross, of Margaree Harbor had no competition against his two-year-old bull, the only one from Inverness County.

D. J. McDougall, Christmas Island, showed a nice yearling bull while Hector McSween, Sydney, had the only bull calf. All prizes in the female sections with the exception of a first on yearling heifer which went to Peter H. Hawkins, Sydney, went to M. W. Ross & Son, Centerville. The second prize donated by R. H. Butts, M. P. P. for second best pure bred cattle exhibit was captured by Messrs Ross' Ayrshires.

Jerseys are increasing in numbers in Cape Breton. There were some very nice individuals in the ring, the most sensational winner being Ira Hughes's aged bull, that captured the County sweepstakes prize as well as the most coveted place in the cattle prize list—the male grand championship, all dairy breeds competing. Prize winners in the Jersey class were as follows:—

Bull, 3 years or over.—1, Ira Hughes; 2, North Sydney Agricultural Society.

Bull, over 2 years old and under 3 years.—1, W. Drysdale, Sydney; 2, Andrew McDonald, Meadows Road.

Bull, senior calf.—1, Donald Johnston, Leitches Creek; 2, Norman McLean, Grand Lake.

Bull, junior calf.—1, J. Webster Allen, North Sydney; 2, A. K. Jackson.

Cow, 4 years old.—1, D. R. Nicholson; 2, A. K. Jackson; 3, J. Webster Allen.

Dry cow, 4 years old.—1, A. K. Jackson.

Dry cow, 3 years old.—1, M. W. Ross & Son.

Heifer, over 2 years.—1, H. A. Moffat, North Sydney; 2, Mrs. H. A. Moffat.

Heifer, senior calf.—1 and 2, H. A. Moffat.

Heifer, junior calf.—1, D. R. Nicholson.

Best bull, Cape Breton County.—1, Ira Hughes.

(Continued on page 29.)

Prize Winners at the Prince Edward Island Provincial Exhibition.

(Continued from page 6)

HOLSTEIN GRADES.

Cow, 4 yrs.—1, E. Heastz; 2, Lea & Clarke; 3, W. J. Gibson.

Heifer, 3 yrs.—1, Lea & Clarke; 2, E Heartz; 3, P. Robinson.

Heifer, 1 yr.—1, Lea & Clarke; 2, H. A. Robertson; 3, P. Robinson.

Heifer calf under 1 yr.—1, Lea & Clarke; 2, W. J. Gibson; 3, P. Horne.

Heifer calf under 6 months.—1 and 2, Lea & Clarke.

Heifer, 2 yrs.—1, Lea & Clarke; 2, H. A. Robertson; 3, P. Robinson.

SPECIAL PRIZES BY HOLSTEIN FREISIAN ASSOCIATION

All won by Lea & Clarke.

SPECIAL, DEPT. OF AGRICULTURE.

Farmer's son judging beef cattle.—1, Fred McRae; 2, Earl Ings; 3, W. W. Gibson; 4, Major McRae; 5, Leo Praught; 6, Geo. Godfrey.

Farmer's sons judging dairy cattle.—1, M. McRae; 2, Fred McRae; 3, W. W. Gibson; 4, Earl Ings; 5, Ernest Ings; 6, Howard Russell.

STEERS.

Pair of steers, 1 yr.—1, Heber Crosby; 2, Wood & Son.

Single steer, 1 yr.—1, 2, H. Crosby.

Pr. of steer calves of 1912.—1, S. C. Lane; 2, J. Praught.

MILK TEST.

Pure bred cow, 3 yrs.—1, Roper Bros; 2, Easton Bros.; 3, Lea & Clarke.

Pure bred heifer under 3 yrs.—1, Roper Bros; 2, C. H. Robertson.

Grade cow.—1, W. J. Gibson; 2, Roper Bros.; 3, Wm. Gregory.

Grade heifer.—1, Roper Bros.; 2, Andrew MacRae.

Holstein Ass'n cow.—1, 2 and 3, Lea & Clarke.

Sheep

SOUTHDOWNS.

Ram, 2 shears.—1, Cephas Nunn; 2, Oliver Saunders.

Ram, shearling.—1, O. Saunders; 2, C. Nunn.

Ram lamb.—1, C. Nunn; 2 and 3, O. Saunders.

Ewe, 2 shears.—1 and 2, C. Nunn; 3, O Saunders.

Ewe, shearling.—1 and 3, C. Nunn; 2, O. Saunders.

Ewe lamb.—1, C. Nunn; 2 and 3, O. Saunders.

Flock.—1, C. Nunn; 2 and 3, O. Saunders.

SHROPSHIRE DOWNS.

Ram, 2 shears.— 1, Geo. Boswall; 2, C. Nunn; 3, L. H. D. Foster.

Ram, shearling.—1, C. Nunn; 2 and 3, Geo. Boswall.

Ram lamb.—1 and 2, Geo. Boswall; 3, D. P. Irving.

Ewe, 2 shears.—1 and 2, Geo. Boswall; 3, C. Nunn.

Ewe, shearling.—1 and 2, Geo. Boswall; 3, C. Nunn.

Ewe lamb.—1 and 2, Geo. Boswall; 3, C. Nunn.

Flock.—1, Geo. Boswall; 2, C. Nunn.

DORSET HORNS.

Geo. L. Boswall claimed all first prizes on Dorsets. M. K. Boswall carried off the seconds except one in the ram lamb section.

LONG WOOL GRADES.

Ewe, 2 shears.—1, A. Boswall; 2, S. C. Lane; 3, S. L. Boswall.

Ewe, shearling.—1, S. S. Lane; 2, S. L. Boswall; 3, E. Lund.

Ewe lamb.—1, S. L. Boswall; 2 and 3, E. Lund.

Wether shearling.—1, A. Boswall; 2, Geo. L. Boswall.

Whether lamb.—1. S. L. Boswall; 2, S. C. Lane; 3, M. K. Boswall.

Fat ewe or wether.—1, S. L. Boswall; 2, S. C. Lane.

SHORT OR MEDIUM WOOL GRADES.

Ewe, 2 shears.—1, Albert Boswall; 2, O. Saunders; 3, Geof L. Boswall.

Ewe, shearling.—1 and 3, E Saunders; 2, O. Saunders.

Ewe lamb.—1, Geo. Boswall; 2, O. Saunders; 3, E. Saunders.

Wether shearling.—1, C. Nunn; 2, O. Saunders; 3, A. Boswall.

Wether lamb.—1, E. Saunders; 2, O. Saunders; 3, G. L. Boswall.

Best fat ewe or wether.—1, C. Nunn; 2, E. Saunders; 3, D. P. Irving.

Hewson special.—1, Geo. Boswall.

Humphrey special.—1, Geo. Boswall.

SWINE.

BERKSHIRES.

Boar, 2 yrs.—1, Wood & Son.

Boar, 1 yr.—1, Peter Brodie; 2, Roper Bros.

Boar over 6 months.—1, P. Brodie; 2, S. R. Ings.

Boar under 6 months.—1 and 3, W. J. Gibson; 2, Stewart Bros.

Sow, 2 yrs.—1, Roper Bros.; 2, W. J. Gibson; 3, P. Brodie.

Sow, 1 yr.—J. Burrigan; 2, P. Brodie; 3, Wood & Son.

Sow, 6 months.—1, P. Brodie; 2, Stewart Bros.

Sow under 6 months.—1, P. Brodie; 2 and 3, Stewart Bros.

Pair of pigs 3 months.—1, Stewart Bros.; 2, S. R. Ings; 3, P. Brodie.

CHESTER WHITES.

Boar, 2 yrs.—1, Wallace Stead; 2, T. W. Prowse.

Boar, 1 yr.—1, W. H. Cooke; 2, Geo. Crockett.

Boar over 6 months.—1, A. H. Boswall; 2, T. W. Prowse; 3, W. H. Cooke.

Boar under 6 months.—1, W. H. Court; 2, A. H. Boswall; 3, W. H. Cooke.

Sow, 2 yrs.—1, A. H. Boswall; 2, T. W. Prowse; 3, W. H. Cooke.

Sow, 1 yr.—1 and 2, T. W. Prowse.

Sow 6 months.—1, W. H. Cooke; 2, A. H. Boswall.

Sow under 6 months.—1, John Burrigan; 2, W. H. Court; 3, A. H. Boswall.

Pair of pigs 3 months.—1, W. H. Court; 2, A. H. Boswall; 3, H. H. Cooke.

Breeding Sow.—1, T. W. Prowse; 2, W. H. Cooke.

Sweepstake boar.—1, W. H. Cooke.

Sweepstake sow.—1, T. W. Prowse.

Pen.—1, T. W. Prowse.

EXPORT BACON HOGS.

2 pure bred hogs.—1, J. W. Callbeck; 2, W. J. Gibson; 3, Stewart Bros.

2 hogs cross or grade.—1, Geo. Crockett; 2, Jos. Praught.

Davies and Fraser's special.—1, Geo. Crockett; 2, W. J. Gibson; 3, P. Brodie.

Bank of Commerce Medal, best pen.—J. W. Callbeck.

White Queen

First Prize two-year-old Shorthorn heifer at the St. John Exhibition. Owned and exhibited by R. A. Snowball, Chatham, N. B.

Breeding sow.—1, Wood & Son; 2, S. R. Ings.

Sweepstake boar.—1, Stewart Bros.

Sweepstake sow.—1, P. Brodie.

Pen.—1, Stewart Bros.

R. E. Mutch Special.—1, Stewart Bros., 2, J. W. Callbeck.

YORKSHIRES.

Boar, 2 yrs.—1, J. W. Callbeck; 2, Stewart Bros.

Boar, 1 yr.—1, J. W. Callbeck; 2, Geo. Crockett.

Boar oper 6 months.—1, J. W. Callbeck; 2, Stewart Bros.; 3, A. A. McBeath.

Boar under 6 months.—1, J. W. Callbeck; 2, Wallace Stead;3, Geo. Crockett.

Sow, 2 yrs.—1 and 3, J. W. Callbeck; 2, Wallace Stead.

Sow, 1 yr.—1, J. W. Callbeck; 2, Stewart Bros.; 3, Geo. Crockett.

Sow, 6 months.—1, 2 and 3, J. W. Callbeck.

Sow under 6 months.—1and 2, Stewart Bros.; 3, J. W. Callbeck.

Pair of pigs, 3 months.—1, J. W. Callbeck; 2, Stewart Bros; 3, Geo. Crockett.

Breeding sow.—1, Stewart Bros.; 2, J. W. Callbeck; 3, Geo. Crockett.

Sweepstake boar.—1, J. W. Callbeck.

Sweepstake sow.—1, J. W. Callbeck.

Pen.—1, J. W. Callbeck.

Poultry

C-Cock, P-Pullet, Cr.-Cockerel, H-Hen.

Anconas, mottled.—1 C. 2 P. Cr., Geo. Callbeck; 1 H. 2 C. 1 P. Cr., E. J. Vessey; 3 Cr. P., John Whitlock.

Andalusian.—1 C., J. Holoran; 1 C. 2 P., Geo. Chilton; 1 P., W. H. Taylor.

Brahma, light or dark.—1 C. H. Cr. P. Geo. Peterson; 2 C. H., J. Btewart.

Cochin Buff.—1 C. H., Geo. Peterson.

Cochin a. o. v.—1 C., Geo. Peterson.

Dorking, a. variety.—1 C. H. Cr. and P., Neil McKinnon.

Hamburg S. S.—1 C. H. P. and Cr. 3 H., John Tweedy; 2 H., F. L. Haszard.

Hamburg, G. P.—1 C. and H., John Burke.

Hamburg, S. P.—1 C. 2 H. 1 and 3 Cr. and P., L. A. Haszard; 1 H. 2 C. Cr. and P., A. . Boswall.

Langshan black.—1 C. 2 H. 1 P. Cr. W. Williams; 1 H. 2 Cr. and P., A. Williams.

Leghorn, W. S. C.—1 C. Cr. P. 2 Cr John Whitlock; 1 H. 3 C., G. Cartier; 3 H. Cr. and P. 2 C., Geo. Chilton.

Leghorn Br. S. C.—1 C. P. Cr. John Whitlock; 2 and 3 H. C. Cr. P. Geo. Chilton.

Leghorn Br. or W. R. C.—1, H. C. P. Cr., G. Lf Simons.

Minorca Black S. C.—1, H. C., Chas. Pippy; 1and 2, Cr. and P. 2 and 3, C. and P., Wm. Cudmore.

Minorca Black R. C.—1, H. C. P. 2 Cr. 3 Cr., John Fraser; 1 Cr. 2 H., E. A. Cudmore.

Minorca Wh. S. C.—1 H. C., Gordon Carter; 2 H. C., Chas. Pippy; 1 P. 2 C. Cr., Byrne Bros.

Orpington Buff.—1 C. 2 H., E. S. Brown; 1 Cr. 2 H. P., L. A. Haszard; 2 C. 3 H., R. W. Jordan.

Orpington A. O. V.—1 C. 2 H., A. Williams; 1 Cr. P. H. 3 C., Henry Gurney; 2 C. 3 H., Nelson Whitlock.

Plymouth Rock Barred.—1 and 3 C. 2 H., L. H. D. Foster; 1 H. 2 C. Geo. Chilton; 1Cr., Heath Foster; 1 P. 2 Cr., Benj. Rodd; 2 P., A. H. McKinnon.

Plymouth Rock Wh.—1 C. P. 2 Cr. P. H., Geo. Callbeck; 1 H. Cr. 2C. John Ives.

Plymouth Rock Buff.—1 C. H. Cr. 2 P., L. A. Haszard; 2 C., Neil McKinnon; 1P. 2 Cr., L. H. D. Foster; 2 H. 3 C. H., Ena Foster.

Rhode Island Red S. C.—1 C. Cr. H. 2 H., L. A. Haszard; 1 H. 2 C. P., T. W. Prowse.

Rhode Island Red R. C.—1 C. H. Cr. P., W. A. Millar.

Spanish Black.—1 C. H., John Burke; 2 C. H., W. Duffy; 1 Cr. 2 H. P., Donald McWilliam; 1. P. 2 Cr., Geo. Chilton.

Wyandotte Silver.—1 C., Robt Hudson; 1 H. P. 2Cr., E. S. Brown; 1Cr. 2 C. H. P., John Fraser.

Wyandotte Wh.—1 C. H. 2 H., Ernest Weeks; 2 P. C. 1 Cr. 3 H., John Whitlock; 1 P. D. McKinnon.

Wyandotte Buff.—1 C. H. Cr. P., Robt Hudson.

Wyandotte A. O. V.—1 C. H. P., Fred Gregory; 1 C. and 2 P., Mrs. Wm. Gregory.

TURKEYS, GEESE,AND DUCKS.

Pair turkeys Bronze hatched 1912.—1, Albert Boswall; 2, Earl Boswall.

Geese Toulouse.—1, Almon Boswall.

Geese, Emden.—1 and 3, Mrs. A. Boswall; 2, Ernest Lund.

Geese, A. O. V.—1, Mrs. A. Boswall; 2, E. Lund.

Geese, Toulouse, hatched 1912.—1, Almon Boswall.

Geese Wh. B. and E. 1912.—1 and 2, Mrs. A. Boswall; 2, E. Lund.

Geese, A. O. V. of 1912.—1, Mrs. A. Boswall; 2, E. Lund.

Ducks, Rouen.—1, Albert Boswall Sr.; 2, Lile Boswall.

Ducks, Pekin.—1, Mrs. A. Boswall; 2, E. Lund.

Ducks, A. O. V. —1, Chas. Pippy.

Ducks, Rouen of 1912.—1, Lile Boswall; 2, Albert Boswall.

Ducks, Pekin of 1912.—1, Mrs. A. Boswall; 2, R. L. Days.

Ducks, A. O. V. of 1912.—1, Erl B. Boswall

Dairy Products

BUTTER, CHEESE, ETC.

Butter, box 28 lbs. creamery.—1, J. P. Simons; 2, Dunk River Dairy Co.

Butter, 2 firkins 20 lbs.—1, Miss E. Prowse; 2, Mrs. Geo. Auld; 3, Mrs. W. Darke.

Butter, 2 firkins 20 lbs. each.—1, J. P. Simons; 2, Dunk River Dairy Co.; 3, J. B. Vaubour.

Butter, crock 20 lbs.—1, Miss E. Prowse; 2, Mrs. Geo. Auld; 3, Mrs. A. H. Boswall.

5 lb. prints.—1, Mrs. L. H. Foster; 2, Miss D. Fraser; 3, H. H. Howard.

5 lbs. rolls.—1, Mrs. L. H. Foster; 2, Miss E. Prowse; 3, Miss D. Fraser.

5 lbs. prints, creamery.—1, Dunk River Dairy Co.; 2, J. P. Simons; 3, J. D. McRae.

Cheese, 2 dairy farm, 20 lbs. each.—1, Miss C. Drake.

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One Man's Success With Sheep

A young man up in Conway, Mass, began farming a few years ago on an ordinary, rough, New England farm of 200 acres where he was born, with only his hands (and brains! and a debt of $3,000 and "with no kind of a show," writes Hollister Sage in Country Life in America. People laughed at him when he spoke of sheep. What could Herbert Lee do with sheep? Older men than he had tried them and failed. But he had made a study of the subject. He saw his opportunity. He believed he could make winter lambs pay, and pay well. His townsmen smiled. "How can Herbert get lambs to feed, in November, when nature decreed that they should be born in April? How could the little, tender things be kept from freezing in our December and January weather? Aircastles!"

Mr. Lee had run up against the great bugbear of farm life, the scarcity of good help. He reasoned that if eight sheep can be kept where one cow or steer will live, and there is no milking to be done night and morning, no milk to make up or to run with, to creamery or railroad, less help will be necessary. Also that if lambs sold at the holidays will bring twice or three times as much as when put on the market in summer, it will pay to make the effort in winter when comparatively idle, and time is plentiful. He decided that he would study sheep keeping at first hand and at home, and bought eight ewes. This is the equivalent of one cow. If a beginner in dairying will buy a cow, care for her himself and observe her closely, while reading everything available on dairying, he will presently know something about cows. Mr. Lee did this with eight sheep. And he learned much faster than he expected to. He has no facilities for sheep keeping—just the old barns on the ancestral farm. His first pens for lambs he made on the barn floor by hanging up blankets, and with so few, he had to provide some heat in the bitterest nights. This he did with lanterns, and raised eight beautiful lambs weighing nearly sixty pounds each, for which he received $100 about January. Here was encouragement of a substantial nature, and he decided that he would do some more, and accordingly increased his flock, did the work, put up with inconveniences and hardships, and continued to learn. It wasn't all smooth sailing, there were many setbacks and discouragements and times when everything seemed to go wrong, but he kept a clear brain and did not forget the cause and cure for reverses.

The larger flock paid well, and the lambs and wool kept the interest account settled and began to gnaw into the mortgage. This is the sort of thing which will give a man a thrill, no matter what people say. Unlike some successful flockmasters, Mr. Lee did not try to raise ewes to increase the flock. He struck out straight from the shoulder on the basis of cash, the same as if he were handling stocks and bonds instead of sheep and lambs. If a lamb would bring $12 in January or February at two months old, where was the sense in raising it when he could go out and buy a ewe in the spring when grass was plentiful and cheap and pay only $3.50 to $5 for it? And so the game was played and won each year, a goodly flock of fine-wool ewes being driven home from some near or distant farm, where "sheep do not pay" to increase the flock in spring, the old ewes fattened and turned into mutton, the fleeces sold, and the manure spread on the land. It was with intense gratification that this manager noted how the mowings were growing more and more productive each year, and the pastures greener, richer, and able to support more stock; how the recurring drouths affected them less and less, and the corn and other crops became more thrifty and abundant. All this he counted among his chief assets.

One single "extravagance" as his friends noted it, was his persistence in buying thoroughbred sires of the Southdown breed to head his flock each year, for that "blood will tell" was one of his foundation ideas in the industry. To spend $100 for a single sheep seemed like folly to most sheep men, but Mr. Lee had a weakness in this direction. Strangely he doesn't get over it, either. His experience only entrenches him more deeply in his eccentricity. His fine wool ewes he is sure are the best of mothers for winter lambs and take good care of twins, of which many arrive. Their wool is in demand, the fleeces weigh eight to twelve pounds each, and for several years have returned him $500 annually in cash. He says that one thing he particularly likes about sheep is the fact that they bring in money in good lump sums and not in driblets; that small amounts get away for all sorts of things and excuses, but that when the commission man hands him a check for $500 to $1,000 (once he got a roll of $1,5000 at one payment! he can put it in the bank. For several years now he has been able to drop $500 a year into the savings bank and not miss it, for besides supporting his family, he paid off his indebtedness in five years, and has cleared his mowings of stone very largely and put money into other improvements—better buildings and modern machinery—and has bought 350 acres to add to the farm, which is paid for. A mile and a half of new net fence was put up last year. Last winter he kept 400 sheep through, besides selling 125 lambs before March, realizing $10 and $12 per head. His aim is to make each one weigh up to the standard of sixty pounds in sixty days from birth.

The buildings in use are the same that have always occupied the ground but the interiors have been reconstructed, adding sheep features that experience has proved essential. The chief department of importance which the evolution has brought in is an enclosed shed under one side of the hay barn. It opens to the east and south, and was originally an earth-floored, wet, and semi-useless place. One of the tenets of Mr. Lee's faith in sheep is founded on the principle that they may be kept, the same as poultry, without fancy buildings and appurtenances. This shed was transformed into a wonderful place by a few poles from the woods, laid on stones for the mowings for piers, and covered with second-hand boards, which raised the floor 18 inches from the ground. Then the front was boarded up with the same old lumber, places roughly left to put in windows when the severest weather set in, and the floor covered one foot deep with forest leaves. The windows are opened between spells of hard weather, for sheep carry overcoats of the best pure wool, and will Rough feed racks for hay, with tight troughs in them for grain, and a water trough through which spring water runs the year round, are the principal dining-room equipments. At one side of this large pen, which will hold 300 sheep, is another forming an L and of about the same size. In the angle between the two is the bottom of a huge hay mow, containing at a rough guess, 300 tons of fragrant green hay.

The Economical Value of Bran

As a material which forms part of the ration for live stock bran has a two-fold value—it is a food of great excellence, and it is a laxative which enables the farmers and others who keep stock to use it in conjunction with such concentrated foods as beans peas, and decorticated cotton cake, all of which have somewhat of a binding action. Bran is therefore seldom used for cows which are feeding upon grass or forage crops. As a food bran has a three-fold value—it is rich in carbohydrates and minerals, although it is not customary to deal with the food from this point of view, in view of its value in the last-named materials, yet they are of great importance. A food containing lime and phosphoric acid in liberal quantities is not only essential to cows, whose milk provides these materials—and especially that used for cheese-making—but it is important for stock of all kinds, and especially growing stock, both lime and phosphorus being present in the bones. There are two kinds of bran, if we may take the liberty of drawing an imaginary line between the coarser and the finer samples—which, in truth, are found in various gradations—but the best is more particularly rich in starchy matter, is more floury and sweeter on the tongue, and possesses a more delightful aroma. In the coarser bran the waste material is greater, by which we mean the fibrous matter which is indigestible, and which in consequence reduces the feeding matter in the food—so much so, indeed, that it makes a considerable difference in the money value, however little difference there may be in the cost.

Farmers have been led to regard the starchy matter of foods as of less value than it really is in comparison with the albuminoids, but there is no doubt that we pay too much attention to the albuminoid constituents of all foods. Starch is practically the motive power, although this term applies more directly to the sugar. Thus carbohydrates heat the body and provide for the expenditure of energy, force, or movement, and for the production of a portion of the fat—possibly a large proportion—while the albuminoids are required simply for the maintenance of the nitrogenous portion of the carcase and the production of the casein of milk, or, in the case of fattening stock, of the muscular tissue, flesh and various organs of the body which contain nitrogen. Thus the part played by the albuminoids, if highly important and essential, is much smaller than that played by the carbohydrates, which are in consequence required in much larger quantity. It is true that the albuminoids in bran and similar foods can be also employed in the maintenance of heat, but at greater cost, not only in the purchase of the food, but at the expense of the animal.

Bran is of great value to stock of all kinds in time of sickness, when an appetizing laxative food is required. It is for this reason that bran mashes are employed, but it is a great mistake to employ them too frequently, owing to the large quantity of albuminoids bran contains. Where stock consume albuminoids which are not required by the body their organization is impaired by dealing with the excess; great strain is thrown upon the liver and kidneys, as in the case of man consuming too rich a meat diet. Good bran contains about 60 per cent. of digestible nutritious matter, about one-fifth being albuminoids. At £4 10s. to £5 per ton it is a food of moderate price, and may be consistently employed in mixing with a ration which consists of roots, chaff, bean meal and maize meal, or, in place of beans, decorticated cotton cake.

Most farmers prefer bran which is the produce of British stone mills, regarding roller-milled bran as too dry and impoverished a material. Imported brans are frequently of this character, and partake more of the outer husk than of the layers of the wheat berry, of which good bran is usually composed.

Salt For Stock

Physiologists differ in opinion as to whether salt (sodium chloride! is necessary to the welfare of stock, but experience points to a supply being very desirable, if not absolutely necessary. Apparently the theorists base their idea that salt is not an essential on the fact that vegetable food is naturally poor in sodium salts, and that the chief salt provided for the herbivora is potassium, which in their ordinary diet largely predominates over sodium; but they forget, or ignore, the fact that animals, especially vegetable feeders, in a state of nature, instinctively travel many miles to saline springs or incrustations or beds of salt, and that domesticated animals invariably avail themselves of the opportunity of taking it when offered. Bunge explains the desire shown by the herbivora for common salt as being due to the large amount of potassium salts consumed with their food, the effct of potassium salts in the blood being to withdraw sodium salts from the system, and states that when the proportion of potassium exceeds a certain ratio the animal instinct seeks for sodium. It may be also noted that sodium chloride is the only inorganic salt taken separately by the human subject in addition to that already existing in the food. The assumption, then, is a fair one that, except in the case of pigs and poultry, the regular or infrequent use of salt is essential for the maintenance of health.

Concerning its medicinal value, there is less difference of opinion. Small doses are restorative, stomachic and antiseptic; larger doses are cathartic and emetic. For vigorous adult cattle and sheep common salt is a purgative, resembling in its effects Epsom and Glauber salts, and frequently conjoined with them, as being more quickly absorbed. In bygone days a purgative dose of salt (½ lb. to 1 lb.) used to be greatly esteemed by farmers as a remedy for red water in cows. In cases of animals suffering from indigestion and irregular appetite, small and repeated doses are conjoined with gentian, ginger, and other vegetable tonics and stomachics with useful results.

PARASITES.

A lump of rock salt in the manger of the horse harbouring worms will often do more to expel the parasites, particularly the common round worm and keep the animal free, than large doses of vermicide medicine, usually considered more potent, a result attributable to its making the intestinal canal distasteful or uninhabitable. In the treatment of fluke disease, or liver "rot" in sheep, so far as it is successful, salt always plays an important part, and we are inclined to think that less would be heard of diseases associated with parasites—to which no inconsiderable proportion of the disease of stock, especially sheep, is due— if salt were more freely supplied. It is undoubtedly a powerful vermicide— nothing in the shape of a worm can tolerate it, and, as it is highly destructive to parasite life during certain stages of their existence outside the bodies of to render pasture safe from "rot", "gid," "husk," "tapeworm" and their natural hosts, salt dowing tends other parasitic diseases.

As some animals, like some men, seem to require a larger quantity of salt than others, and as the situation and the kind of food probably influences individual requirements, it is better to provide rock salt to lick than to mix a fixed quantity with the food, which may result in an excess in some cases or a deficiency in others.—Pateley Bridge.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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R. D. Robinson Publishers, Limited,
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

OCTOBER 8, 1912

DATES OF ISSUE.

October 8-22
November 5-19

AN INVITATION TO YOU

About the only way a man can really get ahead is to mingle with people. We may read our books and papers and find out a great many things. We may read of how Bill Jones did this and Sam Fox did that many years ago. But we want to know how Bill Jones and Sam Fox are doing those things now.

Our school systems would not be worth a cent if our children could not mingle and express their ideas. Just because some book tells a child that two and two are four is no reason that the child will believe it. The teacher has to show the child how two and two make four. She has to exchange ideas with her pupils and have them give their ideas.

We have passed out of that school and are out in the first, second, third, fourth, fifth, etc., grades of the school of life. If we were to be left alone—away from other human influences—our minds would soon become stagnant. None of us want to become that way. We want to mingle. We want to visit our neighbors and talk things over with them about farm topics. We want to know the best way to make hens lay. We want to know the best ways of fattening hogs.

But perhaps our neighbors have the same methods that we have and we want to get the ideas of other neighbors. We might go to the different agricultural colleges and find out how these things are done, but perhaps we are too far away and cannot take the time to go.

In the columns of The Maritime Farmer Dairy ideas are exchanged every month. This is your farm paper. It is edlted with the idea of service. If we fall below the idea of service we will get out of business. We want to make this paper a part of the farm life of every man in the Maritime Provinces. We want the city man to read it and get the ideas of the farmer. We want the farmer to get the ideas of the city man. And we want farmers to get the ideas of other farmers.

We want our paper to be The Meeting House of Maritime farmers. The columns are open to you for your discussions. We are interested in everything for the betterment of farms and farm life. If you want to know about things ask your questions through this paper. Some one surely will answer you. Give your ideas and let others give theirs. Make this paper your meeting house and get acquainted.

"No, But We Have Something Just as Good"

"You're rather a young man to be left in charge of a drug shop," said the old gentleman. Have you any diploma?"

"Why, er-er-no, sir," replied the clerk, "but we have a preparation of our own that is just as good."

That "something just as good" is one of the bugbears of commerce.

It is a common method of foisting any-old-thing on the customer who asks for a particular article—and it is, in many cases, a thoroughly reprensible practice.

Usually this "something just as good" is offered as a substitute for an advertised article. In that way the storekeeper who "substitutes" turns the other fellow's expenditure of money to his own account.

It may be of course, that this "something just as good" is what the substitutor claims it to be—but usually it is not—or the substitution would come out into the open and advertise it, thus creating a legitimate demand for his product, on the articles own merit.

When the substitutor offers you "something just as good" he goes on the theory, usually, that this is the first time you have asked for the other article—and that in such circumstance you have no means of knowing whether the substitute is "as good."

Now if this product is not equal in quality to the article you asked for he has killed your faith in an advertised commodity—which is an economic crime, for he negatives a beneficial force of the most importance to you.

Don't accept substitutes.

You are taking a chance when you do.

If you call for a brand which you see advertised in THE MARITIME FARMER and the tradesman offers you something "just as good," dont take the substitute—go to the store that keeps what our advertisers are spending money to establish your faith in.

TAKE A VACATION

Farmers are quite liable to work year after year without taking a vacation. Of course we are amid the city people's vacation scenes much of our time, We are surrounded by the beauty and tranquility of nature while we carry on our life work. But in order to appreciate our happy surroundings to their fullest measure we must have an occasional change.

Though a day spent among the sights of a large city may prove tiresome, yet its benefits are often commensurately great. For when we return home we take up our work again with fresh vigor and keener insight. A trip to the state fair or to a grange convention may cause us more anxiety than would the same time spent on the farm. Yet this added effort, this breaking away from routine life, this new experience broadens our outlook upon life, develops new possibilities and latent faculties within us, deepens our sympathies, and altogether makes us more complete.

We should all have our play spells now and then. They are essentials in making our lives a success. The man or woman who can enjoy an innocent laugh and frolic is rarely morbid and melancholy. Through the disappointments and setbacks, so frequent in each of our lives, the quality of cheerful optimism is a powerful influence for happiness and success. We should all cultivate the ability to play, the capacity to have innocent fun, the faculty of enjoying ourselves.

Take a vacation. Let the world run itself as it must when you are dead.

SUCCESS WITH SHEEP

In various parts of Canada the interest in sheep raising is taking on new life. The work of the Sheep Commission has borne much fruit. Especially in the Maritime Provinces are there excellent opportunities for money making on the old farms.

On another page of this issue will be found an interesting story, which tells how one young man with little money and little experience made good on an old New England farm. Conditions in many parts of the Maritime Provinces are exactly similar. Let no young man discourage because of a big mortgage, opposition of friends and lack of experience. These will all give place to the metal that rings true. Note how it paid young Lee to pay $100.00 for a pure bred sire.

The article in question should interest many of our readers as at the present season the Dominion Live Stock Department is making an effort to encourage sheep raising in the Maritime Provinces by offering a number of pure bred sires and grade ewes at auction sale in central locations throughout our provinces by the sea.

POWER FOR THE FARM.

No subject is of more importance to the modern farmer than the matter of power. Hand labor is the most expensive kind, and in all lines of industry the greatest minds have striven to substitute mechanical energy for it wherever possible. Horse or mule power is also expensive because of the great amount of lost time during which these animals must be fed and cared for. The past quarter of a century has seen great development in the use of mechanical energy on farms, but nothing compared to what the present generation of farmers are likely to behold. We begin in this issue of Farm and Home a series of articles on the subject of farm power, prepared by an expert engineer, that is one of the most valuable expositions of the subject ever presented. It means a saving of much money to every farmer to carefully study this subject.

EDITORIAL NOTES

A good road, is a friend of the farmer. A mile of good road in his community is a bright spot in his life. It is an aid of education, religion and all things that help make the farm home life better.

The application of business principles to farming is proving that farming is after all the greatest business of them all, the main business from which all others branch.

Some Factors to be Considered in Purchasing Feed for Farm Animals.

Three factors stand out prominently in successful dairy production: First, the man; second, the cow; and third, the feed. It is only a phase of the latter subject that I am to discuss here.

We need to realize in order to comprehend the feeding problem in dairy-production that the dairy cow is an animated machine that has for her mission the conversion of feed into milk. Cow machines vary immensely in their efficiency. If we are to realize the most out of our feeds, we must, as a matter of course, see that they are fed to efficient cows.

Just what happens to the feed after it is consumed by the cow is a debatable question. As Ex-Governor Hoard, of Wisconsin, says, the inside of the cow is a dark place, and no man has yet been able to fathom all the mysteries wrapped up in the inside workings of her body.

MILK A GUIDE TO FEEDING.

There is, however, one fundamental principle that applies to cow machines as well as to all other machines, viz., that there must be in the feed ample and a properly proportioned supply of the raw materials that go to make up the finished product. What does the dairy cow need? If we analyze the product she manufactures, milk, we will get our cue. On an average, whole milk contains approximately the following ingredients:

Water ..... 87.22 per cent.
Ash ....71 per cent.
Casein and albumen 3.50 per cent.
Sugar ....4.88 per cent.
Fat ....3.69 per cent.

It stands to reason that the dairy cow in manufacturing this product must have the raw material, out of which the ingredients mentioned are formed, and must have it in sufficient quantity and in the right proportion. In addition to this, she must first of all be supplied with sufficient food material for the maintenance of her own body.

The first step in supplying the needs of our dairy cow is the analyzing of the different feed stuffs, and then submitting them to the chemical laboratory of the cow's stomach, and see how much and in what proportion the various feeding stuffs will supply the desired ingredients. In studying these feed stuffs there are several important factors to be considered.

DIGESTIBILITY OF FEEDS.

The total composition of a feeding stuff gives very little idea of its feeding value. Only that portion of the feed which can be digested and assimilated can in any way serve the animal for maintenance, growth or productive purposes. The disposition of the energy values in feeds is illustrated in the following table, constructed by H. P. Armsby, and published in the "Cyclopedia of American Agriculture."

ENERGY PER HUNDRED POUNDS.

	Clover hay.	Corn meal
Total energy	172,100 Cals.	170,900 Cals.
Loses in dung	73,600 Cals.	15,500 Cals.
Losses in urine	11,500 Cals.	6,500 Cals.
Losses in marsh gas	12,300 Cals.	15,900 Cals.
Total loss	97,400 Cals.	38,100 Cals.
Remainder	74,700 Cals.	132,800 Cals.

...This table takes the energy contained in the protein, carbohydrates, and other extracts and places them under the name of calories. (A calorie represents the amount of energy required to raise one pound of water four degrees F. in temperature.) It will be noticed from this table that clover hay contains more calories a cwt. than does corn meal, but it will also be noticed that the losses in the case of clover hay are much greater than in the case of corn meal, and that the remainder of the energy available for the use of the animal in its digestive and assimilative processes is much greater in corn meal.

The digestibility of a feed is a vital point in measuring its value, as it is the only part of the feed that can be used in the nourishment of animals. An animal hard at work needs to be fed plenty of grain in order to furnish the maximum pounds of nutrients that it is able to handle.

Many authorities measure the value of feed by its total digestible nutrients. This has been proved not to be entirely correct, for although a feed is digestible, it may contain more bulk, require a large amodnt of energy in chewing, in secreting digestive juices, and in warming up extra water for a suitable solvent. This is called by some, "the facility of digestion."

At the Connecticut Experiment Station (Storrs) an experiment was carried on with two 1,000 pound cows fed on a maintenance ration of 6½ lbs. of corn meal containing 4½ lbs. of digestible nutrients. The same cows required for maintenance 13½ lbs. of mixed hay containing 7.1 lbs. of digestible nutrients. In this instance one pound of digestible nutrients in corn was equal to 1.67 lbs. in mixed hay. Another experiment with pigs showed that 230 lbs. of digestible nutrients in skimmilk were required to produce 100 lbs. of gain. With skimmilk and shorts there were required 258 lbs. of digestible nutrients, and with shorts, 294 lbs.

MILK EASIEST TO DIGEST

All things considered, milk would rank first in facility of digestion, followed by concentrates, and roughage last. With roughage the facility of digestion is greater with early cut than late cut hay. It is greater with silage than corn stover.

An experiment with horses by Zunts and Hagerman, of Germany, shows the nutritive value of different feeding stuffs as follows:

Feeding Stuff.	Dry Matter.	Total digestible nutrients	Labor expended in chewing and digestion.	True nutritive value in terms of nutrients.
Medium hay (aver.quality)	85	39	21	18
Alfalfa hay cut first of bloom	84	45	22	23
Red clover hay	84	41	24	17
Winter wheat straw	86	18	30	—12
Oats (medium quality)	87	61	12	49
Maize	87	78	8	70
Field Beans..	86	72	11	61
Peas	86	69	10	59
Linseed cake	88	69	13	56
Potatoes	25	23	3	20
Carrots.....	15	11	2	9

It will be noticed from this table that 39 per cent. of the nutrients of medium hay are digestible, 21 per cent. of its nutrients are used up in chewing and digestion, leaving only 13 per cent as representing the net nutritive value. In a similar manner alfalfa hay has a net nutritive value of 23 per cent, clover hay 17 per cent. Wheat straw, however, required more energy in chewing and digesting than it contained in its digestible nutrients, making the net nutritive value, 12 per cent. less than nothing. It will be noticed that the grain contains a much higher percentage of net nutritive value.

ABOUT FEEDING STANDARDS.

To furnish a finished animal product the animal must be supplied with the right kind and right quantity of raw material. The standards that have been adopted as a result of numerous experiments indicate how much protein, carbohydrates and ether extract they need under various conditions and circumstances. While these standards are by no means absolute they serve our purpose as guides.

Our farm feeds usually conatin ample quantities of carbohydrates and ether extract, but where alfalfa and clover are not grown in large quantities, there is a likelihood of being a deficiency in protein, and when buying concentrated feeds, we usually buy them, not for the carbohydrates, but for the protein.

Before purchasing these we need to settle whether we need protein nutrients or total nutrients. If it is the former, we will select some nitrogenous roughage, as alfalfa, clover, or cow pea hay, and for grain, oil meal, linseed meal, gluten meal, or other highly nitrogenous feeds. The selection of these feeds and the grouping of them to make what is known as a balanced ration has been agitated through our institutes and the agricultural press, and are now familiar to all leading stock breeders. For properly balancing our live stock rations, we cannot put too much emphasis on the value of alfalfa and clover as abundant sources of digestible nitrogenous nutrients. 6

PALATABILITY.

The relish with which an animal eats its feed has much to do with the effect of that feed on the body. It regulates the amount eaten, and when properly assimilated the more the animal eats, the larger amount of product it turns out. By supplying an animal with food that it eats readily, it will help it to eat its other food better and in larger amounts. A palatable food stimulates the digestive juices and the supposed benefit of many of our stock foods rests in the palatability that they may impart to other foods. It is important to preserve this quality as far as possible in all feeds.

Hay should be so cured that the animals are anxious for it. Greediness of appetite is a great factor in economical production of live stock products. Any feed that will so regulate the animal as to keep it in good health and condition will add much to the final results. Linseed meal, corn silage and roots are all examples of feeds that are greatly relished by our live stock.

VARIETY.

Variety is very closely related to palatability. It helps to keep the appetite keen and the animal healthy and vigorous. By having several feeds, one can supplement the other as one may be deficient in ash, and this deficiency made up by the other. Recent experiments show that ash plays a very important part in the nutrition of farm animals. It is also known that the digestible protein in one feed does not necessarily possess the same nutritive value as the digestible protein in another feed.

By feeding a variety, one will make up where the other falls down, and the feeder can feel reasonably sure that he is giving his animals sufficient nutrients, even though we do not in our present knowledge, know the exact function of these nutrients.—Prof. D. H. Otis, University of Wisconsin.

Why I Spread Manure in Winter.

There are so many good reasons why manure should be hauled to the field daily and spread that it is always a wonder to me that more of my neighbors do not adopt the system which I have practised for years so successfully. I was visiting a farmer recently in an adjoining county who was famed for getting his work done promptly and with a minimum of help. With three horses and one man besides himself last spring he put in 25 acres of grain and 25 acres of corn.

"How did you do it?" I asked.

"By distributing the work over the whole year and not trying to do it all in a few days in the spring," was his answer.

Just then we happened to be going around the corner of the barn, and I saw the litter carrier run out of the stable and dump itself directly into the manure spreader. Some time later the hired man was seen hitching the team to the spreader and starting off for the field.

"You see," said my neighbor, "that when spring opens up, the manure will not only be in the field, but it will be spread as well, and we will be ready to start right ahead plowing the ground for corn instead of making a great big rush to get two or three hundred loads of manure drawn out to the field and spread in a very limited time."

I have found since I adopted the system of hauling out manure daily that I can get my spring work done one week ahead of what I previously did. At the same time, the fertility of the manure is conserved when applied directly to the land. Any of the soluble ingredients which are washed out into the soil are there ready to assist the crop growth next spring.

The fermentation in the manure heap, which I believe causes a great deal of loss before the manure ever reaches the field at all, is avoided. Institute lecturers have told us that this fermentation is due to the life activities of small plants called bacteria, and that these plants cannot work except in warm temperatures. When manure is spread directly it is frozen, and there being no chance to here, the bacteria are not able to work.

REASONS FOR HAULING DIRECT.

Hauling out the manure is good exercise for the horses. To be kept in the best condition horses should get a little exercise every day of the year, and as the manure on our farm is hauled out every day but Sunday, this work answers requirements nicely.

I have been told that this system cannot be followed on hilly farms as too much of the fertilizing ingredients would be washed away. Personally I do not believe that they would be washed very far, but had I a hilly farm, I would at least haul the manure out and le it where it would be convenient next spring.

Storing Seed Potatoes.

Seed potatoes in storage have three very definite requirements. They must be kept in a cool place well ventilated and dark. That the potatoes be kept cool is most important. The best temperature is from 33 to 35 degrees. If the temperature falls below 32 degrees there is danger of freezing, although it takes a slightly lower temperature to freeze potatoes than water. Good ventilation is necessary in order to prevent the spread of rot, and it is well to keep the potatoes dark, so they will not start to sprout at any time. A cool, dark, well ventilated cellar fairly dry is the best place to store seed potatoes on the ordinary farm. As spring comes in, seed potatoes should not be allowed to send out the long, pale, spindly shoots so often seen. This may be prevented by keeping the potatoes cool and dark. Some of the eastern growers, three or four weeks before planting time, spread their seed potatoes out in the light at a temperature of 60 to 70 degrees, and here allow them to develop sprouts a half to an inch long. These are strong, stubby little sprouts, that are not broken off in planting. It is said this process both hastens the maturity of the crop and increases the the yield.—B. H. Thorne, Hayne County, O.

HORTICULTURE.

The English Pomeroy Walnut

Owners of country estates and orchardists throughout the United States are just now devoting more attention to the culture of the English or Persian walnut than to any other industry. In fact, horticulturalists everywhere are tremendously interested in the propagation of this delicious fruit, both from a commercial and a aesthetic point of view.

For many years the English walnut has been cultivated with more than ordinary success in California, but only very recently has a sufficiently hardy variety been found to withstand the severe winters of the northern, eastern and south-eastern states. The circumstances pertaining to the discovery of an unusually harnut, may be related as follows:

The late Norman Pomeroy of Lockport, N. Y., while attending the Centennial exposition in Philadelphia in 1876, noticed a species of tree totally new to him. On investigation, he found it to be an English walnut tree of surprising beauty. It was the fall of the year and the ground underneath the tree was covered with nuts. These proved to be equal, if not superior, to the taste, to any of the imported varieties with which Mr. Pomeroy was familiar.

Being thoroughly versed in arbor culture, Mr. Pomeroy propagated young trees from this acclimated variety, feeling certain that from these he would ultimately obtain an English walnut of superior hardiness, capable of resisting the rigors of almost any climate.

He planted these young trees about his residence in Niagara County, N. Y., in the spring of 1877 and they grew steadily, making surprising growths each year until now they stand fully 50 feet high, with a spread to their branches of 40 to 45 feet, and yielding nuts of the finest quality and in great abundance. During the 35 years of growth where the temperature has frequently descended far below (ero, they have not had a single setback, maturing even earlier than the black walnut or the oak.

The elder Pomeroy's remarkable success has attracted the attention of nut cdlturists, horticulturists and progressive farmers in all parts of this country and in Europe. Nut specialists from California came east and examined the Pomeroy trees, and were well satisfied that a hardy variety for the colder states had at last been found.

Realizing the value of his father's discovery, Mr. E. C. Pomeroy, a few years ago, set out several orchards of the variety which had thriven so well, and all these trees are now in a fine state of healthy growth, and are known by nut growers all over the country. Only the other day a prominent physican in Atlantic City, just returned from a tour of Austria, told Mr. Pomeroy of the fame which his orchards enjoyed abroad. As an instance of this, the doctor mentioned the name of an Austrian nut grower, who declared the Pomeroy nut to be the very best variety in the world. These nuts do not become rancid in warm weather, having been kept for several years in perfect condition, without cold storage.

So profitable has the culture of the English walnut in the Eastern and Northern states become, that owners of farms and suburban tracts are beginning to set out large orchards, in preparation for the immense demand that is already being shown for this most edible of all nuts.

It is only a few years ago that the cultivation of the English walnuts for the market started in California, and today they are shipped from that state in car and train loads. To show, however, that the supply does not begin to meet the demand in this country, it may be stated that the United States consumes more than 50,000,000 pounds of English walnuts a year, and that about 27,000,000 pounds of these have to be imported every year. And when it is known that the price is steadily advancing, it will very readily be seen that the possibilities of commercial success are unusually great.

In California the nut industry is rivaling that of the orange; and even now, there are more dollars worth of nuts shipped from the state per year than there are of oranges. This statement is meant to include all varieties of nuts, although the English walnut figures largest in the proportion.

As to planting and cultivating, English walnut trees seem to require no particular soil, but should not be set out where it is low and wet. The trees should be planted 40 to 50 feet apart each way. A cultivated crop, such as corn or potatoes, with small fruit trees for fillers, can be made to yield an income for the brief period, compatatively, before the walnuts begin to bear. The pruning should be done between fall and spring, only such branches as would interfere with cultivation being removed.

In planting on the lawn the ground about the base of the tree should be kept spaded for three feet in circumference, but after the first year some well-rooted manure should be worked into the soil around the tree. No cultivating should be done after the first of August, as it would encourage further growth, and from then until winter the annual growth of wood is ripening and hardening.

No more beautiful shade tree is known than the English walnut. They make comparatively no litter, have a pure white bark, very closely resembling that of the white birch, and bear a heavy foliage with a rich, glossy leaf. They are almost immune from insect pests, a certain alkali sap which they possess serving to drive away the parasites which are so ruinous to the chestnut and nearly all other fruit trees.

In the English walnut at its best, the male and female blossoms mature at the same time, insuring perfect fertilization. Under favorable circumstances the trees will bear nuts three to five years from transplanting and increase in yield yearly. As a food, nuts are becoming less a luxury and more a staple article of diet. Their value is being recognized and they are being used more and more as a substitute for meat, one pound of walnut meat being said to equal eight pounds of steak, in nutriment.

In transplantation, most growers have found that two to four-year-old trees are most readily transplanted. At this age most of their growth has been in roots, and removal causes them to throw out additional roots, and thus give increased vigor to the tree. Then again, the smaller the tree, the more safely may it be packed and shipped to its destination.

The eastern grower has many advantages over his rival of the West. First of all, there is the consideration of freight charges, which on a carload from California amounts to such a sum that added to the cost of the nut, naturally increases the price per pound several cents over the variety grown in the East and placed in an Eastern market.

A California grower of English walnuts who recently visited an orchard in western New York declared the specimens which he saw there to be "the very finest I have ever seen." "You have a better flavored nut and you have proved beyond a doubt that the variety is thrifty and hardy," were his exact words. This same grower said that his few acres of young California trees gave him in 1911 a crop which he sold for $10,000.

AREN'T facts worth more than phrases?

Judge this, your dealer will return your money unless—

Regal Flour yields the *best quality* and the *utmost quantity* of bread per barrel; light, white loaves: flaky pastry.

You try

REGAL FLOUR

The After Care of Strawberries

After the strawberry crop is gathered the plants will require special cultural attention if they are to remain for the production of berries the succeeding year. The limited cultivation possible while the crop is developing in the spring is not sufficient to keep down weeds, so that under ordinary conditions these are present in a liberal number and generous size, and demand removal by the time one can get to them after the harvest. Old plants that have spent their energy will only obstruct the chances of the patch for another season. These need to be cut out with the weeds. The soil stirred but little and packed hard by the repeated trampings of the pickers, is in a poor state to begin the growth of new plants and ripen another crop of berries. Deep and frequent cultivation is the only way to put this soil in condition, and if it lacks in the elements of fertility there should be added and worked into the soil a quantity of well-rotted barnyard manure, or commercial fertilizers if the former is lacking, or both, to replenish the plant food taken out by the last crop. After this has been done the old crowns will send out runners in every direction. If these are permitted to establish themselves at random it would be but a short time till all trace of the old rows is obliterated. The prevention lies in training the new plants into rows corresponding to those occupied by the old plants. This is done by following a special method of culture. Run a one-horse plow about six inches from the centre of each row on both sides, throwing the soil away from the row, thus leaving an undisturbed portion one foot wide. With a hoe the weeds are removed and the runners pulled around so that the plants developing from them will be on the narrow strip unplowed. This confines them to the row and permits cultivation to the end of the season. In the cultivation that follows a rolling cutter fastened to the side of the cultivator will sever all new runners that attempt to grow into the spaces between the rows and thus keep the spaces clean. This stirring of the soil provides conditions for the development of sturdy plants.

Parasites Attack Caterpillar Pest.

According to Mr. R. W. Shepherd pomological expert, Como, the farmers who have taken care of their orchards will make money this year, and the prospects for crops generally are good, and there will be no caterpillar pest next season. Mr. Shepherd sized the situation up as a full crop of early apples, a fair crop of Fameuse, with McIntosh Red amost a failure. The apples are free from fungous growths, owing to favorable weather, and are of fine size

That there is no prospect of a tent caterpillar plague next spring, is attributed to a parasite attacking the caterpillars. He had examined thousands of the cocoons spun by the caterpillars, and found that in almost every instance they were barren, the caterpillars having failed to form chrysales. Any great rush of caterpillars was generally followed by a murderous parasite.

Apples Wanted.

A large fruit importer of Buenos Ayres, desires to be placed in communication with shippers of Canadian apples; c.i.f. quotations are required, for fruit in lots of 1,000 barrels, and boxes in similar quantities. In each of these cases, further particulars may be obtained from the Department of Trade and Commerce, Ottawa. Mention inquiry No. 246.

Dr. Morse's Indian Root Pills

are made according to a formula in use nearly a century ago among the Indians, and learned from them by Dr. Morse. Though repeated attempts have been made, by physicians and chemists, it has been found impossible to improve the formula or the pills. Dr. Morse's Indian Root Pills are a household remedy throughout the world for Constipation and all Kidney and Liver troubles. They act promptly and effectively, and 49

Cleanse the Syster

ALWAYS WINS
field competitions because of its wonderful capacity

See The "Bissell"

Disc Harrow in action and you'll buy no other. Write for Harrow Catalog to Dept. M

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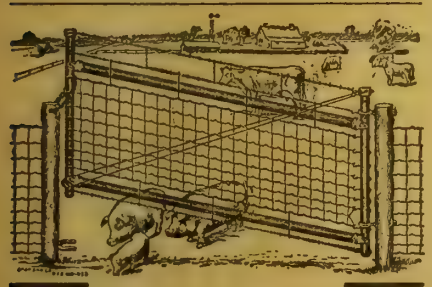


A Practical Gate

PRACTICAL BECAUSE IT CAN BE RAISED QUICKLY AND SIMPLY TO LET SMALL STOCK THROUGH (see illustration), or to lift over deep snow in winter. Clay Steel Farm Gates cannot bend, burn, break, sag, blow down or rot and are fully guaranteed. Sent for 60 days' free trial. Have one or two for next winter.
Send for illustrated Price List.

Canadian Gate Co., Limited
54 Morris Street, Guelph, Ont.

NEW CENTURY WASHING MACHINE

The Washer of the Present and the Future

Scientists tell us that some day no person will do hard manual labor—machines will do it all. The first great step has already been accomplished, as far as household work is concerned. The New Century Washer, not only takes all the hard manual labor away from washing, but it washes clothes better than such work has ever been done before. The water tap furnishes the power, the New Century does nearly all the rest.

Washing-machines are not new but the New Century is. The other kinds did *some* of the work, the New Century does almost *all* the work. The others gave trouble, the New Century saves trouble. The difference is in the patented and exclusive features of the New Century. Ask your dealer about them or send to us for full information.

CUMMER-DOWSWELL, LIMITED
HAMILTON, ONTARIO

If you have young children you have perhaps noticed that disorders of the stomach are their most common ailment. To correct this you will find Chamberlain's Stomach and Liver Tablets excellent. They are easy and pleasant to take, and mild and gentle in effect. For sale by all dealers.

Apple Scab and Grading of Apples.

Our correspondents almost everywhere report that apple scab is very prevalent this season. Undoubtedly there will be more than the usual tempation to brand as "No. 1" apples not strictly up to the grade. The reputation of Canadian apples has suffered in the past on account of the fraudently and carelessly packed fruit of a comparatively few dealers and growers, working a great hardship to those who grow clean fruit and pack it honestly.

Special attention is drawn, therefore, to Section 321 (b) (111) of the Inspection and Sale Act, Part 9, which provides that No. 1 fruit shall "include no culls and "consist of well grown specimens of one variety, sound, of not less than medium size "and of good colour for the variety, of normal shape and not less than 90 per cent. free from scab, worm holes, bruises and other defects, and properly packed."

An increased staff of fruit in spectors will be on duty this season both at shipping points and at the point of distribution, and every provision is being made to examine as large a quantity of fruit as possible. Fruit for local markets must conform to the law as well as that for export.

Copies of the Inspection and Sale Act, Part 9, (dealing with fruit and fruit packages) can be obtained on application to the Fruit Division, Ottawa.—A. McNeil, Chief Fruit Division, Ottawa.

Effect of Sawdust on Plants.

There is in Great Britain a general belief among farmers and gardeners that farmyard or stable manure made with sawdust as litter is injurious to plants, or at least is not so valuable as that made with straw. This belief is apparently aslo widespread among gardeners in America, and in order to ascertain if there is any real foundation for it, experiments were begun in 1908, and continued on a large scale for three years with flowering plants grown in greenhouses. Comparisons were made between (1) cow manure made with sawdust as litter; (2) cow manure made with straw or chopped corn stalks as litter; (3) cow manure free from litter of any kind, the cows being on a cement floor without bedding.

The manure was collected and left in a heap until some fermentation had taken place. This broke down the strawy litter considerably but the sawdust had quite a fresh appearance when it was applied. The same amounts of the different manures were used, and they were all thoroughly worked into the soil. The plants tested were roses, carnations, chrysanthemums, and sweet peas. In no case could any harmful effect of the sawdust be detected, and in fact, taking the average of the three years the manure containing it gave slightly the largest number of blooms. For other reasons, however, it was concluded that for the particular circumstance manure without litter of any kind was the best.—Journal of the Board of agriculture.

Paying Apple Varieties

"The older orchards of this country have grown up in connection with general farming, and very few men have kept any records of their trees. Further, the age of profitable bearing has come down probably five years in the last decade, by reason of intensive cultivation, and modern methods of pruning. Where in our early experience we pruned to make good appearing large trees, we now prune to shorten in and to induce bud growth in bearing wood to get apples. I really do not know what variety is paying best. Gravenstein, Ribston, Stark, Ben Davis and Salome make up the bulk of my crop. The best market apple of the bunch, the King, is, I think, the least profitable of these, and I would say, in twenty years, the Baldwin has been the most profitable. In planting a commercial orchard, I would use these varieties named above, adding for fillers the Wagener. My apples in the past five years in the Berwick Co-Operative Association have averaged me as follows:—

Kings, $2.7 ; Ribstons, $2.45; Baldwins, $2.62; Stark, $2.57; Spy, $2.96; G. Russet, $2.99; Gravenstein, $8.70; Blenheim, $2.62. These prices are for No. 1 stock, while No. 2's were 50cts. less. We furnished the barrels. This company shipped 40,000 barrels last season.—S. C. Parker, Berwick, N. S. in Farmers' Magazine.

Protection is cheaper than feed

MAKE your live stock comfortable this winter and your profits will show an increase. When you put up a new house, barn, chicken house or farm building you want a durable roof that is not going to leak—one that retards fire. You will get this kind of a roof if you use

Certain-teed Rubber Roofing

Quality Certified Durability Guaranteed
Comes in Shingles or Rolls

D you have to feed your chickens additional corn to keep them warm in winter? You can make your chicken house cozy, dry and warm by using *Certain-teed* Rubber Roofing on the sides as well as the roof. *Certain-teed* Roofing is made from best materials—that is why we guarantee it for 15 years—but it lasts much longer.

Valuable Book B-U-5 "How to Build for Less Money FREE

You do not have to wade through a maze of complicated directions

to lay *Certain-teed* Rubber Roofing—hammer and nails only necessary, just the thing for that chicken house or pig shelter that you want to erect quickly and yet have it light, durable and inexpensive. *Certain-teed* Rubber Roofing is more durable than shingles or metal and costs less

Certain-teed Rubber Roofing is sold throughout the provinces of Canada by local dealers and is distributed by wholesale jobbers in St. Johns, Halifax, Quebec, Montreal, Ottawa, Toronto, London, Winnipeg, Calgary, Saskatoon, Edmonton, Regina, Moose Jaw, Brandon, Vancouver, Victoria.

GENERAL ROOFING MFG. CO.
Largest Roofing and Building Paper Manufacturer in the World

SAVE LABOR IN THE COW STABLE

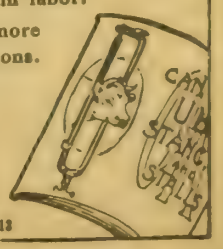
This book will show you exactly what you can do with your present stable buildings to make them more sanitary and easier to clean and how much it will cost.

Wooden stalls rot out and make dirty stables. Iron and steel equipment is not expensive and it saves its cost many times over in labor.

Chains and Halters are out of date. Learn more about the stronger and simpler Stanchions.

We are willing to supply farmers with a FREE COPY of this clearly illustrated book.

Your Old Barns can be Re-fitted. Drop us a line and get your free copy of this illustrated booklet.



CANADIAN POTATO MACHINERY CO.
DEPT. H GALT, ONT. Limited 13

Advertise in The Maritime Farmer.

St. John Market Report.

GRAIN—Wheat, $1.00 to $1.10 bus.; Oats, 50c to 60c.; Peas, $2.00 to $2.25 bus.; Buckwheat, 50c to 60c.

FEEDSTUFFS—Bran, $1.45 in bags; Shorts, $1.55; Middlings, $1.55; Corn Meal, $1.85.

GRASS SEEDS.—Timothy, $10.50 per bus.; Com. Red Clover, 28c. lb.; Mam. Red Clover, 30c. lb.

LIVE STOCK.—Butcher's Cattle, 4c to 5c lb.; Stockers, $20.00 to $30.00 Milch Cows, $40.00 to $60.00; Sheep, $4.00 to $6.00; Lambs, 3.50 to $4.00 each; Hogs, 7c to 8c. lb.

DRESSED MEATS— Beef, (carcass) 6½c to 8c lb.; Mutton, 6½c lb.; Vea,, 9c lb.; Pork, 9c to 10c lb.

HORSES—Drafters, $200 to $250; Roadsters, $150 to $200.

DAIRY PRODUCTS — Creamery Butter, 30c to 35c lb.; Dairy Butter, 24c to 28c lb.; Cheese, 14¾c to 15c lb.

POULTRY TND POULTRY PRODUSTS—Eggs, 25c to 35c doz.; Fowl, 15c to 16c lb.; Chickens, 20c to 22c. lb.; Ducks, 20c to 22c lb. Geese, none Turkeys, none.

Fruit—Apples, $1.25 to $2.00 bbl.; Honey, 18c to 20c.

MISCELLANEOUS — Hay, $16.00 to $18.00 ton; Straw, $4.00 to $5.00 ton; Beef Hides, 9½c to 10½c.

VEGETABLES.—Carrots—$1.25 to $1.50 per bbl.; Potatoes, $1.00 to $1.25 bbl.; Turnips, 75c to $1.00 bbl.; Beets, $1.50 to $1.75.

The market for all linesof produce is holding fairly good. There is a tendency in some lines toward a decline. The potato market is in a peculiar condition. Buyers are a little shy because of stock not showing keeping quality. The crop is a good one, when all sections are considered. Our neighbors in Northern Maine and Ontario, have a big yield. But with all this we are looking for fair prices after the first of the year. Our market has broadened considerably in the past two or three years. If Ontario or the United States do not require our surplus, the West Indies can be counted on to furnish us with a reasonable sure outlet. The time has passed when the grower of good potatoes can be caught with stock he cannot dispose of at a reasonable margin. Turnips and other root crops have not yet come on the market in any quantities. At this season there is rather too much produce forced on the market. The growers in the river sections have to get what they have to dispose off to market while navagation is open. We would strongly advise men who have railway communication, not to be too anxious to market their produce. This market at best is only a small one and every advantage is taken of an over supply.

Poultry has hardly maintained the place it should have, considering the quality of the stock offered. Poultry raising in New Brunswick shows signs of development. If the growth and quality are maintained, outside markets will have to be secured, otherwise prices will decline to a point where the raising of chickens will be unprofitable. There is another side to the poultry business that shows a brighter prospect. Eggs are high, higher than they have been for a number of years at this time and they are going to stay. Prince Edward Island gave this market a few hundred cases a few weeks ago and there was joy in the consumer's heart for a short season, as prices went down two cents a dozen, but some of the stock was not up to sample and New Brunswick production is again

Order Your Thresher At Once from The Sussex Manufacturing Co., Ltd.

THE threshing season will soon be at its best and you will want a Thresher in a hurry. We have ready for shipment, Two, Four and Eight Horse Power separators. Either of these machines can be supplied with Tailings Elevator, Bagger and equipped with Trucks. Every machine is given a thorough testing before leaving the factory and is fully guaranteed.

Four Horse Thresher with Tailings Elevator.

Are you thinking of buying a Root Pulper or Farmer's Feed Boiler this season ? If you have not one, you certainly should have. We have a large stock and you can have circulars on same for the asking.

We also have, for the farming trade, Hay Presses, Wood Cutters, Garden Seeders, Grain Grinders, Rubber Belting, etc. Write at once,

THE SUSSEX MANUFACTURING COMPANY LIMITED, SUSSEX, N. B.

Built To Give Lasting Service

NO cream separator in the world is made from finer materials than the STANDARD. For instance, the Gear Spindles are made from a special grade of tool steel, ground and polished—a steel so hard and wear-resistent that tools are made from it, for drilling through ordinary steel. This special tool steel costs five times as much as steel in ordinary separators, but ten ordinary spindles wear out before one STANDARD spindle.

The STANDARDS' Discs are made of steel, heavily and smoothly tinned. Stand on one and test its strength in comparison with alluminum or tinned iron discs.

The Bowl Bottom is made of special steel forging. If the STANDARD'S bowl falls on the floor it won't bend or break.

Standard

Not the Only Reason

In fact, every part of the STANDARD cream separator is built to give lasting service. But that's not the only reason you have for selecting the Standard cream separator. There are, for instance, several features that add greatly to the convenience and satisfaction of owning a STANDARD.

For example, there is the Wide Open Bowl, so easy to get at and wash. No tubes to clog up, either. Then there is the disc holder on which the discs are all washed together in about one minute. The discs are numbered so that they cannot be put together wrong.

Then, too, the STANDARD Bowl doesnt leak. That's because the bowl shell fits tight without screwing down on top of a rubber ring, causing wear on the rubber and allowing the milk to leak through when the bowl is revolving.

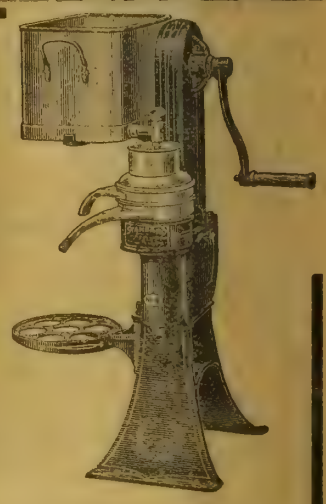
Another good feature is the Interchangeable Clutch. When you stop the crank the gears all stop and the bowl runs down of its own accord and without wear. The Interchangeable Clutch also enables you to "pump" the handle and start the STANDARD quickly and easily.

Other Big Features

Other big features of the STANDARD, such as the Self-Oiling System—The Centre Balanced Bowl—The Liberal Space Between Disc Edges and Bowl for Accumulation of Impurities—The High Crank Shaft—The Low Supply Can—The Enclosed Dust-Proof Gearing, were emphasized in previous advertisements.

So why go further. You've already learned enough to know that the Standard is the convenient and efficient machine, and is built to last long. In fact, tests go to show that the STANDARD should give 25 years of service.

One test given the STANDARD was equal to skimming 100 pounds of milk every day for six years. At the completion ef the test, there was no wear visible on the working parts. The STANDARD was easily good for 20 years of service after the test.



Write for Booklets

We take it for granted you are interested in this test. And we would like to send you our booklet describing it fully. Also booklets showing construction of the STANDARD and containing records of skimming tests. Send us your name and address promptly. The booklets will be mailed to you by return mail.

The Renfrew Machinery Co., Limited, Head Office and Works: Renfrew, Ont.

Sales Branches: Winnipeg, Man., and Sussex, N. B.

THE BUTTER-BUYER said—
"Your two lots of butter taste all right—but will they keep? What kind of salt did you use?"

THE FIRST FARMER said—
"I don't know—the storekeeper gave me what he had".

THE SECOND FARMER said—
"I used Windsor Dairy Salt".

THE BUTTER-BUYER said—
"I want your butter. I know all about Windsor Dairy Salt—and the man who is particular enough to always use Windsor Dairy Salt is pretty sure to be particular to make good butter.

I'll take all you make—as long as you use

WINDSOR DAIRY SALT

69D

CHALLENGE COLLARS

Are a boon to every man who cares for his personal appearance.

Challenge Collars are not shiny rubber collars. They have a dull linen finish. In fact, you can't tell them from linen. Keep up appearances—keep down laundry bills.

Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

The Arlington Company of Canada, Limited, TORONTO

3

FOR SALE

A well matured Guernsey bull, a handsome fellow and gentle as an old cow. A dandy sire, very active and dependable. His breeding will satisfy the most exacting, he's in fine condition as he has been well cared for. Somebody will get a great bargain as he will be sold for only a small p. c. above what he would bring on the market for beef. The figure at which he is held will put him on the cars at St. John. Full particulars given on enquiry. SARAH E. MOSES SMITH, Woodward Cove, Grand Manan.

in demand at an advance.

Fruits of all kinds are plentiful and of excellent quality. Our fruit growers are now producing a fine line or I should say, those men who are making a study of this particular branch, York and Carleton counties are leading in fruit culture. G. C. Cosser, at Lower Gagetown, is making a distinct success of fruit growing. He has already shipped a quantity of apples to England, where his stock has taken a place among the high grade fruit. The right variety of fruit carefully and honestly packed soon put him in the market right. This applies, not only to fruit, but all lines of produce.

Dairy products are firming up. There has been no radical advance, but a steady gradual stiffening of prices. St. John milk dealers are agitating an advance of one cent per quart to consumers. In fact, we understand this advance is to be tried out at once. West-side dealers are asking and receiving 8c per quart, we hear to-day. We might say in connection with these comments, that we do not know of a business which will stand more reformation than the retail milk business as now conducted in the city of St. John.— G. W. Hoegg.

A Council of War.

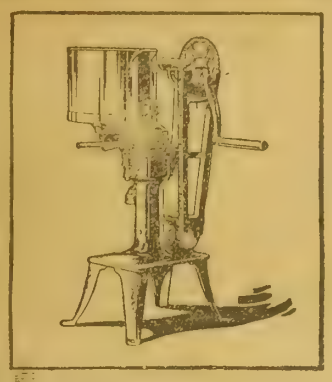
Editor Maritime Farmer:

The question which is being most seriously discussed among the fruit growers of the Annapolis Valley at the present time is what regulations shall they ask the Government to pass in regard to future importation of nursery stock into the Province. As has been quite extensively advertised, from two to three per cent. of the nursery stock shipped into Nova Scotia during the past year or more has been found to be infested with living San Jose scale. During the past summer the Department of Agriculture has spent thousands of dollars endeavoring to eradicate this invasion of the scale. Assuming that it may be possible to eradicate what scale has already gained entrance to the Province, the fruit growers are now interested in preventing any more importation of this dangerous pest.

With this in view, a public meeting of fruit growers will be held at the Kentville Court House on Thursday, Oct. 24th at 2 o'clock at which the fruit growers and others interested will be given an opportunity of presenting their views to the Government with data upon which to pass regulations upon this important matter.—M. Cumming.

Now Importing Cattle.

Both Canadian and Mexican cattle are being imported under present conditions. Mexican are mainly thin cattle for maturing purposes, but Canadians are beef, all ready for the butcher. Several consignments from Toronto, Ont., have reached Buffalo this week, and speculators gathering them have secured handsome profits. Ontario cattlemen find their usual export outlet at this season closed, owing to the relative cheapness of Argentine beef in Great Britain, but Toronto is $1 per cwt. lower than Buffalo, and several heavy shipments are expected to cross the Niagara frontier in consequence. Cattle selling at $7 in Toronto are easily worth $8 at Chicago or Buffalo, and the duty, intended to be prohibitory, has ceased, temporarily at least, to be a barrier. Only the Mexican insurrection has prevented 25,000 Mexican cattle from crossing the Rio Grande weekly this summer. Most of the have been siezed by the revolutionists, and gathering on the open range under present conditions is impossible.—Live Stock World, Chicago.



IHC
Cream Separators Have Trouble-Proof Neck Bearings

GRANTING that a cream separator is a money making necessity on every farm where three or more cows are kept, there are two points to make sure of when you purchase your machine—close skimming and long life.

There is very little skimming difference between separators when new but there is a tremendous difference in the length of service they will give. The difference is due to design and mechanical construction. To take one example of mechanical efficiency

IHC Cream Separators Dairymaid and Bluebell

have trouble proof, self aligning, bowl spindle bearings. The bowl spindle bearing or neck bearing is an extremely important part of the separator mechanism. Its business is to reduce to the lowest possible point the vibration of a heavy bowl whirling at the rate of 6,000 or more revolutions per minute. A rigid bearing in such a place is impossible. To make a flexible bearing capable of withstanding the terrific strain requires the most accurate balance of strength, firmness, and elasticity. In I H C cream separators this balance is acquired by the use of one spring. There is only one wearing part, a phosphor bronze bushing. The entire bearing is protected from dirt or milk by steel cases. There is but one adjustment and that easy to make.

Go to the I H C local agent who handles these machines and ask him to show you how successfully this bearing meets all the difficulties imposed upon it. He will also show you many other reasons why I H C cream separators, made in four sizes, are the best. Get catalogues and full information from him, or write the nearest branch house.

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The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A.

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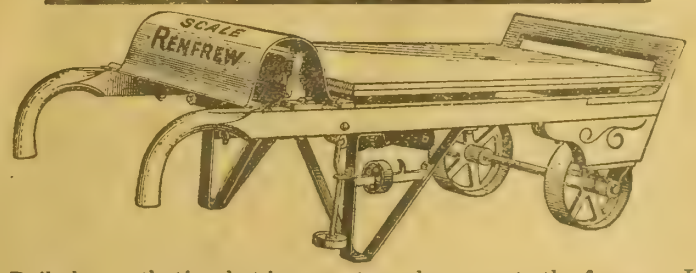

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McClary's Sask-alta STEEL Range

LIVE STOCK.

Maggots and Sheep.

August and September are probably the two worst months of the season for fly attacks on sheep. Prevention is better than cure, and shepherds attending sheep at present should be careful in keeping them scrupulously clean. Fly attacks will occur at times in the best-managed flocks, but with less virulency. Keeping sheep should be properly dipped at least twice a year with a reliable mixture early in summer and late in autumn. It is sometimes desirable in the depth of winter to dip sheep if they are badly infested with vermin. They settle and thrive so much better that the small outlay for dipping is amply repaid. Fresh weather should be chosen, and the cold air taken from the dip by adding hot water occasiooally, which will generally prevent any ill-effects fram the operation. Every sheep should be submerged for one full minute, otherwise the most efficacious dip will prove ineffectual. Frequently both labor and cost are litefally thrown away by entrusting this important operation to careless and incompetent men who may consider it a dirty job, and the sooner over the better. In dipping in this careless fashion the sheep are no sooner into the pool than they are out again, and when carrying a rough coat of wool in the autumn and winter they are never wet to the skin at all. If a thing is worth doing at all it is worth doing well, and it will pay any owner of sheep to give the operation of dipping a close personal supervision, standing with watch in hand to see that both sheep and dip get justice. Frequent dipping, however, will not prevent fly attacks in their season for more than a week or two after the operation. The atmosphere exhausts the offensive smell, and its resisting powers become neutralized. Light warm showers and bright intervening blinks of sunshine or thick dewy mornings with sunshine during the height of the day are the weather conditions most favorable to fly attacks. Scour in sheep renders them very susceptible to attack; indeed, there are probably more attacks from this cause than from all other causes combined, hence the necessity of cleanliness. Whenever scour is observed in a sheep it should be caught and thoroughly cleaned. All the soiled fringes of wool should be carefully shorn away, gnd the parts cleaned and dried. A handy pocket bottle should be kept by shepherds constantly during the season, for the development of fly attacks is the work of a few hours. A very good bottle is one part of Cuff's oil to twenty parts of water. This should be lightly sprinkled over the discoloured parts and rubbed well in with the hand. Other dressings may be necessary if the maggots have developed to any great extent. Fly attacks are also traceable to starlings. Opinion is divided as to whether these birds are the friends or the enemies of sheep owners. Possibly they may be both at the same time. They pick large numbers of keds from the sheep when they crawl to the surface of the wool in bright sunshine, and are extremely useful in this way. On the other hand, they are a frequent cause of fly attacks, baecause when picking the parasites from the backs of the sheep they drop their excrement on the wool, which is at once selected as a cluster spot for a fly deposit. It is not unusual to see hundreds of those bright active birds perched on the heads and backs of sheep, and in the fly seasons numbers of sheep are "struck," although the weather is not damp with desultory bursts of sunshine nor any scour apparent in the sheep, demonstrating fully tnat it is to the peculiarly foetid nature of the excrement of starlings that the pest is attributable. When the fly-blow is allowed to develop into maggots before being touched it entails an enormous amount of suffering on the poor animal as well as loss to the owner. Such carelessness is almost unpardonable in an attendant. Sometimes sheep are eaten through the bowels by maggots, and death, of course ensues. Such cases are indescribable and revolting to humanity. In cases where the skin and flesh of the animal are broken the maggots should be dislodged by means of gently scraping with the back of a pen knife and Cuff oil rubbed well into and about the affected parts. Sheep should never be permitted to become infested to such a degree, as the indications of maggots are generally apparent even to an ordinary observer, When attacked sheep display much restlessness. They will frequently shake their tails, turn round, and scratch with their teeth, run forward with the head extended and squat down suddenly. They will repeat this uneasy jerking hour after hour with short intervales of rest, and not infrequently they isolate themselves from the fiock and lie in an obscure and hidden corner of the field.—Farm and Home, England.

To Ensure Good Chewing.

The cow, sheep and animals that chew the cud have four stomachs and a very perfect arrangement for grinding their food.

Grain should be fed with roughage, as then it goes into the first stomach and will be rechewed. If the grain is eaten alone it is apt to go to the third stomach and so miss the rechewing.

To make sure that the feed is thoroughly chewed, feed it with roughage. The best way is to cut the hay or straw, mix the grain feed with it, then it will go through the whole grinding process.

MOLASSINE

MOLASSINE HORSE FOOD MOLASSINE CATTLE

Do You Know That

MOLASSINE MEAL

Will cut down your Feed Bills.

Will increase the flow of Milk from your Cows.

Will fatten Beef Cattle and Pigs quickly.

PERHAPS YOU DO

As most Farmers are aware of these facts.

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Buy some and prove it for yourself.

All Feed dealers handle it.

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Loss in Weight of Fat Cattle

Cattle lose in weight on their way to the slaughter-house. This loss should be calculated as exactly as possible by the owner, so that on consulting the quotations of the slaughter-houses he may be able to ascertain the real worth of his cattle.

The above work endeavors to determine the amount of this loss.

Messrs. Herter and Wilsdorf asked the exhibitors in the 35 th Berlin Cattle show to give them the exact weights of the animals before they were sent to Berlin. On their being again weighed when they arrived, it was found that 25 calves had lost on an average 5.16 per cent., and 238 full-grown animals 5.47 per cent.

At the 36th Berlin Cattle Show, 1910, more exact details were obtained.

The losses in weight on the journey showed great individual differences, and did not appear to depend alone on the time involved. Differences of age and sex, of biological and physiological condition, perhaps also of food, were doubtless the other determining factors.

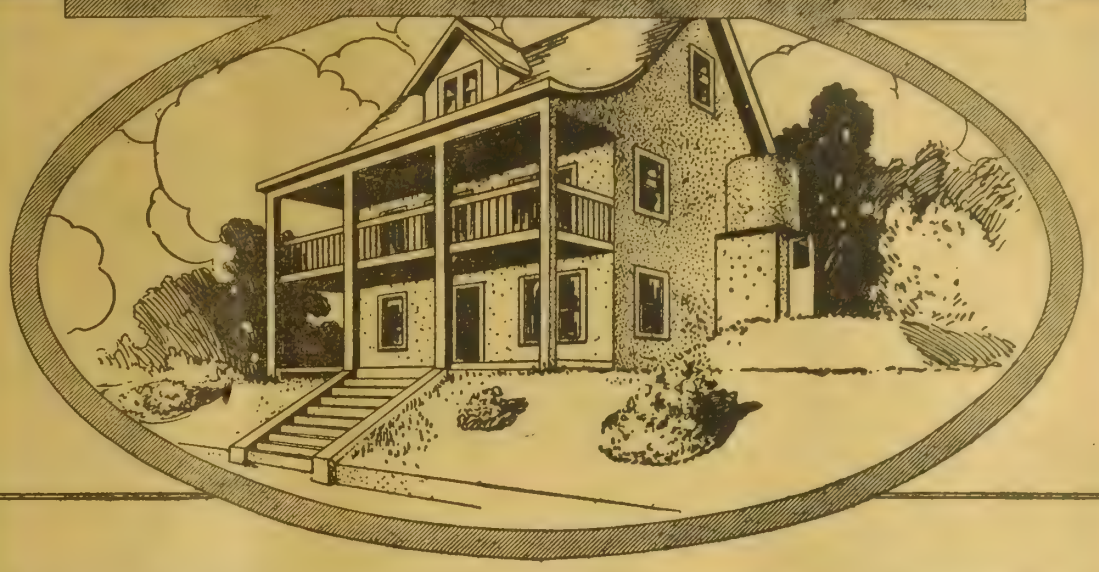
The following shows the average results obtained:

Forty-two calves, up to 4½ months old, weighed an average of 3.33 cwts. each, lost 4.2 per cent. weight during transport over 167¾ miles of railway, making 23.60 miles of railway travel lose 2.2 lbs. weight in each animal. Eleven bulls aged 3½ years and up weighed 18.77 cwts. before a railway travel of 148½ miles, which lost them 4.5 per cent. of their weight, 3.47 miles of railway travel causing 2.2 pounds of loss to each bull. Twenty-seven cows aged 3½ years and up and weighing 14.34 cwts. travelled 138 miles with a loss during the trip of 4.9 per cent. of their weight, 3.85 miles of railway causing 2.2 pounds loss. Eighteen young bulls under 3½ years and weighing 17.05 cwts. lost 5.5 per cent. of their weight in travelling by rail 159 miles, a loss of 2.2 pounds for each 3.10 miles carried. Eight cows from 2½ to 3½ years of age and weighing 12.55 cwts., lost 5.9 per cent. of their weight in travelling 204½ miles, a loss of 2.2 pounds for each 5.40 miles carried. Fifty steers aged 3½ years and up and weighing 15.69 cwts. lost 6.1 per cent. in travelling 210½ miles, a loss of 2.2 pounds in weight for each 4.28 miles carried. Forty-three heifers and steers under 3½ years and weighing 11.68 cwts. lost 6.5 per cent. weight in travelling 248½ miles, a loss of 2.2 pounds for each 6.46 miles carried. One hundred and forty-five steers from 2½ to 3½ years old weighed an average of 13.42 cwts., and lost 7.3 per cent. in travelling 192 miles, making the loss of 2.2 pounds cover but each 3.85 miles of travel.

Trans-Atlantic Cattle Trade Dwindling

That the export trade in beef cattle from Canada and the United States to Great Britain has been rapidly falling off is made evident by figures from the Deptford Foreign Cattle Market. This is one of the British coast markets established for the reception and slaughter of imported animals, and for years it has received supplies only from Canada and the United States. In 1907 the number of cattle received was 184,971, but this dwindled down to just under 100,000 in 1811, and for the first half of this year the total was only 21,547 head. This reduction, however, must, in all fairness, be partly attributed to the disturbed industrial conditions in the shipping trade. But at the same time the situation has became so serious that the committee in charge have been casting about to know how to meet the financial losses of the market through lack of business, and they have had to advise the taking of severe radical steps in order to make the market pay its way.—The Nor' West Farmer.

Write for the "Concrete Book"



IN Canada, where the winters are long and cold, houses must be solid and substantial. No "gingerbread frills," such as distinguish California bungalows, can be permitted. Canadian homes should be built to defy wind and cold, to keep warm inside when it's thirty below out-doors.

IT is because Concrete, of all materials, best withstands wind, water and cold, that it is fast becoming popular with Canadian home-builders. Concrete houses are warm in winter, requiring less coal for heating; they are cool in summer. A Concrete house never needs repairs; because, instead of decaying, it actually grows stronger with time and exposure to the elements.

VERY attractive architectural effects may be obtained with Concrete, especially for houses in the country, where the rough concrete surface harmonizes with its surroundings.

SINCE it never requires repairs, the first cost of a concrete residence is its last cost; and it is cheaper, for this reason, than any other kind of home.

NOT only is Concrete the best material for house-building. It may also be used in scores of other ways around the home and on the farm. For each of these purposes it is the best material known.

IF you haven't investigated the use of Concrete around the home and on the farm, write now for our free book, which tells all about the mixing and placing of Concrete, and describes hundreds of practical uses for it. Just say "Send me your book" in a letter or on a post card, and the book will be sent you absolutely free.

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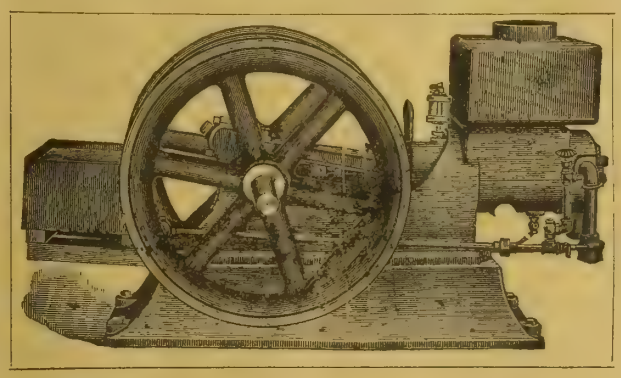

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Send for our latest catalogue and agents proposition

THE SUSSEX MOTOR CO. Ltd. SUSSEX, N. B.

THE HORSE.

The Nose Bag and Wisdom.

Now this is no argument that a horse knows more than a man, but—

A farmer sent his hired man to town with a load of hay. The hired man was provided with nose-bags to feed oats to his team. One of the bags had straps so short that when the man fastened them the horse's nose was shoved too deep down into the bag, and the horse, (without check-rein, thank, goodness!) deliberately hooked the end of the wagon-tongue into the mouth of the bag, and tore the bag loose from his head, and ate the oats from the ground.

The straps of the second nose-bag were so long that the hungry horse could not get at the oats at all, so he kept tossing his head, thus throwing the oats into his open mouth.

Here are two horses which knew more than their driver.

A man was plowing. He had fastened the reins across his shoulders in the usual fashion, leaving both hands free to guide the plow. But the reins were all skew-gee on his shoulders, and kept pulling his horses "gee," whilst he yelled "haw"—and this man reported to the owner of the horses: "Them horses are dum fools!"

All right!

When a collar hurts, the average horse winces upon being asked to throw his weight into the collar. Later, he becomes what we foolishly call balky, perhaps— and finally he fights like an army mule when someone tries to put a collar on him. That's knowing something!

I am personally acquainted with a horse which simply hates a certain blacksmith who once upon a time nailed a bad-fitting pair of shoes to his feet and inflicted sore feet upon this horse for all time to come.

There are men in this world of ours cruel enough to fasten a horse with a heavy rope in a stall and then beat the horse WITH A CHAIN. But such men have "bad luck," and forever afterward if the horse which has received this sort of dicipline hears a chain rattle he will bolt in terror, whether hitched to a mowing-machine, a carriage with children in it or a heavy wagon loaded with produce. This is either horse sense or horse revenge.

A fine horse doesn't know so much as an inferior dog, but a horse has some sense. Perhaps it would remember this we would get along better with the motive power on the farm. Some wise men resort to flattery to gain the good will of horses.

A Need for Good Horses.

The farmer who breeds or buys a lot of ewes does so primarily with a view to raising lambs and, in the second place, to converting the ewes, when they cease to be desirable as breeders, into mutton and wool.

He who owns cows uses them first for dairy and breeding purposes, and as soon as they cease profitably to "fill the bill" in those respects, converts them into beef, or sells them as they are.

But how often does the owner appear quite unable to see any use for the most valuable individual animal on his farm, possibly a well-bred mare? He sees no value in her other than as an item in his cultivating machinery. Possibly it may strike him that he would like a colt by her, but he often fears, through ignorance, to endanger her usefulness or her health if he puts her to the additional labors of maternity. He does not know that, if properly used, he adds to her value in both these respects. He has not studied the matter, perhaps.

If, however, after consulting his neighbors, he determines to try for a colt, he knows no better than to mate her with the nearest and cheapest stallion that comes handy, without paying any special attention to that stallion's breeding or fitness of crossing with his pet mare.

I remember when once upon a time I was standing at his stable door in a small Illinois town, talking to a man who had several stallions, a well appearing farmer drove up with a nicely bred and impressive-looking Clydesdale mare hitched to the back of his wagon. While he and the horseman went into the stable, I looked the mare over and thought to myself; why, here's a man who owns a little gold mine. I wonder if he knows it? Curious to get this query answered, I followed them into the stablestable, somewhat, as I thought to the disgust of the horseman, who, however, said nothing; and I heard the following conversation:

Horseman—"Well, it's all the same to me which you use, but here's the hoss I should recommend. He's a Clydesdale, same as your mare, and he has all the points she is short of. I paid a long price for him two years ago; he's just six now; and as she is about two-thirds bred, and a good one, she one, she will be apt to throw you a colt you may be proud of. He comes rather high—I always get fifty dollars for his services, but as you are a neighbor and as I would like to have a colt by him in the neighborhood that would do him justice, I'll give you the chance for twenty-five dollars. He'll cost you less to rear than a scrub and pay you well."

Farmer.—"That is more than I can give just now. I was told you could give me the service of a good horse for ten dollars."

Horseman—"Well, yes; I have a mighty good hoss you can use at ten dollars cash down, and you can bring the mare back if needed. Joe," to his stable man, "bring out Greg Eagle. He is getting a little old, and though he's a thoroughbred Percheron I got him cheap because the importer was hard up. He has done me good service at my other place in Indiana."

So Grey Ragle came out, a good-looking. lively chap, full of fire and glee. I put him down as at least twenty years old and wondered much to myself, if the prosposed union came off, what sort of a baby would come to bless the maternal instincts of the mare from the "land o' cakes.' The bargain was concluded, but what the results of this too typical example of injudicious horse-breeding were I never knew. But I do know that the method followed was not the best to pursue if one desires to reap a share of the rich harvest to be found in the breeding of farm and draft horses. John P. Ross, in Farm and Fireside.

Sick headache is caused by a disordered stomach. Take Chamberlain's Tablets and correct that and the headaches will disappear. For sale by all dealers.

Use of Scales in Feeding.

The best and practically the only way one can tell whether his animals are making proper gains or not is by the use of scales.

A friend of mine who gave me the data used here tried this on a colt last year. The colt weighed 130 lbs. when foaled and was weighed every week for the first six months, with the following results: Three and three-fourths pounds average daily gain first month, three and one-fourth pounds average daily gain the second month, three pounds average daily gain the fifth and sixth months.

At ten months the colt weighed 870 pounds and had made a daily gain of about two and one-fourth pounds, which is very good for a grade Percheron.

The colt was allowed all the whole oats and bran it would clean up until five months old. Her mother was worked nearly every day, and the colt sucked four times a day from eight o'clock in the morning to five o'clock in the afternoon. At night both mare and colt were turned out to pasture.

The winter ration consisted of a mixture of five pounds of whole oats, two pounds of shelled corn, and five quarts of skim-milk daily. A small amount of silage and mixed hay for roughage were also fed.

From the observations made by this man it will be seen that the average farm colt should make a daily gain of at least two pounds per day. Also, that good colts can be raised when the mares are working. From previous experience in using scales in feeding, this farmer says that a colt should weigh at ten months one half of its weight at maturity.—W. A. Dopke.

Horsemen Attention!

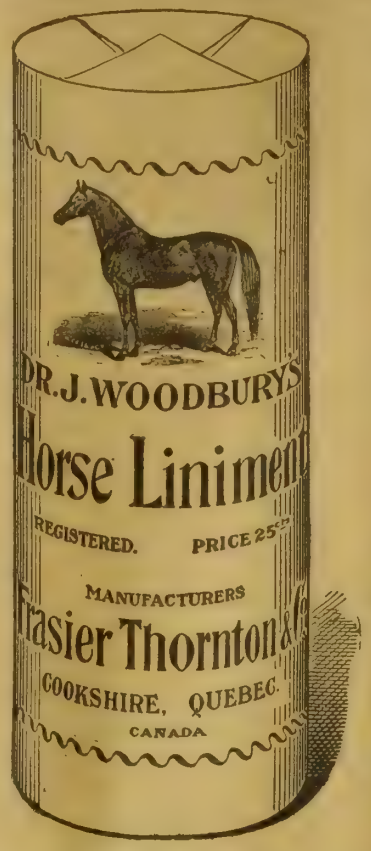
Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Their use will cure and prevent the disease common to horses, such as Cough, Colds, Distempr, Glanders, Spavins, Pink Ey, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

BEFORE USING

Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

For Sale all Dealers

Price 25 cents



Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

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DR. J. Woodbury's

Horse Liniment

AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

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Cures Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Sores, Wire Cuts, Bruises, Swellings, Lameness, and allays Pain quickly without Blistering, removing the hair, or laying the horse up. Pleasant to use. $2.00 per bottle, delivered. Describe your case for special instructions and Book 5 E free.

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ABSORBINE, J.R., liniment for mankind. For Strains, Painful, Knotted, Swollen Veins, Milk Leg, Gout. Price $1.00 per bottle at dealers or delivered. W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca.

POULTRY.

The Improvement of Poultry for Market Purposes.

J. P. Laundry, Poultry Manager and Lecturer at the Nova Scotia Agricultural College, writes:

"I am enclosing herewith a copy of an address by J. J. Ferguson, Swift & Company, before the International Association of Instructors and Investigators of Poultry Husbandry, Agricultural College, Michigan, June 27, 1912. It explains conditions very well and such as we have them here in the poultry and egg trade. I would be pleased to see this paper reproduced in your poultry columns. We are organizing an egg circle at Southern Nova Scotia to try out the plan."

"During the last ten years the population of this country increased practically twenty per cent. whereas the supply of meat producing animals showed practically no increase. The ranches and ranges of the great West have been broken up to meet the encroachment of the homesteader and small farmer, consequently, the plains country will not furnish any considerable portion of our meat food supply until the primary stage of grain growing has been passed and the farmers of the West engaged in live stock production. There is, therefore, no reasonable possibility that for years to come the production of meat foods may overtake the demand.

The poultry business offers an immediate, profitable source of supply, as poultry can be raised almost anywhere in the United States. The original investment is small, returns come quickly and with proper care and feeding returns are larger in proportion to the capital invested than in any other line of live stock operation.

There is no danger of the poultry business being over-done. In 1911 production of the American hen was valued at over $620,000,000. This enormous production was readily absorbed; in fact, was not equal to the demand as shown by the steady advance in prices for poultry and eggs during the season of heavy consumption.

In 1899 the average price of eggs for the year was 11.15c per dozen; in 1909 the average price was 19.7c with a steady demand for everything offered.

A dozen years ago the handling of poultry and eggs in a commercial way was carried on without much system. About that time some of the meat packers entered the field with equipment to handle the product in a systematic and sanitary manner. No other feature of a commercial food supply has shown such a scientific development with such beneficial results affecting both producer and consumer.

The price which the poultry man receives and the price which the consumer pays for poultry and eggs depends entirely upon the supply and demand and the relative quality of the produce. The chief difficulty in the way of general improvement in quality lies with the small producer; not in other words, the farmer who is educated to the necessity of taking the same care with poultry and eggs he devotes to cattle and hogs. With most farmers poultry and eggs are by-products of a business usually left to the care of the small boy or the women on the farm.

To furnish products of prime quality farmers must feed their birds properly and market eggs as fresh as possible. Each additional day of age does not add to the selling price or eating quality of an egg. Side-road egg buyers and country storekeepers are responsible for much of the deterioration in the quality of market eggs.

Swift & Comuany have in successful operation a large number of Branch Houses through which poultry and eggs are received practically direct from the farmers. By this close contact the farmer learns to breed, feed and finish the kind of birds which suit the market and are the most profitable to him.

The quality of commercial poultry and eggs depends primarily upon the producer. Between him and the consumer come a chain of buyers, handlers and the ultimate retailer. Such firms as ours, having well equipped cold storage plants for receiving and storing poultry and eggs, refrigerator cars in which to ship to distributing points and cold storage Branch Houses in hundreds of cities and towns, are in the best possible position to effect the distribution of these products with a minimum loss in quality between the poultry yard and the consumer's table. There has been a tremendous improvement in the quality of poultry and eggs on the market since the meat packers entered the produce business and applied their organization and experience to the systematic sanitary handling of these important food supplies.

Under the ordinary system of handling poultry and eggs there are too many middlemen between the producer and the consumer.

Many middlemen have not modern equipment to handle these products—as a result, there is often serious deterioration in quality.

Under our system of Branch Poultry Houses located in good territory dressed poultry and eggs are moved to storage or to the retailer in the shortest possible time, under the most sanitary conditions.

While in some cases it may be possible and desirable for the farmer or poultry man to furnish dressed poultry and eggs direct to high grade customers in cities and towns, this trade will always remain but a fraction of the total volume of business handled over the country. There is a steadily growing disinclination on the part of the high-grade city customer to bother with trade direct from the country, the preference being to concentrate as far as possible purchase of food supplies in one place. The bulk of distribution must always be made through retail meat and provision stores where housewives can purchase practically all food supplies with the greatest economy of time and effort.

The Experiment Stations, Schools of Poultry Instruction and Poultry Journals are doing splendid work, but a large part of it is done for the poultry fancier, breeder and professional exhibitor of purebred poultry. This class of poultrymen have but little to do with the great commercial poultry interests of the country, and Experiment Stations might well devote more time and effort to reaching the average farmer who looks to poultry and eggs as a source of steadily increasing revenue.

In conclusion Swift & Company's system of handling poultry and eggs was explained and a cordial invitation issued to the Instructors present to visit Swift & Company's Plant and Branch Poultry Houses and study the system in detail. The invitation was most enthusiastically received, several of the Instructors present announcing their intention to visit some of the Swift Plants during vacation this summer.

Gombault's Caustic Balsam

The Worlds Greatest and Surest Veterinary Remedy

HAS IMITATORS BUT NO COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for

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WIND PUFFS,
THRUSH,
DIPHTHERIA,
SKIN DISEASES,
RINGBONE,
PINK EYE,
SWEENY,
BONY TUMORS,
LAMENESS FROM SPAVIN,
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REMOVES

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SPLINTS,
CAPPED HOCK,
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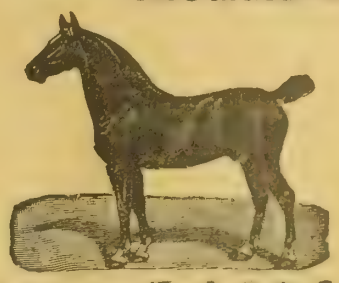
We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made Every bottle sold is warranted to give satisfaction Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINANY REMEDY

Always Reliable. Sure In Results.



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Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—E. D. KIRK, Antigonish, N.S.

Canadians Appreciate Caustic Balsam

I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

Sole Agents for the United States and Canada.

The Lawrence-Williams Co.

TORONTO, ONT. CLEVELAND, OHIO.

Poultry Houses.

There isn't even a nail missing in the description of the three poultry houses given in a bulletin, No. 132, "Farm Poultry Houses," just issued by the Iowa Agricultural Experiment Station at Ames.

Every detail and every step of construction is made clear by photographs showing the exterior and interior alike, and by builder's drawings showing the method of construction throughout, and by bills of materials that include every item needed.

Three types of houses are described, two movable and one stationary. The "A" shaped movable house may be built at a cost of $39.00. The "Iowa Colony House," used first at the Iowa Poultry farm at the station, costs about $58.00. The stationary house is larger than either and may be built for about $173.00 or $180.00, depending on whether lumber and concrete or hollow tile and concrete are used.

The Iowa Agricultural Experiment Station will send these bulletins on request.

Lameness in Ducks.

When ducks become lame from no apparent cause it is usually due to their sleeping quarters being damp. Ducks are easily affected in the feet and legs by dampness and cold. They will remain in the water for hours, but they are then exercising. When they return to their quarters they require a dry place. The most successful persons with ducks provide board floors, which are littered deeply with cut straw or hay, which are regularly moved as soon as it becomes in the least degree damp or filthy. By carefully attending to the ducks in this respect there will be fewer cases of lameness among them.

A Few Doses of VIGORA Succeeded in Curing His Horses

MR. J. B. MORIN:—
I, the undersigned, Henri Talbot, carter, declare that I bought VIGORA for my horse which was troubled with breathing. A few bottles of this remedy cured it immediately and my horse is now well.
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THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

EACH HAS A MISSION.

There's never a rose in all the world!
But makes some green spray sweeter;
There's never a wind in all the sky!
But makes some bird wing fleeter;
There's never a star but brings to Heaven
Some silver radiance tender;
And never a rosy cloud but helps
To crown the sunset splendor;
No robin but may thrill some heart
His dawnlight gladly voicing.
God gives us all some small, sweet way
To set the world rejoicing.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

"And my dear boy," cried my mother, coming to the elbow-chair in which I was, and caressing me, "my own little Davy! Is it to be hinted to me that I am wanting in affection for my precious treasure, the dearest little fellow that ever was!"

"Nobody never went and hinted no such a thing," said Peggotty.

"You did Peggotty;" returned my mother; "You know you did. What else was it possible to infer from what you said, you unkind creature, when you know as well as I do, that on his account only last quarter I wouldn't buy myself a new parasol, though the old green one is frayed frayed the whole way up, and the fringe is perfectly mangy? You know it is, Peggotty; you can't deny it." Then, turning affectionately to me, with her cheek against mine, "Am I a naughty mama to you, Davy? Am I a nasty, cruel, selfish, bad mama? Say I am, my child; say 'yes" dear boy, and Peggotty will love you; and Peggotty's love is a great deal better than mine, Davy. I don't love you at all, do I?"

At this, we all fell a-crying together. I think I was the loudest of the party, but I am sure we were all sincere about it. I was quite heart-broken myself, and am afraid that in the first transports of wounded tenderness I called Peggotty a "Beast." That honest creature was in deep affliction, I remember, and must have become quite buttonless on the occasion; for a little volley of those explosives went off, when, after having made it up with my mother, she kneeled down by the elbow chair, and made it up with me.

We went to bed greatly dejected. My sobs kept waking me, for a long time; and when one very strong sob quite hoisted me up in bed, I found my mother sitting on the coverlet, and leaning over me. I fell asleep in her arms, after that, and slept soundly.

Whether it was the following Sunday when I saw the gentleman again, or whether there was any greater lapse of time before he re'appeared, I cannot recall. I don't profess to be clear about dates. But there he was, in church, and he walked home with us afterwards. He came in, too, to look at a famous geranium we had, in the parlor window. It did not appear to me that he took much notice of it, but before he went he asked my mother to give him a bit of the blossom. She begged him to choose it for himself, but he refused to do that—I could not understand why—so she plucked it for him, and gave it into his hand. He said he would never, never, part with it any more; and I thought he must be quite a fool not to know that it would fall to pieces in a day or two.

Peggotty began to be less with us, of an evening, than she had always been. My mother defrrred to her very much--more than usual, it occurred to me—and we were all three excellent friends; still we were different from what we used to be, and were not so comfortable among ourselves. Sometimes I fancied that Peggotty perhaps objected to my mother's wearing all the pretty dresses she had in her drawers, or to be going so often to visit at the neighbors; but I couldn't, to my satisfaction, make out how it was.

Gradually, I became used to seeing the gentleman with the black whiskers. I liked him no better than at first, and had the same uneasy jealously of him; but if I had any reason for it beyond a child's instinctive dislike, and a general idea that Peggotty and I could make much of my mother without any help, it certainly was not the reason that I might have found if I had been older. No such thing came to my mind, or near it. I could observe, in little pieces, as it were; but as to making a net of a number of these pieces, and catching anybody in it, that was, as yet, beyond me.

One autumn morning I was with my mother in the front garden, when Mr. Murdstone—I knew him by that name now—came by, on horseback. He reined up his horse to salute my mother, and said he was going to Lowestoft to see some friends who were there with a yacht, and merrily proposed to take me on the saddle before him if I would like the ride.

The air was so clear and pleasant, and the horse seemed to like the idea of the saddle so much himself, as he stood snorting and pawing at the garden gate, that I had a great desire to go. So I was sent upstairs to Peggotty to be made spruce; and, in the meantime Mr. Murdstone dismounted, and, with his horse's bridle drawn over his arm, walked slowly up and down on the outer side of the sweet brier fence, while my mother walked slowly up and down on the inner, to keep him company. I recollect Peggotty and I peeping out at them from my little window; I recollect how closely they seemed to be examining the sweetbriar between them, as they strolled along; and how, from being in a perfectly angelic temper, Peggotty turned cross in a moment, and brushed my hair the wrong way, excessively hard.

Mr. Murdstone and I were soon off, and trotting along on the green turf by the side of the road. He held me quite easily with one arm, and I don't think I was restless usually; but I could not make up my mind to sit in front of him without turning my head sometimes, and looking up in his face. He had that kind of shallow black eye—I want a better word to express an eye that has no depth in it to be looked into—which, when it is abstracted, seems, from some peculiarity of light, to be disfigured, for a moment at a time, by a cast. Several times when I glanced at him, I observed that appearance with a sort of awe, and wondered what he was thinking about so closely. His hair and whiskers were blacker and thicker, looked at so near, than even I had given them credit for being. A squareness about the lower part of his face, and the dotted indication of the strong black beard he shaved close every day, reminded me of the wax-work that had travelled into our neighborhood some half-a-year before. This, his regular eye brows, and the rich white, and black, and brown, of his complexion—confound his complexion, and his memory!—made me think of him, in spite of my misgivings, a very handsome man. I have no doubt that my poor dear mother thought him so too.

We went to a hotel by the sea, where two gentlemen were smoking cigars in a room by themselves. Each of them was lying on at least four chairs, and had a large rough jacket on. In a corner was a heap of coats and boot-cloaks, and a flag, all bundled up together.

They both rolled on their feet, in an untidy sort of manner, when we came in, and said, "Halloa, Murdstone! We thought you were dead!"

"Not yet," said Mr, Murdstone.

"And who's this shaver?" said one of the gentleman, taking hold of me.

"That's Davy," returned Mr. Murdstone.

"Davy who?" said the gentleman. "Jones?"

"Copperfield," said Mr. Murdstone.

"What! Bewitching Mrs. Copperfield's incumbrance?" cried the gentleman. "The pretty little widow?"

"Quinion," said Mr. Murdstone, "take care, if you please. Somebody's sharp."

"Who is?" asked the gentleman, laughing.

I looked up, quickly; being curious to know.

"Only Brooks of Sheffield," said Mr. Murdstone.

I was quite relieved to find that it was only Brooks of Sheffield; for, at first, I really thought it was I.

There seemed to be something very comical in the reputation of Mr. Brooks of Sheffield, for both the gentlemen laughed heartily when he was mentioned, and Mr. Murdstone was a good deal amused also. After some laughing, the gentleman whom he had called Quinion said:

And what is the opinion of Brooks of Sheffield, in reference to the projected business?"

"Why, I don't know that Brooks understands much about it at present," replied Mr. Murdstone; "but he is not generally favorable, I believe."

There was more laughter at this, and Mr. Quinion said he would ring the bell for some sherry in which to drink to Brooks. This he did; and when the wine came, he made me have a little, with a biscuit, and before I drank it, stand up and say, "Confusion to Brooks of Sheffield!" the toast was received with great applause, and such hearty laughter that it made me laugh too; at which they laughed the more. In short, we quite enjoyed ourselves.

We walked about on the cliff after that, and sat on the grass, and looked at things through a telescope—I could make out nothing myself when it was put to my eye, but I pretended I could—and then we went back to the hotel to an early dinner. All the time we were out, the two gentlemen smoked incessantly—which, I thought, if I might judge from the smell of their rough coats, they must have been doing, ever since the coats had first come home from the tailor's. I must not forget that we went on board the yacht, where they all three descended into the cabin, and were busy with some papers. I saw them quite hard at work, when I looked down through the open skylight. They left me, during this time, with a very nice man, with a very large head of red hair and a very small shiny hat upon it, who had got a cross-barred shirt or waistcoat on, with "Skylark" in capital letters across the chest. I thought it was his name; and that he lived on board ship and hadn't a street-door to put his name on, he put it there instead; but when I called him Mr. Skylark, he said it meant the vessel.

I observed all day that Mr. Murdstone was graver and steadier than the two gentlemen. They were very gay and careless. They joked freely with one another, but seldom with him. It appeared to me that he was more clever and cold than they were, and that they regarded him with something of my own feeling. I remarked that, once or twice, when Mr. Quinion was talking, he looked at Mr. Murdstone sideways, as if to make sure of his not being displeased; and that once when Mr. Passnidge (the other gentleman) was in high spirits, he trod upon his foot, and gave him a secret caution with his eyes, to observe Mr. Murdstone, who was sitting stern and silent. Nor do I recollect that Mr. Murdstone laughed at all that day, except at the Sheffield joke—and that, by the by, was his own.

We went home early in the evening. It was a very fine evening, and my mother and he had another stroll by the sweetbriar, while I was sent in to get my tea. When he was gone, my mother asked me all about the day I had had, and what they had said and done. I mentioned what they had said about her, and she laughed, and told me they were impudent fellows who talked nonsense—but I knew it pleased her. I knew it quite as well as I know it now. I took the opportunity of asking if she was at all acquainted with Mr. Brooks of Sheffield,-but she answered no, only she supposed he must be a manufacturer in the knife and fork way.

Can I say of her face—altered as I have reason to remember it, perished as I know it is—that it is gone, when here it comes before me at this instant, as distinct as any face that I may choose to look on in a crowded street? Can I say of her innocent and girlish beauty, that it faded, and was no more, when its breath falls on my cheek now, as it fell that night? Can I say she ever changed, when my remembrance brings her back to life, thus only; and, truer to its loving youth that I have been, or man ever is, still holds fast what it cherished then?

I write of her just as she was when I had gone to bed after this talk, and she came to bid me good night. She kneeled down playfully by the side of the bed, and laying her chin on her hands, and laughing, said:

"What was it they said, Davy? Tell me again. I can't believe it."

"Bewitching—" I began.

My mother put her hands upon my lips to stop me.

"It was never bewitching," she said, laughing. "It never could have been bewitching, Davy. Now I know it wasn't!"

"Yes it was. Bewitching Mrs. Copperfield," I repeated stoutly. "And pretty."

"No, no, it was never pretty. Not

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

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To work in Paper Box Factory and Printing Office. Good board and lodging provided. Write for terms and particulars to

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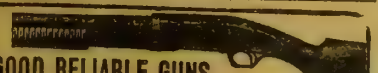
ST. JOHN, N. B.

J. W. Copeland, of Dayton, Ohio, purchased a bottle of Chamberlain's Cough Remedy for his boy who had a cold, and before the bottle was all used the boy's cold was gone. Is it not better than to pay a five dollar doctor's bill? For sale by all dealers.

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**



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T. W. BOYD & SON, 27 Notre Dame St. West, MONTREAL.

pretty," interposed my mother, laying her fingers on my lips again.

"Yes it was. Pretty little widow."

"What foolish, impudent creatures!" cried my mother, laughing adventurous proposition that I am about to mention; but it was probably about two months afterwards.

We were sitting as before, one evening (when my mother was out as before), in company with the stocking and the yard measure, and the bit of wax, and the box with St. Paul's on the lid, and the crocodile book, when Peggotty, after looking at me several times, and opening her mouth as if she were going to speak, without doing it—which I thought was merely gaping, or I should have been rather alarmed—said coaxingly:

"Master Davy, how should you like to go along with me and spend a fortnight at my brother's at Yarmouth? Wouldn't that be a treat?"

"Is your brother an agreeable man, Peggotty?" I inquired provisionally.

"Oh, what an agreeable man he is!" cried Peggotty, holding up her hands. "Then there's the sea; and the boats and ships; and the fishermen; and the beach; and Am to play with—"

Peggotty meant her nephew Ham, mentioned in my first chapter; but she spoke of him as a morsel of English Grammar.

I was flushed by her summary of delights, and replied that it would indeed be a treat, but what would my mother say?

"Why then I'll as good as bet a guinea," said Peggotty, intent upon my face, "that she'll let us go. I'll ask her, if you like, as soon as ever she comes home. There now!"

"But what's she to do while we are away?" said I, putting my small elbows on the table to argue the point. "She can't live by herself."

If Peggotty were looking for a hole, all of a sudden, in the heel of that stocking, it must have been a very little one indeed, and not worth darning.

"I say! Peggotty! She can't live by herself, you know."

"Oh bless you!" said Peggotty, you know? She's going to stay for looking at me again at last. "Don't a fortnight with Mrs. Grayper. Mrs. Grayper's going to have a lot of company."

Oh! If that was it, I was quite ready to go. I waited, in the utmost impatience, until my mother came from Mrs. Grayper's (for it was that identical neighbor,) to ascertain if we could get leave to carry out this great idea. Without being nearly so much surprised as I expected, my mother entered into it readily; and it was all arranged that night, and my board and lodging during the visit were to be paid for.

The day soon came for our going. It was such an early day that it came soon, even to me, who was in a fever of expectation, and half afraid that an earthquake or a fiery mountain, or some other great convulsion of nature, might interpose or stop our expedition. We were to go in a carrier's cart, which departed in the morning after breakfast. I would have given any money to have been allowed to wrap myself up over night and sleep in my hat and boots.

It touches me nearly now, although I tell it lightly, to recollect how eager I was to leave my happy home to think how little I suspected what I did leave for ever. I am glad to recollect that when the carrier's cart was at the gate, and my mother stood there kissing me, a grateful fondness for her and the old place I had never turned my back upon before made me cry. I am glad to know that my mother cried too, and that I felt her heart beat against mine.

I am glad to recollect that when the carrier began to move, my mother ran out at the gate, and called to him to stop, that she might kiss me once more. I am glad to dwell upon the earnestness and love with which she lifted up her face to mine, and did so.

As we left her standing in the road, Mr. Murdstone came up to where she was, and seemed to expostulate with her for being so moved. I was looking back round the awning of the cart, and wondered what business it was of his. Peggotty, who was looking back on the other side, seemed anything but satisfied; as the face she brought back in the cart donated.

I sat looking at Peggotty for some time, in a reverie on this stupendous case; whether, if she were employed to lose me like the boy in the fairy tale, I should be able to track my way back home again by the buttons she would shed.

CHAPTER III.

I have a change.

The carrier's horse was the laziest horse in the world, I should hope, and shuffled along, with his head down, as if he liked to keep people waiting to whom the packages were directed. I fancied, indeed, that he sometimes chuckled audibly over this reflection, but the carrier said he was only troubled with a cough.

The carrier had a way of keeping his head down, like the horse, and of dropping sleepily forward as he drove, with one of his arms on each of his knees. I say "drove," but it struck me that the cart would have gone to Yarmouth quite as well without him, for the horse did all that; and as to conversation, he had no idea of it but whistling.

Peggotty had a basket of refreshments on her knee, which would have lasted us out handsomely, if we had been going to London by the same conveyance. We ate a good deal, and slept a good deal. Peggotty always went to sleep with her chin upon the handle of her basket, her hold of which never relaxed, and I could not have believed unless I had heard her do it, that one defenceless woman could have snored so much.

We made so many deviations up and down lanes, and were such a long time delivering a bedstead at a public house, and calling at other places, that I was quite tired and very glad, when we saw Yarmouth. It looked rather spongy and soppy, I thought, as I carried my eye over the great dull waste that lay across the river; and I could not help wondering, if the world were really as round as my geography-book said, how any part of it came to be so flat. But I reflected that Yarmouth might be situated at one of the poles; which would account for it.

As we drew a little nearer, and saw the whole adjacent prospect lying a straight low line under the sky, I hinted to Peggotty that a mound or so might have improved it; and also that if the land had been a little more separated from the sea, and the town and the tide had not been quite so mixed up, like toast and water, it would have been nicer. But Peggotty said, with greater emphasis than usual, that we must take things as we found them, and that, for her part, she was proud to call herself a Yarmouth Bloater.

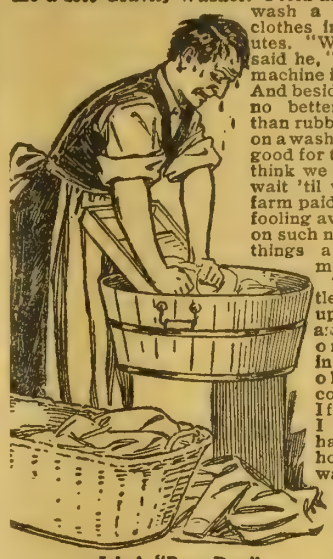
When we got into the street (which was strange enough to me), and smelt the fish, and pitch, and oakum, and tar, and saw the sailors walking about, and the carts jingling up and down over the stones, I felt that I

He Bought Her a 1900 Washer

ONE OF OUR READERS TELLS HOW HER HUSBAND LEARNED

What Washday Means to a Woman

DEAR EDITOR:—Most men have no realization of what "wash-day" means to a woman. My husband is one of the best men that ever lived, but he laughed when I asked him one day to get me a 1900 Gravity Washer. I told him it would wash a tubful of clothes in six minutes. "Why, wife," said he, "a washing machine is a luxury. And besides, there's no better exercise than rubbing clothes on a washboard. It's good for the back. I think we had better wait 'til we get the farm paid for before fooling away money on such new-fangled things as washing machines."



John's "Busy Day"

That settled it. I gave up the idea and kept right on washing in the same old way. I confess that I felt hurt, but I knew John had no notion how hard it was to do the washing for a family of five—three of them little tots. I am not very strong, and the washing, with all my other work, finally got the better of me. I had quite a sick spell, and after things had gone at sixes and sevens for nearly two weeks, I suggested to John that he had better do the washing. We couldn't hire a girl for love or money, and the situation was desperate.

So one morning he started it. My, what a commotion there was in the kitchen! From my bedroom I occasionally caught glimpses of poor John struggling with that mountain of dirty clothes.

If ever a man had all the "exercise" he wanted, my husband was that man! Couldn't help feeling sorry for him, and yet it made me laugh, for I remembered how he made fun of me when I hinted so strongly for a 1900 Gravity Washer. When he finally got the clothes done and on the line, he was just about "all in."

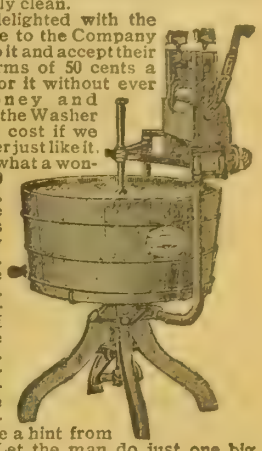
That evening John came to my room, and said kind of sheepishly—"What's the name of the firm that makes those washers you were telling me about?" I looked up their advertisement and found the following address:

G. V. MORRIS Manager
The 1900 Washer Co.,
357 Yonge St., Toronto, Can.

That's all he said, but he lost no time in sending for their Free Washer Book. The book came in due time and with it an offer to send the 1900 Gravity Washer on thirty days' free trial. My husband jumped at the chance to try the Washer without having to spend a cent. "We'll have four weeks' use of the Washer anyway, even if we don't decide to keep it," he said! So he told the Company to send on the Washer.

It was sent promptly, all charges paid, and the 1900 Washer Company offered to let us pay for it in little easy payments. The next week I felt well enough to use it. It is the nicest Washer I ever saw, and it almost runs itself. Takes only six minutes to wash a tubful, and the garments come out spotlessly clean.

We were all delighted with the Washer, and wrote to the Company that we would keep it and accept their easy payment terms of 50 cents a week. We paid for it without ever missing the money and wouldn't part with the Washer for five times its cost if we couldn't get another just like it.



If women knew what a wonderful help the 1900 Gravity Washer is, not one would be without it. It saves work and worry and doctor's bills. Takes away all the dread of wash-day. I feel like a different woman since I have quit the use of the washboard. And if any woman's husband objects to buying one of these labor-saving machines, take a hint from my experience. Let the man do just one big washing by hand-rubbing on the old-fashioned washboard, and he will be only too glad to get you a 1900 Gravity Washer.

Anybody can get one on free trial, by first writing for the Washer Book.

Excuse me for writing such a long letter, but I hope, Mr. Editor, you will print it for the benefit of the women readers of your valuable paper.

Sincerely yours, MRS. J. H. SMITH.

A Range should be a permanent investment and guaranteed as such. The "Pandora" is fearlessly guaranteed by dealers as well as by the makers, simply because they know that it will give utter satisfaction. Can you wonder that so many people buy
112
McClary's
Pandora
Range

had done so busy a place an injustice; and said as much to Peggotty, who heard my expressions of delight with great complacency, and told me it was well known (I suppose to those who had the good fortune to be born Bloaters) that Yarmouth was, upon the whole, the finest place in the unioerse.

"Here's my Am!" screamed Peggotty, "growed out of knowledge!"

He was waiting for us, in fact, at the public-house; and asked me how I found myself, like an old acquaintance. I did not feel, at first, that I knew him as well as he knew me, because he had never come into our house since the night I was born, and naturally he had the advantage of me. But our intimacy was much advanced by his taking me on his back to carry me home. He was now, a huge, strong fellow of six feet high, broad in proportion, and round shouldered; but with a simpering boy's face and curly light hair that gave him quite a sheepish look. He was dressed in a canvass jacket, and a pair of such very stiff trousers that they would have stood quite as well alone, without any legs in them. And you couldn't so properly have said he wore a hat, as that he was covered in a top, like an old building, with something pitchy.

Ham carrying me on his back and a small box of ours under his arm, and Peggotty carrying another small box of ours, we turned down lanes bestrewn with bits of chips, and little hillocks of sand, and went past gasworks, rope-walks, boat-builders' yards, ship-wrights' yards, ship-breakers' yards, caulkers' yards, figgers' lofts, smiths' forges, and a great litter of such places, until we came out upon the dull waste I had already seen at a distance; when Ham said,

"Yon's our house Mas'r Davy!"

I looked in all directions, as far as I could stare over the wilderness, and away at the sea, and away at the river, but no house could I make out. There was a black barge, or some other superannuated boat, not far off. high and dry on the ground, with an iron funnel sticking out of it for a chimney and smoking very cosily; but nothing else in the way of a habitation that was visible to me.

"That's not it," said I. "That ship-looking thing?"

"That's it, Mas'r Davy," returned Ham.

If it had been Aladdin's palace, roc's egg and all, I suppose I could not have been more charmed with the romantic idea of living in it. There was a delightful door cut in the side, and it was roofed in, and there were little windows in it, but the wonderful charm of it was, that it was a real boat which had no doubt been upon the water hundreds of times, and which had never been intended to be lived in, on dry land. That was the captivation of it to me. If it had ever been meant to be lived in, I might have thought it small, or inconvenient, or lonely; but never having been designed for any such use, it became a perfect abode.

It was beautifully clean inside, and as tidy as possible. There was a table, and a Dutch clock, and a chest of drawers, and on the chest of drawers there was a tea-tray with a painting on it of a lady with a parasol, taking a walk with a military-looking child who was trundling a hoop. The tray was kept from tumbling down by a bible; and the tray, if it had tumbled down, would have smashed a quantity of cups and saucers and a teapot that were grouped around the book. On the walls there were some common colored pictures, framed and glazed, of scripture subjects; such as I have never seen since in the hands of peddlers, without seeing the whole interior of Peggotty's brother's house again, at one view. Abraham in red going to sacrifice Isaac in blue, and Daniel in yellow cast into a den of green lions, were the most prominent of these. Over the little mantle-shelf, was a picture of the Sarah Jane lugger, built at Sunderland; with a real little wooden stern stuck on it; a work of art, combining composition with carpentry, which I considered to be one of the most enviable possessions that the world could afford. There were some hooks in the beams of the ceiling, the use of which I did not divine then; and some lockers and boxes and conveniences of that sort, which served for seats and eked out the the chairs.

(Continued in next issue)

Flour and Breadmaking.

(Continued from last issue)

METHODS OF MAKING BREAD.

There are various methods of making bread in the home. A few of the methods and their uses are discussed below.

1. The ferment, sponge and dough method is one of the most common methods in use, consisting of a ferment, sponge and dough stage. (a) Ferment: A thin batter made up of potato or plain water, a little sugar and enough flour to make a pour batter, placed in a temperature of from 70 to 80 debrees F., until it is light and spongy. This method is best suited to the use of dry compressed yeast, which is in a dry dormant state, and needs the food, moisture, and warmth to bring it into a healthy, vigorous ferment. (b) Sponge: At the stage the sugar, salt, shortening and sufficient liquid to make the desired amount of bread is added to the ferment, and flour added to make a thick batter, and this sponge is allowed to rise from 8 to 10 hours. (c) Dough. The dough is then added by the addition of all the flour needed to make the mass of the desired consistency.

2. Sponge and dough, probably the most widely used in the home, and the best adapted to the uses of the soft and hard flours. Sponge may be made with hard Manitoba flour and fermented from 6 to 10 hours. The hard flours take a much longer time to ripen, hence the reason for giving them the longer time in the sponge. Potato water and a little mashed potato improves this sponge. This is a desirable method where the home-made yeast is used, or the moist compressed yeast. The dough is made from this sponge with either hard or soft flour, either giving good results when properly used. The soft flour gives a loaf of very close texture, but a characteristic sweet flavour that is very much liked by some people, and can only be obtained when Ontario winter wheat flour is used.

3. Offhand dough is that method in which the dough is made direct without any preceding stages of ferment and sponge, and it is the best method to use when it is desirable to make bread in a short time. Because of the short fermentation period, it is necessary to use a much

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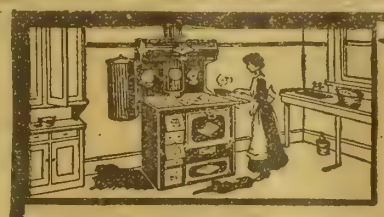

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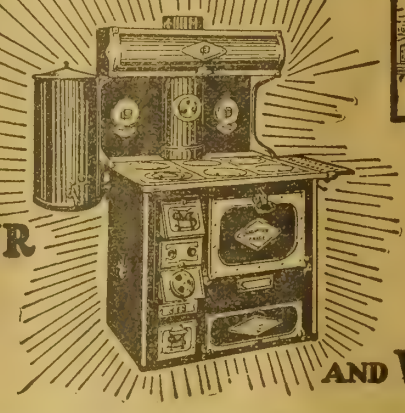

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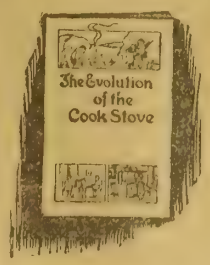

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larger amount of yeast in proportion to the amount of liquid, and flavour must to some extent be sacrificed, but, if rightly manipulated, this method makes very nice bread and one in which a good grade of soft flour may be used. It is also a good method to follow in winter when there is no means of controlling temperature. The following recipes, typical of each process, are used in our flour testing laboratories with satisfactory results.

The beginner is advised to start with the first method and become thoroughly familiar with its successful use before proceeding to the others. She is also urged to use a thermometer in order to become sensitive to correct temperature as soon as possible. After these typical recipes are followed the beginner should be able to follow the variations of any good cook book.

The following are the detailed directions for making bread by each of the above methods. When the recipe does not provide sufficient materials to make the desired quantity of bread, the amount of the various ingredients may be halved, doubled or portion remains the same.

1. FERMENT, SPONGE AND DOUGH METHOD.

1 dry yeast cake.
2 quarts liquid.
2 level tablespoons salt.
2 level tablespoons sugar.
2 level table spoons lard.
Flour.

Preparation of ferment. Put a pint of water at a temperature of about 90 degrees F. into a bowl, drop the dry yeast cake into it and soak for half an hour, then stir in enough flour to make a thin batter, add one tablespoon sugar, and beat with a dover beater until well mixed and full of bubbles. Stand in a temperature of 70 degrees to 80 degrees F. until light, which will take from four to five hours.

Preparation of sponge. When the ferment is ready, put the rest of the sugar, salt and lard into a kneading-pan, bring the rest of the liquid to 90 degrees F. and add it to the ingredients in the pan. Add enough strong flour to make a batter that will beat without spattering; add the ferment and beat until it looks smooth and elastic. This will probable take 15 or 20 minutes. Cover closely, and keep at a temperature of 70 degrees F., until light and spongy. This will take from 9 to 10 hours.

Preparation of dough. When the sponge is ready stir in strong flour until too stiff to use the spoon, then mix in more with a stiff-bladed knife, or the hand, until the dough no longer sticks to the fingers. Turn the dough out on the moulding board to knead, leaving the pan quite clean. The dough should knead without flour being put on the board or hands; if it proves sticky return it to the pan and mix in moreflour, remembering that while too slack a dough makes coarse textured bread, too stiff a dough makes slow-rising bread which will dry out quickly. Knead lightly until the mass is elastic and velvety, the surface covered with a film of tiny bubbles, and cut with a sharp knife shows the inside full of fine even bubbles and free from lumps or unmixed portions. Grease the kneading-pan lightly with lard, warm both pan and cover if they are cold, put in the dough, cover closely, and keep at a temperature of 80 degrees F. until rather more than doubled in volume, or until a gentle slap with the tips of the fingers causes it to fall in. This will take from 2 to 3 hours.

Knead lightly in the pan for a minute to get rid of the larger bubbles and return to rise a second time until double in volume. This will take from 1 to 2 hours.

Divide into loaves that will half fill the bread tins. Knead each piece only enough to get rid of large bubbles and smooth the surface, and put it into a greased tin. Keep at a temperature of 70 degrees to 80 degrees F. until doubled in volume, when they should have a bold, nicely rounded appearance.

Bake an hour in an oven about 350 degrees F. When done, the loaves should give a hollow sound when tapped on the bottom.

When baked remove at once from the pan, and stand on edge or across the top of the pans, that the air may get to all parts and cool it quickly.

VARIATIONS.

1. The above calls for strong flour. Soft flour may be used for the dough stage, but must be kneaded down before it has quite doubled in volume each time. It is not advisable to use soft flour for the ferment and sponge stages, as it does not stand the long fermentation.

2. Home-made yeast may be used instead of the dry yeast. Use one cup home-made yeast and only 3½ pints of liquid.

3. The liquid may be part milk (scalded) and part water. The latter may be potato water; i.e., water in which two or three potatoes have been boiled, removed and finely mashed and returned to the liquid.

4. The potato water may form the liquid for the ferment stage, and the mashed potatoes added when the sponge is made. Potatoes give that silkiness of texture so much desired by good breadmakers.

5. If the dough is kept covered while rising it will not form a crust. If it seems inclined to form a crust, moisten it with warm milk and water. A crust is to be avoided as it makes a streak through the loaf if kneaded in at the early stage, and an unsightly crust on the baked loaf if allowed to form in the last stages.

6. The second rising of the dough may be omitted, although the extra rising makes the loaf a rather finer texture.

7. The bread-mixer may be used to knead the dough after it is known exactly how much flour the liquid will need to make dough of the right stiffness.

(Continued in next issue)

Prize Winners at the Prince Edward Island Provincial Exhibition.

(Continued from page 8)

Cheese, 2 factory, 50 lbs. each.—1, Wm. Clarke; 2, Leo. Hughes; 3, A. McInnis.

Dillon and Spillet Gold Medal.—Wm. Clark.

Agricultural Products

GRAIN AND SEEDS.

Wheat, white fife.—1, Robt. Drake; 2, H. H. Howard; 3, E. J. Vessey.

Wheat, red fife.—1, J. Duffy.

Wheat, chaff.—1, Duncan Stewart; 2, Wood & Son.

Wheat, white Russian.—1, Robt. Drake; 2, E. Chappell.

Wheat, A. O. V.—1, F. Bulman; 2, J. Simpson.

Barley, 2 rowed.—1, P. Brodie; 2, Ben Mallet; 3, Wood & Son.

Barley, 6 rowed.—1, B. Mallet; 2, Ernest Lund; 3, John Court.

Ligowa oats.—1, C. Mallet; 2, H. Vessey; 3, F. Bulman & Son.

Banner oats.—1, F. Bulman; 2, G. Page; 3, E- J. Vessey.

White oats, a. o. v.—1, Wood & Son; 2, C. Mallet; 3, B. Mallet.

Buckwheat.—1, B. Mallet; 2, Messrs. McPhail; 3, Wood & Son.

Field peas.—1, P. McKinnon.

Beans, white.—1, P. McKinnon.

Timothy seed.—1, P. McKinnon; 2, B. Mallet; 3, W. J. Godfrey.

Flax seed.—1, H. Horne; 2, B. Mallett; 3, C. Newsome.

Sheaf wheat, red or white fife.—1, E. J. Vessey; 2, John Court.

Sheaf wheat, a. o. v.—1, D. Stewart; 2, Wood & Son.

Sheaf oats, banner.—1, E. J. Vessey; 2, James Simpson; 3, F. Bulman.

Sheaf oats, a. o. v.—1, J. Simpson; 2, E. J. Vessey; 3, Wood & Son.

FIELD ROOTS AND VEGETABLES.

Potatoes, collection early variety.—1, P. Brodie; 2, B. Mallet; 3, J. Burrigan.

Potatoes, collection white varieties. 1, P. Brodie; 2, Messrs. McPhail; 3, B. Mallet.

Potatoes, collection white varieties.-1, B. Mallet; 2, Messrs McPhail; 3, P. Brodie.

Potatoes, red varieties.—1, P. Brodie; 2, B. Mallet.

Potatoes, early Rose.—1, W. B. Drake; 2, P. Brodie; 3, B. Mallet.

Potatoes, Beauty of Hebron.—1, J. Court; 2, B. Mallett; 3, C. J. Vessey.

Potatoes, Burpee's Extra Early.—1, R. Carey.

Potatoes, McIntyre.—1, B. Mallet; 2, W. G. Drake; 3, P. Brodie.

Potatoes, Green Mt.—1, M. McPhail 3, J. Burrigan.

Potatoes, Vermont Gold Coin.—1, E. J. Vessey; 2, R. R. Fitzgerald

Potatoes, early.—1, J. Burrigan; 2, P. Brodie; 3, J. Arthur.

Potatoes, late, white, a. o. v.—1, R. R. Fitzgerald; 2, H. H. Howard; 3, S. Warren.

Potatoes, any variety.—1, H. H. Howard; 2, C. Robinson; 3, E. J. Vessey.

Potatoes, packed for export.—Messrs McPhail; 2, E. J. Vessey; 3, P. Burke.

Judge Fitzgerald No. 1., R. R. Fitzgerald.

Swede turnips, purple tops.—1, W. B. Drake; 2, H. H. Howard; 3, P. Curley.

Swede turnips, green or bronze tops —1, J. McPhee; 2, E. Martin; 3, S. Warren.

Swede turnips, Monarch Type.—1, P. McCallum; 2, P. Curley; 3, J. Arthur.

Mangel Wurtzel long red.—1, S. R. Ings; 2, P. Curley; 3, W. J. Godfrey.

Mangel Wurtzel red globe.—1, W. B. Drake; 2, P. McCallum; 3, P. Curley.

Mangel Wurtzel yellow globe.—1, P. WcCallum; 2, P. Curley; 3, P. Burke.

Mangel Wurtzel long yellow.—1, P. Brodie; 2, W. B. Drake; 3, P. Curley.

Beets, Danish, forage sugar.—1, P. Curley; 2, R. R. Fitzgerald.

Beets, sugar a. o. v.—1, P. Curley; 2, A. Burke; 3, W. B. Drake.

Carrots, red intermediate.—1, P. Curley; 2, A. C. Wood; 3, W. B. Drake.

Carrots, red long.—1, W. B. Drake; 2, P. Curley; 3, A. C. Wood.

Carrots, white Belgian.—1, P. Curley; 2, W. B. Drake; 3, A. C. Wood.

Carrots, white intermediate.—1, W. B. Drake; 2, P. Curley; 3, A. Burke.

Fodder corn summer use.—1, J. Housson; 2, A. McRae; 3, P. Brodie.

Fodder corn ensilage.—1, P. Brodie; 2, A. McRae; 3, J. Housson.

ie Broom corn, 10 stalks.—1, P. Brodie.

Broom corn, 7 heads.—1, P. Brodie.

Tobacco grown in P. E. I.—1, H. Jenkinis; 2, S. Essory; 3, R. L. Days.

Pumpkins.—1, A. Burke; 2, W. J. Gibson; 3, A. C. Wood.

Collection of field roots.—1, W. B. Drake; 2, P. Curley.

GARDEN VEGETABLES.

Cauliflower.—1, A. Burke; 2, N. McKinnon; 3, F. J. Gallant.

3 Cabbage Winningstadt.—1, S. McLennan; 2, V. Hudson; 3, G. McKinnon.

3 Cabbage Drumhead.—1, H. H. Howard; 2, S. McLennan; 3, G. A. Sharpe.

3 Cabbage Red.—1, N. McKinnon; 2, A. C. Hood; 3, A. Burke.

3, Savoy.—1, A. Burke; 2, F. J. Gallant; 3, N. McKinnon.

Brussels sprouts.—1, F. J. Gallant; 2. A. C. Hood; 3, A. C. Burke.

Carrots, intermediate.—1, G. A. Sharpe; 2, Geo. Howard; 3, S. McLennan.

Carroots, intermediate, point rooted.—1, H. H. Howard; 2, F. J. Gallant; 3, G. Howard.

Carrots, short stump rooted.—1, A. Burke; 2, S. McLennan; 3, G. Howard.

Parsnips.—1, G. Russell; 2, G. Howard; 3, N. McKinnon.

Celery, white dwarf.—1, A. Burke; 2, N. McKinnon.

Celery, red.—1, N. McKinnon; 2, A. Burke.

Celery, white plumed.—1, N. McKinnon; 2, A. Burke; 3, G. Russell.

Melons, citrons.—1, N. McKinnon; 2, A. C. Hood.

Melons, musk ripe.—1, A. Russell; 2, F. G. Gallant; 3, A. Burke.

Tomatoes, red ripe.—1, F. J. Gallant; 2, Geo. King; 3, J. Housson.

Tomatoes, yellow ripe.—1, A. D. McDonald; 2, J. Housson; 3, G. Russell.

Tomatoes, assorted collections.—1, A. Burke; 2, G. R. Gay; 3, N. McKinnon.

Onions, red.—1, R. Gay; 2, N. McKinnon; 3, A. C. Wood.

Onions, yellow.—1, A. D. McDonald; 2, A. C. Wood; 3, A. G. Mutch.

Onions, white.—1, A. D. McDonald; 2, N. McKinnon; 3, A. C. Wood.

Eschalots.—1, N. McKinnon; 2, S. McLennan; 3, T. Gregory.

Beets, Egyptian blood turnips.—1, N. McKinnon; 2, S. McLennan; 3, A. Burke.

Beets, long blood.—1, N. McKinnon; 2, F. J. Gallant; 3, Geo. King.

Beets, turnips, blood.—1, S. McLennan; 2, A. McDonald; 3, H. Jenkins.

Corn, sweet.—1, N. McKinnon; 2, Burke; 3, A. McDonald.

Squash, Boston marrow.—1, James Housson; 2, S. McLennan; 3, R. Gay.

Squash, Hubbard.—1, R. Gay; 2, A. Burke; 3, A. C. Wood.

Squash, vegetable marrow.—1, A. Burke; 2, A. C. Wood; 3, S. McLennan.

Squash, table.—1, J. Housson; 2, A. C. Wood; 3, S. McLennan.

Collection table squash.—1, N. McKinnon; 2, A. Burke; 3, A. C. Wood.

Herbs, garden collection.—1, P. McKinnon; 2, A. C. Wood; 3, L. McLennan.

Collection of vegetables.—1, A. C. Burke; 2, P. McKinnon; 3, R. L. Days.

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Baldwin.—1, A. C. Johnston; 2, H. D. Johnston.

Baxter.—1, H. D. Johnston; 2, J. H. McKinnon.

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Questions Re Alfalfa.

Editor Maritime Farmer:—

Kindly answer a few questions, in regard to Alfalfa, through your valuable paper. I have a small patch which was sown late in the summer, and notwithstanding the dry weather it has grown fairly well. Would it be advisable to cut it or let it die down? Should I cover it over like strawberries for the winter, and, if so, what would be the most suitable covering.

It is from sample seed which was advertised through your paper.—J. G. Reed, Sumb. Co., N. S.

Ans.—1. It would be unwise to cut it at this late date in the season. Even a luxuriant growth will be sufficiently wilted by the frosts of an average fall to prevent any smothering of the roots.

2. Only experimentally would we advise any covering for winter protection. A plant for forage purposes that needs such treatment is not practical. We noticed where some covering had been applied last winter that there was a greater percentage of plants killed. The character of the winter will have a great deal to do with it. In the case noted last winter the snow covering was thin and during the thaw periods the straw covering became filled with ice; obviously this was the cause of the smothering. Try a liberal and uniform dressing of manure on a section of the patch.

By all means treat sections of your patch differently. It is wonderful what ideas a farmer can glean from sound experimental work under his own conditions.—C. W. McD.

Alfalfa Gives Bright Yolks.

It has often been noticed by poultrymen that the yolks of eggs laid during the winter months are not as well colored as those laid in summer.

It was believed by some that this was due to a lack of green food, and in order to test the correctness of this belief, a series of experiments were carried on at the Utah Experiment Station by Prof. James Dryden, now of the Oregon Agricultural College, during the winter of 1904. The fowls in the test were divided into a number of different pens, being fed several different rations, some with corn as the principal grain, and others with wheat as the main part of the ration, but all being fed sugar-beets as a source of green food. The corn fed was a mixture of white and yellow, the white predominating, but did not seem to affect the color of the yolk, as all the pens at the beginning of the experiment were laying eggs with pale yolks.

Gradually dry alfalfa leaves were added to the food of several of the pens in addition to the ration they were already getting, including the sugar beets. Two weeks after the alfalfa was first fed, a test for color was made, and the yolks from the alfalfa-fed pens were found to have a uniformly rich color, while those from the other pens, which were fed no alfalfa, continued to be very pale in color. One pen was fed skim milk in place of meat-scraps, but this did not seem to affect the color of the yolk. The results of this test show that it is not merely a matter of having plenty of green food, but of having plenty of the right kind of green feed, if a bright colored yolk is desired.

When you have a cold you want the best medicine obtainable so as to cure it with as little delay as possible, Here is a druggist's opinion. "I have sold Chamberlain's Cough Remedy for fifteen years," says Enos Lollar, of Saratoga, Ind., "and consider it the best on the market." For sale by all dealers.

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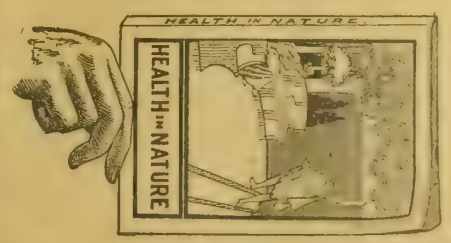

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This coupon, upon presentation to J. Y. Egan, rupture specialist, 331 West King Street, Toronto, who will visit the towns (on dates mentioned below) will entitle bearer to free consultation and examination of samples. Ask at hotel office for number of my room. Note dates.

Sackville, Brunswick Hotel—Oct. 8

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Fredericton, Queen Hotel—Oct. 18, 19, 20

Woodstock, Carlisle Hotel—Oct. 21, 22

WRITE TO TORONTO OFFICE

MAIL CONTRACT

SEALED TENDERS addressed to the Postmaster General will be received at Ottawa until Noon on Friday, the 8th November, 1912, for the conveyance of His Majesty's Mails on a proposed Contract for four years six times per week each way, OVER RURAL MAIL ROUTE FROM CUMBERLAND BAY, NEW BRUNSWICK, to commence at the Postmaster General's Pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Office of Cumberland Bay, The Range, and at the Office of the Post Office Inspector at St. John.

G. C. ANDERSON,
Superintendent.

POST OFFICE DEPARTMENT,
MAIL SERVICE BRANCH
Ottawa, 21st September, 1912

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In spare time at home. We teach you: Complete Commercial, Shorthand, Engineering (Stationary, traction, gasoline, automobile), Mechanical Drawing, Architectural Drawing, Beginner's Course, Matriculation, Teachers' Courses, etc. Write Canadian Correspondence College, Limited, Dept. K., Toronto, Canada.

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Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

How to Destroy Them.

The common little red ant, which makes tiny hills on our walks and in the grass, can be hestroyed by pouring a little gasoline in each hole. Half a teacupful to a teacupful will suffice for from three to six hills. Do not be afraid to use plenty of gasoline, in order to reach the queen or queens which lay the eggs. This liquid, however, will kill grass or plants where it comes in direct contact with them.

The large mounds out of doors, each of which is occupied by hundreds of ants can be easily treated with bisulphide of carbon. Make eight or ten holes with a cane or croquet stick, about eight inches deep, in each mound. Into each hole pour a good tablespoonful of bisulphide of carbon, closing each hole with earth, and then throw a couple of wet burlap sacks over the hills, leaving them over night. One might have to do this twice, or until the queens are killed.

While ants, when seen climbing up apple trees, or shrubbery and plants, generally do not directly injure the plants, since they are for the most part alter the lice, which give up to them in response to their caresses, some honey dew, of which ants are very fond; nevertheless the black ant sometimes girdles and kills shrubs like the lilac and snowball. When ants are found at this work, we first have recourse to strong tobacco water to see whether we can drive them away. If they still persist in eating the bark, we advise uncovering the crown and larger roots, mixing up arsenate of lead with a little water, and applying it as thick whitewash to these parts. Arsenate of lead is a poison, which, however, applied in that way, would not injure the bush.

Should Turnip Leaves be Left in Field.

Practice differs in regard to the utilisation of the turnip leaves. Some farmers leave them in the field, and plough them in for the benefit of the following crop; others, and probably by far the larger number, carry them off with the bulbs to be used as food for cattle. The latter, perhaps, is the easiest way, but an important question is: Which method is the more profitable?

A 17 ton crop of turnips contains in its leaves 50 lb. of nitrogen, 5 lb. of phosphorus (equal to 25 lb. phosphateof lime), and 33 lb. of potassium, which would be equal to £1 13s. 6d. value in artificial manure.

To test the actual manurial value of turnip leaves, twenty plots were set aside, ten of these having the leaves carried off, while in the other ten plots the leaves were left on the ground. These plots were sown with oats, and, during growth, the difference in favor of leaving the leaves on the ground was very evident.

Ten different trials were made of each system, beacuse the previous manuring had not been quite identical, and this probably accounts for the increases not being uniform, but the general increase is quite obvious, amounting on the average, to 19 cwt. straw and 2 qr. extra grain.

The weight of leaves of a 17-ton crop is about 3 tons per acre. It is difficult to place a value on unmarketable, hall-decaying material, but, putting turnips at 8s, per ton, it would not be an over estimate to put the leaves at 4s per ton. Even, however, at this high price the leavers of the 17-ton crop would have a value of only 12s. for leeding purposes, but for manurial purposes, as has been mentioned, its value, as compared with the same contents in artificial manure, is £1 13s. 6d.; while the value of the increase of crop, putting

Professor H. H. Dean Prepares a Course On "Dairying"

HERE is a Course of Education that will appeal to every progressive farmer. It is the experience and knowledge of the most successful dairymen in various parts of the world put into such a clear and simple form that it may be readily understood and applied with profit by Canadian farmers.

This course is the crowning achievement of Professor Dean's life —the result of twenty-two years' experience as a teacher, scientist, investigator and practical dairyman. Prof. Dean is one of the most eminent dairy professors in the world, being professor of dairying at Ontario Agricultural College, Guelph.

World's Leading Dairy Farms Visited

Much of the material for the course was gathered from visits to the leading dairy farms of the world in England, Scotland, Holland, and the islands of Guernsey and Jersey. There is but one other way to obtain this information. That is, to go abroad yourself and visit these model dairy farms. It would be well worth your while, too, but it would cost you a thousand dollars or more.

Among other things, this course explains the marvelously efficient methods pursued by the "Model Farm" of North Holland where the finest Holsteins are kept.

Two Breeding Systems

This course on "Dairying" also tells about two widely different, yet successful, systems of breeding for milk-producing cows as followed on two Guernsey farms for over forty years. Canadian dairymen should certainly have this information.

But to go into full particulars about this course is impossible in this space. To state the matter briefly, it covers almost everything from the origin and development of dairy cattle and the various breeds to modern dairy stock management. The subjects of "Feeding" and "Breeding" are alone worth many dollars to the man who will apply what he learns.

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The Course aims to meet two classes of readers: *First*—Those who are interested in dairying, but who do not care to answer the examination questions. *Second*—Those who will write on the examination questions at the close of the course. Five year subscriptions to "Canadian Farm" will be given free to the subscriber residing in the Maritime Provinces who makes the highest marks, to the one residing in Ontario and Quebec, and to the one residing in the Western Provinces. You have as good a chance as anyone to win a five years' subscription.

This course is a gift that the Publishers of "Canadian Farm" are making to their subscribers. It cost considerable, more than you imagine, to secure the rights to print this notable series of articles in "Canadian Farm." It is the biggest thing that any agricultural publication has ever pulled off.

Each week for ten weeks, this series of articles will be continued in "Canadian Farm." Each article will be well illustrated and intensely interesting.

Can You Answer These?

Just as an experiment see if you can answer the following questions. Then you will have some idea as to whether there is anything in the course for you to learn.

1. What is the general outlook for immediate improvement in dairy cattle in Canada?
2. What are the three main theories relating to origin of species?
3. What is the limit of milk production in a dairy cow?
4. What are the strong and weak points of the Ayrshire breed? The Jersey? The Holstein?
5. What is the reason for the high percentage of butter fat in Jerseys' milk?
6. What is the "upward principle" in breeding? (This principle is more important than heredity.)
7. Why is it important to look out for "sports" and "mutants" among cows? How would you discover them, there being no noticeable difference in appearance?
8. What is Nutritive Ratio? Why is it so vastly important for dairying purposes? What are the German, American and O.A.C. Tables of Nutritive Ratio?
9. What is a correct balanced ration for a cow giving 60 lbs. of milk daily?
10. What do the terms "Record of Performance" and "Record of Merit" mean as applied to dairy cattle?
11. What is one satisfactory system of ventilating a dairy?

You will be able to answer these questions and scores of others when you've completed the course—read the series of articles faithfully. Just think how largely you will increase your knowledge. Knowledge is power—power to make larger profits.

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Fill in coupon below. Enclose with it 25c. for a three months' subscription, or $1 for a year's subscription. You will receive the entire series of articles in the three months' subscription.

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20

straw at 40s. her ton and grain at 16s. per qr., is; Straw, £1 18s.; and grain, £1 12s. Total, £3 10.

It thus appears evident that it is much more profitable to leave the leaves on the ground than to cart them home for cattle food.

There is a general complaint of the oat crop after turnips being unsatisfactory. The above results go far to show that this unsatisfactory feature would disappear if the turnip leaves were left on the field, and covered up as early as practicable, and if the soil was not put in a bad mechanical state by carting on it, and working it in a wet condition.—Mark Lane Express.

How Bones are Collected in Arabia.

The advance in the value of bones has caused their collection in out-of-the-way places of the world to be carried on with greater activity. Thus it is reported that the trade in bones from Arabia is increasing. The bones are shipped to Germany, France and England. Some parcels even find their way to America.

The bones collected in the Somali district of Arabia are of two classes. Those gathered from the surface being clean and white, while those dug out of the ground are more or less yellow.

The native Arab traders buy the bones from the poor women of the district, paying about 33s. per English ton, and the bones are then loaded on camels for transport to the nearest place. A camel can carry a load of 336 lbs. The bones are then bought by the merchants who ship them. Merchants have sometimes tried to deal direct with the poor women who collect the bones, but have found it a far more costly system, as the women prefer to deal with the Arab traders, and the traders do not make inquiries as to the origin of the merchandise.

Seed Potato Selection.

Many farmers even yet postpone the selection of their seed potatoes until the time they are wanted for use. Those of the progressive and wide-awake order however, now follow a different plan. It is far better to make the selection at the time of harvesting. Some plants will produce seven or eight good-sized, perfectly formed tubers. Other hills have to show one or two large potatoes, with perhaps eight or ten unsaleable ones. Now if the selection is made from the bins, the good sized potatoes from the latter hills, with their inherent tendency to reproduce many little ones, are as likely to be chosen as the good ones are. It is then obviously better to choose the seed potatoes from the hills at harvesting time. There is no reason why this policy if continued for some years should not result in an average harvest of seven or eight pounds of large well-formed tubers to the hill.

Phosphate of Lime Necessary for Bone Culture.

It may be taken as an axiom that pastures and hay land poor in phosphate of lime cannot support stock in a healthy condition. A striking example of this fact has been supplied by a district in France where the soil was naturally lacking in phosphate. For a long period up to about the year 1880 the cattle in the district of Gaetnais were decimated by bone diseases. Efforts were made to improve their condition by giving them doses of phosphate, powdered bones, and similar materials as a medicine, although without any marked success, and it was not until the use of phosphoric fertilizers became general in the locality that any marked diminution in the disease could be observed.

Before 1880 the cattle, according to records, did not average more than 800 lb. in weight, and furnished only about 3 pints of milk, whereas at the present time the weight of the cattle frequently exceeds 1,000 lbs., and the milk yield has increased to 4¼ pints.

Formerly the cattle presented to the eye an appearance of lassitude and indolence, and the mortality sometimes amounted to 15 per cent. on a farm.

Now their appearance denotes strength and activity, and the mortality has declined to 2 per cent.

These changed conditions are ascribed in the report, from which we have taken the details to the regular application to the pastures and hay lands of phosphoric fertilizers, which have enabled the soil to produce forage more abundant and richer in phosphate of lime.

Get Busy With a Baler

IF you have clover, timothy, prairie grass, or alfalfa, it will pay you to bale it. Loose hay takes barn space. You cannot sell it easily and you cannot ship it at all. It is the hay that is baled which is in demand in the high-priced city markets. This is the hay upon which you make your profits.

The difference between what it costs to bale hay and the increase you get in price per ton, gives you a bigger margin of profit on your work than anything else you do on a farm. You can bale easily from 8 to 16 tons a day and under certain conditions, several tons more. Baled hay can be made as much a big cash crop to you as your wheat, corn, or oats. All you need is the right kind of hay press. There is money in owning an

I H C Hay Press

An I H C pull power press in either one or two-horse style, or an I H C motor press with a 3, 4, or 6-horse power I H C engine, will do the work required on any farm cheaper, quicker, and with less attention than any other hay press so far designed.

It has taken years of field testing to make these presses the best that you can buy. They are that now. The horse power presses have greater capacity than any other horse press of equal size. They are lighter draft and easier on the horses. The step-over is the lowest and narrowest made. They have an adjustable bale tension, which insures compact bales. They are equipped with a roller tucker to turn in all straggling ends, thus making each bale neat in appearance.

I H C motor presses consist of a bale chamber and an I H C engine mounted on substantial trucks. The bale chamber of the motor press corresponds in size to the bale chamber of the horse press—14x18 inches, 16x18 inches, and 17x22 inches. No time is lost in setting up the machine. It can be moved easily from place to place, backed to the stack or barn, and started to work at once. The engine does not need a man to watch it and there is no danger from sparks. When not baling hay, the engine can be detached. Two extra wheels, an axle, and a belt pulley are furnished, so that with a little adjusting, you have a regular portable I H C engine ready for business 365 days each year. You can operate a small thresher or corn shredder, saw wood, shell corn, grind feed, pump water, generate electricity, or run a cream separator. You thus purchase two useful machines in one. There is profit in the hay press and unlimited work in the engine.

Hay time is drawing near. Be prepared for it. Drop in and see an I H C local agent in your town, or write the nearest branch house for a catalogue.

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The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizers, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

In Handling the Bull.

Do not permit the animal to run with the herd.

Give him plenty of exercise. A yard in which he can move about and a cover under which he can go for shelter is a good plan, arranging this so it will not be necessary to go inside to take care of him.

Do not feed him so he becomes fat, but simply keep him in good physical condition.

Give him feeds that are rather rich in protein, as carbonaceous foods are not conducive to vigor or efficient service.

The tread power is a splendid thing to force a bull to take the exercise needed to keep him in good physical condition.

Here is a woman who speaks from personal knowledge and long experience, viz., Mrs. P. H. Brogan, of Wilson, Pa., who says, "I know from experience that Chamberlain's Cough Remedy is superior to any other. For croup there is nothing that excels it." For sale by all dealers.

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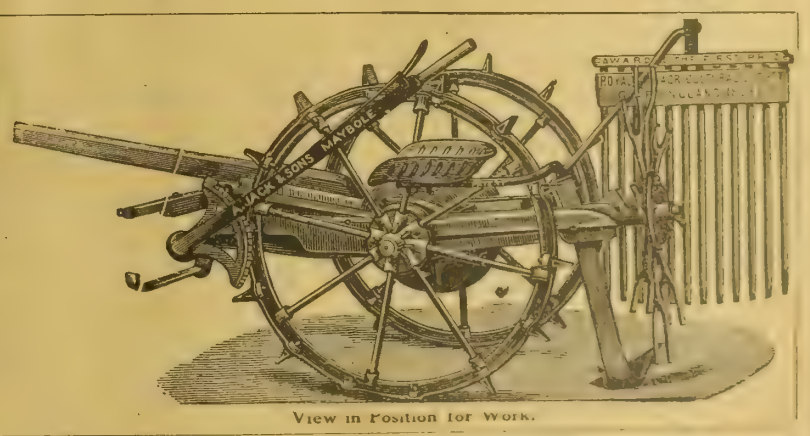

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THE NEW PATENT CALEDONIAN POTATO RAISER holds the record as the Most Perfect Potato Raiser in the World. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at Leicester, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christana (leading Foreign and English Machines competing). WRITE FOR CATALOG and PRICE.

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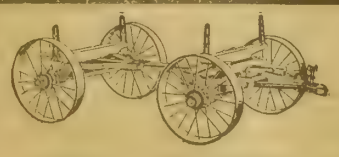
WAS TROUBLED WITH HIS HEART

HAD TO GIVE UP WORK

Mr. Alfred Male, Eloida, Ont., writes: "I was troubled with my heart for two or three years. I thought sometimes that I would die. I went to the doctor, and he said he could not do anything for me. I had to give up work. My wife persuaded me to try Milburn's Heart and Nerve Pills. The first box relieved me, so I kept on until I had taken seven boxes, and they cured me. I would not be without them on any account, as they are worth their weight in gold. I advise my friends and neighbors who are troubled with heart or nerve trouble to try them."

To any of those suffering from heart or nerve trouble we can recommend our Milburn's Heart and Nerve Pills with the greatest confidence.

Price 50 cents per box, or 3 boxes for $1.25. If your dealer does not have them in stock, send direct to The T. Milburn Co., Limited, Toronto, Ont.



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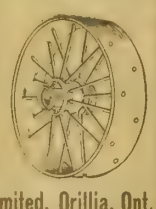
For convenience, strength and durability, get a T-A Handy Farm Wagon. Designed especially for farm work, will give everlasting service under the roughest usage to which a wagon can be put. And besides—it is easy on horses.

T-A Handy Farm Wagons and Wide Tire Steel Wheels

Carefully and strongly built of the highest grade material, these T-A Wide-Tire Steel Wheels will carry 25 to 50 per cent. heavier loads without the least danger of breaking down or getting stuck.

We will be pleased to send you descriptive catalogue. Write for it.



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Minard's Liniment Co., Limited.

Gents,—A customer of ours cured a very bad case of distemper in a valuable horse by the use of MINARD'S LINIMENT.

Yours truly,
VILANDIE FRERES.

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is the date on which classes will be resumed at

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The Value of Black Muck on the Farm

The black muck subject has attracted some public attention lately, and different opinions have been expressed as to its value, many of which were mere speculations, and misleading ones at that. Inasmuch as New Brunswick possesses very large quantities of black muck, I ask the privilege, through the columns of The Times, to give the farmers the benefit of twenty years of scientific research and practical experience.

Different mucks vary much in value, especially in the possession of the essential fertilizing elements. That may in part, account for the different opinions of its merits.

The following is the analysis of the deposits on my own place, which I have been experimenting with:

	Per cent.
Nitrogen as ammonia (N.H.3)	—2.03
Organic matter	...73.87

We therefore see that one ton of muck, dry, would contain 40.06 lbs. of ammonia. Its equivalent in nitrogen (available plant food) 33.43 lbs. worth fifteen cents per lb. is tqual to $5.01 per dried ton. About five tons wet would be required to make one ton dry.

The average mucks contain about 75 per cent. water. As the analysis does not show a complete fertilizer, but would require the additions of potash and phospharic acid, to keep up a balanced fertility of the soil, we must account for its good results in another way.

First: The organic matter loosens the soil, puts it in good mechanical condition, enables the moisture to freely circulate and carry food to the plants, and retains moisture in dry sandy soils.

Second: Its use in a dry state in the stable is almost indispensable, for used as bedding and in the trough behind the cattle, it absorbs and retains all the liquid, which is the best part of the manure. This liquid runs to waste in the majority of stables.

In order to better understand its value in this connection, it is necessary to examine the ordinary methods of handling barn manure, and see if the essential elements are finding their way back to the soil, to produce future crops.

LOSSES IN MANURE.

It has been demonstrated by experiments (Bulletin 56, Cornell University Agricultural Experimental Station), that 50 per cent. of the total constituents in farm manures is liable to lost by ill-regulated fermentation and leaching.

It is estimated that if but one-tenth of the present waste could be avoided the total amount of constituents that may thus be saved, would be more than equivalent to the amounts now purchased in the form of commercial fertilizers. Farmers, wake up, and stop the leaks.

I have proved to my satisfaction that not only 10 per cent, but 90 per cent. of the waste occurring in this way may be avoided by the use of black muck and a little land plaster.

No crop will grow without nitrogen, and it is the most expensive fertilizer we buy. We are told that 80 per cent. of the air is nitrogen, but not available to all crops. Crops are divided into two classes, called nitrogen collectors and nitrogen consumers. The latter class must take it from the ground by the roots or starve. The former collects it from the air and stores it in the ground to feed the latter. Clover is one of the principal collectors, and wherever muck is used we get clover.

It is estimated that there is $10,000,000 worth of nitrogen over every acre of land; this is collectable by clover and we are thus able to get the most expensive plant food free.

I think it should be clear to any man that black muck is one of New Brunswick's greatest assets. Even the mucks contain no direct plant foods are available as absorbents and for their physical effect upon the soil.

Lime is not a plant food, yet we get wonderful effects by its use on damp acid soil. Anything that will improve the physical condition of the soil and produce better crops is valuable.—D. MacDougall.

Gas engine "ignition" is the production at the proper instant within the engine cylinder, of an electric spark whereby the charge is ignited. Without good ignition the best engine will not run satisfactorily.

Batteries are commonly used for producing the spark. These wear out in time and require renewal. When the engine begins to miss, and there is plenty of fuel and oil, it is reasonable to suspect the ignition and the batteries should be the first thing examined.

The latest types of engines have built-in engine timed magnetoes, and batteries are unnecessary, the care and expense incidental to their upkeep is being eliminated, as the magneto is an actual part of the engine that furnishes current as long as the engine runs. So the engine furnishes its own electricity and the magneto wears as long as the engine.

As a comparison of the cost of doing work by mechanical and animal power, it is estimated that on the basis of one cent per kilowatt hour, and the use of 10 horsepower hours to plow one acre, the fuel cost for the mechanical power is under 20c. while the cost of the equivalent horse power would be $1.00.

Magneto ignition instead of the troublesome battery, has removed the last objection to the use of the gas engine on the farm.

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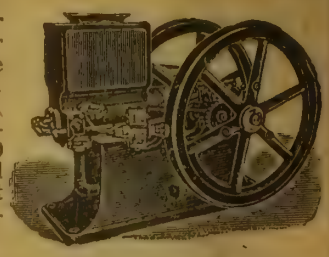
Why not Get One This Fall?

THE easily-moved "Monarch" will do your farm chores—give you an easier winter than you ever enjoyed. Get one, like thousands of live, economical, wise farmers. All sizes from 1 1-2 to 35 horse power.

This is the "King of Farm Engines" for economy and long wear. Easy to start even at 30 below zero. Made with gasoline gauge, speed regulator, etc., like automobile engines. Just learn how good it is. Water-cooled and air-cooled types. Send for catalogue and folder.



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This security is different from any other ever issued with its **Profit Sharing Features**, and is as safe as any farm mortgage. Investors wanting the highest earning capacity with absolute safety, should write at once for full particulars to

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FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, **free** of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure — **you**, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience**, we know better than any doctor. **I know** that my home treatment is a safe and sure cure for **Leucorrhoea** or **Whitish discharges, Ulceration, Displacement** or **Falling** of the **Womb, Profuse, Scanty** or **Painful Periods, Uterine** or **Ovarian Tumors** or **Growths**, also **pains in the head; back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar** to our sex.

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address**, tell me how you suffer, if you wish, and **I** will send you the treatment for your case, entirely free, in plain wrapper, by return mail. **I** will also send you **free of cost**, my book—**"WOMAN'S OWN MEDICAL ADVISER"** with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers** of **Daughters, I** will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, **I** can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all woman's diseases and makes women well, strong, plump and robust. **Just send me your address**, and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 309 - - - - WINDSOR, Ont.

The Cape Breton Island Exhibition.

(Continued from page 7.)

Guernseys.—The vicinity of the Sydneys is becoming a veritable hot bed for Guernseys and some fine individuals were found in the ring.

Bull, 3 years old and over.—1, Little Bras D'or Agricultural Society; 2, Georges River Agricultural Society; 3, Murdo McKenzie, Coxheath.

Bull, 2 years old.—1, G. O. Purves, North Sydney.

Bull, senior calf.—1, R. M, Jackson, Jacksonville.

Bull, junior calf.—1, Murdo McKenzie; 2, R. M. Jackson.

Cow, over 3 years and under 4 years—1, Murdo McKenzie; 2, R. M. Jackson.

Heifer, 2 years old.—1, E. J. Johnston, George's River; 2, R. M. Jackson.

Heifer, over 1 year.—1, R. M. Jackson.

Heifer, senior calf.—1, E. J. Johnston.

Best bull, any age, Cape Breton County.—1, Little Bras D'or Agricultural Society.

The Grade Classes had strong competition in every section. Jersey Grades and Guernsey Grades competing in one class and Ayrshire Grades and Holstein Grades in another class. The number included some useful, milky looking cows and promising young heifers. The best grade herd, Victoria County, was shown by J. C. McDonald, while D. R. Nicholson's grade Holsteins was the best Cape Breton County grade herd. Nicholson also captured the Cape Breton County prize for best herd of grade heifers, under 3 years, bred and owned by exhibitor.

A. K. Jackson and H. A. Moffat had the second and third prize herds of grade cows, while similar honors on herd of heifers, bred by exhibitor went to E. J. Johnston and H. A. Moffat. Nicholson had the best grade cow, any age, as well as the best purebred cow, any age or breed.

Following is a list of awards in the Grade Classes:

GRADE JERSEYS AND GUERNSEYS.

Cow, 4 years old and upwards—1, D. R. Nicholson; 2 and 6, Ira Hughes; 3, A. K. Jackson; 4, H. A. Moffat; 5, E. J. Johnson; 7, Duncan McLeod, 8, Dan McRae.

Dry Cow, 4 years and upwards—1, Ira Hughes; 2, M. R. Gillis; 3, A. K. Jackson; 4 and 5, Murdo McKenzie.

Cow, 3 years old—1, A. K. Jackson 2, J. Webster Allen; 3, H. C. Musgrove; 4, R. M. Jackson; 5, James McKenzie.

Cow, 2 years old—1, E. J. Johnston; 2, Jas. McKenzie; 3, M. P. Gillis.

Heifer, 2 years old—1, Jas. C. McDonald; 2, Thos. C. Hart; 3, J. A. McCormack.

Heifer, senior, yearling—1 and 5, Jas. McKenzie; 2, Dan A. McAdam; 3, M. P. Gillis; 4, H. A. Moffat.

Heifer, junior yearling—1, E. J. Johnston; 2, Andrew McDonald; 3, Henry J. Boutilier; 4, Thos. C. Hart; 5, H. C. Musgrave.

Heifer, senior calf—1 and 4, George D. Oland; 2, Jas. McKenzie; 3, John McMullin.

Heifer, junior calf—1, Dan Young; 2 and 3, E. J. Johnston; 4, Jas. McKenzie; 5, Geo. D. Oland.

GRADE AYRSHIRES AND GRADE HOLSTEINS.

Cow, 4 years and over—1 and 4, A. K. Jackson; 2 and 3, D. R. Nicholson; 5, H. A. Moffat.

Dry Cow, 4 years old—1, 3 and 4, D. R. Nicholson; 2, C. A. Munn; 5, G. D. Oland.

Cow, 3 years old—1, H. A. Moffat; 2 and 3, M. P. Gillis.

Dry Cow, 3 years old—1 and 2, D. R. Nicholson; 3, H. A. Moffat; 4, M. W. Ross & Son; 5, Dan McRae.

Cow, 2 years old—1 and 3, D. R. Nicholson; 2 M. W. Ross & Son; 4, H. A. Moffat; 5, A. K. Jackson.

Heifer, 2 years old—1, W. Drysdale; 2, A. F. McNeil; 3, D. R. Eicholson.

Heifer, senior yearling—1, H. A. Moffat; 2, 3 and 4, D. R. Nicholson.

Heifer, junior yearling—1 and 2, J. S. McLennan; 3 and 5, H. A. Moffat; 4, D. R. Nicholson.

Heifer, senior calf—1, H. A. Moffat; 2, C. A. Munn; 3, A. K. Jackson; 4, and 5, Murdo McKenzie.

Heifer, junior calf—1 and 4, G. D. Oland; 2, H. A. Moffat; 3, D. R. Nicholson.

Sheep

were judged by M. H. Parlee, Lower were judged by M. H. Parlee, Lr. Millstream, N. B. The competition in the sheep classes was not so keen as the extent of the sheep breeding industry in Cape Breton would warrant. There are some large flocks of high grade and not a few pure bred sheep to be found in the four counties. The sheep were all brought out in a thrifty field condition, without any extra fitting or trimming and showed that the breeders are selecting robust strains for their foundation flocks. We look for lively competition in the sheep classes at Sydney in future years.

Prizes were awarded as follows:

LEICESTERS.

Ram, 2 years or over—1, John McLean.

Ram, over 1 year and under 2 yrs.—1, Nelson Beaton.

SOUTHDOWNS.

Ram, 2 years or over—1, Neil McDonald; 2, W. M. Hill.

SHROPSHIRES.

Ram, 2 years old or over—1 George's River Agricultural Society.

Ram, 1 year old—1, E. J. Johnson.

Ram Lamb—1, John P. Harvey; 2 and 3, Neil McDonald.

Ewe, 2 years old—1, John P. Harvey; 2, Neil McDonald.

Ewe Lamb—1, John P. Harvey.

OXFORDS.

All prizes awarded in this class went to E. J. Johnston, George's River, without competition.

ANY OTHER PURE BREED

First prizes on aged and shearling Zulu Rams were awarded in their class to Prof. Bell, Beinn Breath, Baddeck. These rams are speckled black and white, have four horns, one pair coiled and another pair straight or curved. Their origin is supposed to trace back to Jacob's speckled flock of Biblical fame. The reader can acquaint himself with their history by reading Genesis 30th chapter.

GRADES, (Long Wool.)

Ewe, 2 years or older—1, Allen Boutilier.

Ewe, over one year old—1, 2 and 3, Allen Boutilier.

Ewe Lamb—1, Albert Ferguson; 2 and 3, Allen Boutilier.

Pen—1, Allen Boutilier.

GRADES, (Medium Wool.)

Ewe, 2 years or older—1, E. J. Johnston; 2, John P. Harvey; 3, John McMullin.

Ewe, over 1 year—1, George's River Agricultural Society; 2, E. J. Johnston.

Ewe Lamb—1, John P. Harvey; 2, John McMullin.

COMMON SHEEP.

Ewe, 2 years old and over—1, George's River Agricultural Society; 2, Neil McDonald; 3, W. M. Hill.

Ewe Lamb—1, Neil McDonald; 2 and 3, Nelson Beaton.

FAT SHEEP.

Fat Ewe.—I, Neil McDonald; 2, Albert Ferguson.

Fat Wether—1, W. M. Hill.

Fat Ewe Lamb—1, John P. Harvey.

Fat Wether Lamb—1, John McMullin; 2 and 3, E. J. Johnston.

Special prizes donated by Hon. Senator McDonald, Glace Bay, for :

Best Yearling Ram—1, E. J. Johnston; 2, Nelson Beaton.

Best Yearling Ewe—1, E. J. Johnston; 2, Allen Boutilier.

Swine

Berkshires, Yorkshires, Chester Whites and their Grades made up the Swine Classes at Sydney. M. H. Parlee placed the awards. With the exception of first prize on sow, 1 year old or over, which was captured by R. M. Jackson, all the other prizes awarded in this class went to a good lot of black and whites, owned by D. R. Nicholson, who captured with them the Cape Breton County Sweepstakes prize for best purebred

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boar and three females. The prizes in the other sections were awarded as follows:

YORKSHIRES.

Boar, over 1 year old—1, A. K. Jackson.

Boar, under 1 year old—1, D. R. Nicholson.

Sow, 1 year old or over—1, John McQueen; 2, Eldridge Hill; 3, Ira Hughes.

Sow, over 6 months—1 and 2, Murdo McKenzie; 3, D. R. Nicholson.

Sow, under 6 months—1, D. R. Nicholson; 2, John P. Harvey.

Sow and litter—1 and 3, D. R. Nicholson; 2, R. M. Jackson.

Best Herd—1, D. R. Nicholson.

CHESTER WHITES.

Boar, 1 year old—1, Ira Hughes; 2, Dan McRae; 3, John McMullin.

Boar, under 1 year old—1, D. R. Nicholson; 2, Ira Hughes; 3, John McMullin.

Sow, 1 year old or over—1 and 2, Ira Hughes; 3, John McMullin.

Sow, over 6 months and under 1 year—1, Ira Hughes; 2 and 3; D. R. Nicholson.

Sow, under 6 months—1 and 2, Ira Hughes; 3, John McMullin.

Sow and Litter—1, Ira Hughes.

Best Herd—1 and 3, Ira Hughes; 2, D. R. Nicholson.

GRADES AND CROSSES.

Sow, 1 year old or over—1, Dan. McRae.

Sow, 6 months old and under 1 year—1 and 2, Ira Hughes.

Sow, under 6 months—1 and 2, Nelson Beaton.

Fat hog, sow or barrow, under 1 year—1, John McMullin; 2 and 3, Jas. McKenzie.

THE POULTRY.

Seth Jones, Poultry Superintendent for New Brunswick, placed the awards in the poultry classes which were well filled with choice birds, some of which had been imported at high prices. The hen fever has a strong hold of the Cape Breton exhibitors. Their well equipped poultry house was filled and a large tent had to be utilized to house the overflow, which would have made a show of quite respectable dimensions.

FRUITS AED VEGETABLES.

G. H. Vroom, judged the fruit, which for quantity, coloring and uniformity was a revelation of Cape Breton's fruit growing possibilities.

O. W. Wetmore, Clifton, N. B., placed the awards in the vegetable and grain classes, and so far as quality and quantity was concerned the exhibits far out-classed the showing made at either St. John or Halifax. Cape Breton farmers can grow vegetables that are the equal of any produced in Maritime Canada. The best seed collection from any one farm in Cape Breton County was shown by R. B, Murray, Coxheath. The prize winning County collections of vegetables were shown by H. A. Moffat, D. R. Nicholson, John McMullin and Harry Lewis.

DAIRY PRODUCE.

The dairy products made up an aggregation of quality that was hard to beat. There were nineteen entries in the tub butter section and thirty-four entries in prints. The cheese section had two entries of home made quality that was very good.

LADIES FANCY WORK.

The Woman's Department contained samples of fancy work, domestic and household arts that would be hard to excel at any show in Canada.

Mrs. I. W. Leonard and Mrs. H. A. Moffat had the best collections of fancy work. Miss Effie McDonald, Enon, placed the awards.

The Yarmouth County Exhibition.

The weather man favored the Yarmouth exhibition from start to finish and in this, helped to make the attendance at the fair a record one. The show, taken all the way through, was the best in the history of the Society, both in number and quality of the exhibits.

A large number of local firms, and outside exhibitors filled the main building to capacity. The management served good attractions in addition for both afternoons and evenings.

Some of our Provincial Exhibitions can take a lesson from Yarmouth, in having confortable sleeping quarters for stock men. A comfortable bunk house was fitted up with bunks, tables and chairs.

The only other place, to our knowledge, having such good quarters, is Chatham.

Yarmouth also has new sheds for cattle, horses and sheep.

The ladies in charge of their respective departments deserve great credit for the way in which their classes were filled with Fancy Work, Domestic, Manufactures etc.

The flower exhibit, especially attracted a great deal of widely deserved attention, no finer being shown at any of the other exhibitions. In one class of dalhias alone there were sixty-five varieties.

The fruit exhibit was splendid and astonished any one not familiar with Yarmouth County. The show of apples compared favorably with any of the larger exhibitions, the variety being good and the fruit in fine condition.

A very large exhibit of plums and pears, also two large exhibits of grapes, one shown by Robert Caie, the other by Dr. I. M. Lovett.

The exhibit of seeds was small, even dropping below that of former years.

The display of vegetables was not as large as usual, but of good quality, the potatoes being especially good. Some of the chief exhibitors in this line were G. Israel Allen, G. A. Allen, and Geo. Murphy.

The products of the dairy were to be seen in abundance. Yarmouth Creamery Co., had a very large exhibit of butter in crocks, tubs, and prints. This factory has been in operation less than a year, but under the efficient management of Chipman and Porter, is now making a ton of butter a week.

CATTLE.

Every section of the classes for cattle was filled. The Shorthorn herd of Dr. Lovitt, the Guernsey herd of H. W. Corning, and the Devon herds of Chas. and Wm. Pinkney were to be seen in even better shape, than at St. John and Halifax shows.

We have had a wrong impression of the Devons seeing them at our Provincial shows, as there they have to show against strictly beef cattle, but in their own home they are used as a dual purpose cow, perhaps a little strong on the dairy side; therefore they are hardly in the right place in a strictly beef class, as it does not do to fatten them.

We understand one owner has ruined three good dairy cows for the sake of competing in the beef classes at our provincial shows.

Considering the difficulties the Devons have to contend with, they deserve greater credit than we have heretofore given them.

There was a very large exhibit of grade Guernseys and Jerseys, showing how well the County is adapted to dairy purposes.

In the Devons Wm. Pinkney and Chas. Pinkney took about everything, Everil Burrill and H. D. Hutman coming in with some good grade Devons.

In the Ayrshires, C. Morrell, Brookline, took first in aged cow class with O. L. Churchill second and third, who also won first in 3 year-old cow class with no competition. Morrell won first with two-year-old heifer in milk, Churchill second. The latter took first money in the yearling class, with Mr. Tartar second.

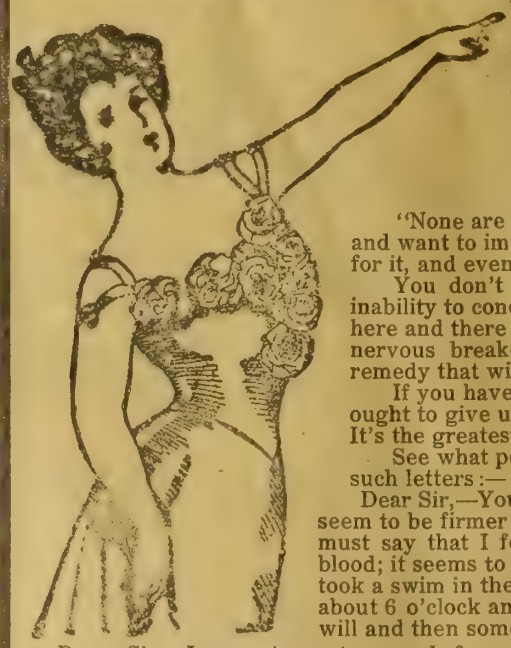
Morrell won first in senior heifer calf, also first and second in junior heifer calf with Curchill third.

In grade Ayrshires, A. Servant won out with aged cow, A, Corning second, M. R. Crosby third.

First in 3 years-old went to Churchill with no competition. Morrell won first in 2 year-old heifer, Tartar first in yearling heifer, Churchill came to the top in senior heifer calves with Morrell second. Tartar won with junior calf, no competition.

Guernseys.—H. W. Corning took all

Weak Men, Have Courage!



It you get up in the morning with a dull brain, tired nerves, an ache in your back, a dread of the toil and hardships of everyday life, these are the signs that your vitality is at a low ebb - that some of the organs or functions of your body are in a weakened morbid condition.

If you are a young man, and free rein for evil habits and passions have exhausted your vital energy, or if on the shady side of 40, you have not the strength and stamina that should be possessed by a man of your years, you can regain your health, strength and energy with Electricity.

"None are so blind as those who will not see," but if you are open to conviction and want to improve your condition, I can convince you that my Belt, does all I claim for it, and even more.

You don't need to be taught that restless nights, sleeplessness, despondency, inability to concentrate your thoughts, loss of appetite, weak back, headache, pains here and there in other parts of your body, lack of energy and push, are all signs of nervous breakdown, physical debility; you know that, but what you want is a remedy that will restore the vitality that you have lost.

If you have doctored and drugged and got no benefit, that's no sign that you ought to give up. Drugs can't restore your vitality. Electricity is for men like you. It's the greatest nerve builder and body builder in the world to-day.

See what people say who have used my Belt. Every mail I get brings scores of such letters:—

Dear Sir,—Your Belt has been a boon to me. The emissions have ceased, the testicles seem to be firmer and increased in size. My Rheumatism in the shoulder has gone. I must say that I feel that life is now worth living. The most noticeable thing is the blood; it seems to have increased very much in circulation. Before using the Belt, if I took a swim in the lake I very soon got cold, but now I am in the water every morning about 6 o'clock and don't feel the cold at all. I think your Belt will do all you claim it will and then some more. I remain, A. G. ROFFEY, Wabigoon, Ont.

Dear Sir,—I cannot say too much for your Belt. I consider it completely cured me of Rheumatism and I never felt so well for the last thirty years. I would recommend it to any railroad man suffering from weak back or kidney disease. I only wore my Belt for one month.—WILLIAM HONAN, Cochrane, Ont.

My Belt, with special Electric attachment, will restore your vigor. It will check all loss of vitality, and affects every organ of the body. It cures Nervous Debility, Varicocele, Rheumatism, Lame Back, Lumbago, Sciatica, any case of Kidney Disease that has not gone as far as Bright's Disease, Stomach Trouble, Constipation.

THE WORLD HATES A QUITTER—If you go into a fight, stay with it, no matter how poor your chances look. The other fellow probably wants to quit, and if you hold your head up he will quit first.

The victory to the brave. It takes nerve and energy to win nowadays.

You don't want to be a failure. You are made for better things, but you can't win without courage and energy. That's the idea behind my Electric Belt, the body battery that pours electric vim into a man's body.

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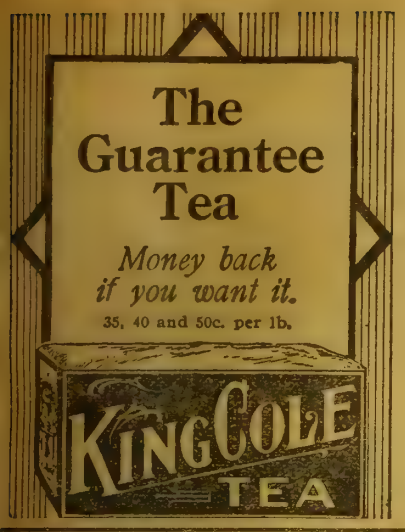


the firsts in the Guernsey class. Lloyd Cook took second in 2 year-old bull, Harry Boyd second in Junior calf and second in 3 year-old cow. Boyd also took second with senior calf.

A very strong class of grades was shown, A. Servant winning out in aged cow, Geo. Murphy second, M. R. Crosby third. First in 3 year old cow went to G. W. Cook, second to James Earle. Cook also got first in 2 year old heifer in milk with no competition. Earle captured first and second in 2 year old heifers. In yearling heifers, Murphy came first, Boyd second and W. L. Cook third. In senior calves Crosby first, W. L. Cook second, A. Servant third. In junior calves, Murphy first, Corning second, W. L. Cook third.

JERSEYS.

3 year old bull.—1, W. L. Cook.

2 year old bull.—1, Harry Conn; 2, Benjamin Bain; 3, J. C. Corning.

Yearling bull.—1, F. G. Cook; 2, J. C. Corning; 3, D. Trask.

Senior bull calf.—1, Harry Conn; 2, A. C. Rose, 3, Corning.

Junior bull calf.—1, Conn; 2, Corning; 3, H. Cook.

4 year old cow.—1, A. Corning; 2, J. C. Corning; 3, Geo. Murphy.

3 year old cow.—1, Conn; 2, H. Boyd; 3, H. Conn.

2 year old heifer in milk.—1, J. S. Corning.

2 year old heifer dry.—1, A. C. Rose.

Yearling heifer.— 1 and 2, Conn; 3, H. B. Cook.

Senior calf.—1, G. W. Cook; 2, Geo. Murphy; 3, S. Bain.

Junior calf.—1, Bain; 2, Trask; 3, Murphy.

GRADE JERSEYS.

4 year old cow.—1, Cook; 2, Corning; 3, Frank Cook.

3 year old cow.—1, M. S. McConell; 2, H. Murphy; 3, J. C. Corning.

2 year old heifer in milk.—1, Mrs. A. B. Crosby; 2, Ross Durkee; 3, Corning.

2 year old heifer, dry.—1, Wm. Churchill, no competition.

Yearling heifer.—1, M. Harris; 2, Chas. Doane; 3, H. Pitman.

Senior calf.—1, A. Cook; 2, Vernon Allen; 3, Bain.

Holsteins.—Only one Holstein bull was shown being a six months old calf owned by Herman Churchill.

Stephen Churchill took first money in aged cow with A. Corning second. Corning took first in 2 year-old heifer in milk and first in dry class, first in yearlings.

GRADE HOLSTEINS.

G. W. Churchill took first in aged cow, A. Corning second. F. Rose first in 2 year old dry heifer, no competition. C. H. Doane first in yearling, no competition. S. Churchill first in senior heifers, A. servant second. M. Harris first in junior heifer, A. Servant second.

In the Herefords, only one aged bull was shown also one cow and bull calf by Geo. H. Burrill. Burrill also got first in grade cows both 3 and 4 yrs. old. Everil Burrill first in grade 2 year old heifer in milk; Foster Burrill first in dry class with George Burill second. First in yearling heifer went to Geo. Burrill also senior calves, second R. Bain; 3, Burrill.

Junior calves won first by Everil Burill; 2 and 3, to Geo. Burrill.

OXEN.

Working oxen were the strongest class in the show, there being thirty yokes on exhibition.

Pair 7 years old.—1, R. McDonald; 2, F. Churchill; 3, J. Corning.

Pair 6 years old—1, H. Killam; 2, Jutson Clements.

Pair 5 years old—1, J. Winters; 2, H. Cook; 3, Chas. Pinkney.

Pair 4 years old—1, S. Panels; 2, H. Denis; 3, F. Doucett.

Pair 3 year old steers—1, M. Fraughten; 2, A. Spears.

Pair 2 year old steers—1, H. Churchill; 2, Capt. Goudy; 3, A. Studley.

Yearlings—1, G. Cook; 2, R. Goudy; 3, L. Ellis.

Senior steers, calves—1, Burrill; 2, Capt. Goudy; 3, S. Cook.

Junior steers, calves—1, L. Cann; 2, Burrill; 3, R. Goudy.

BEEF CATTLE.

Pair oxen, 4 years old—1, D. Sanders; 2, Geo. Handy.

Pair steers, 3 years old—1, Cann; 2, D. Trask.

Pair steers, 2 years old—1, Burrill.

Cow, 3 years and up—1, Dr. Lovill; 2, A. Corning.

There was a fairly good exhibit of horses especially in the light draft class, Capt. Goudy winning first in 4 year olds, H. W. Corning second. Three year olds, C. Cann won the money and in 2 year olds A. Corning with Geo. Cleveland second.

J. M. Trefry won first in Percheron stallion. D. S. Churchill won first on pair carriage horses. Dr. Webster took first on Hackney stallion.

Some splendid standard breeds were shown, Burges Blackadair's mare "Fannie Lambert" by "Revolution" by "Rampart" won first in brood

mare with foal. The foal which is sired by "Kivera" also won first. One of "Fannie Lambert's" colts sired by "Kivera" won first as 2 year old in the roadsters class, owned by J. A. Blackadar.

James A. Blackadar won first with another yearling "Kivera" colt in the roadster class.

SHEEP.

This exhibit was a little behind the usual number. In Cotswolds, F. Rose took first on ram 2 shears, Arthur Winters first on yearling ram. Rose took first second and third on ram lamb. First on ewe 2 shears went to G. W. Churchill; 2, Rose; 3, Geo. Hardy. In sheasling ewe, all prizes went to Rose. Geo. Hardy won first on ewe lamb, Rose second and third.

In Shropshires, Chas. Butler won first on ram 2 shears with C. M. Killam second, J. C. Corning third. First and second yearling ram went to H. Cameron. First ram lamb to Corning; second to Cameron. Ewe 2 shears, won by Cameron, second and third Corning. Cameron also won in shearling ewe, and in ewe lamb with Corning second and third.

M. Lamont showed everything in the Southdowns, Stewart Servant in Oxford Downs, Emerson Servant in the Dorsets.

A few good grade sheep were shown by the different pure bred breeders.

H. Cameron won a special of ten dollars for best yearling sheep, bred by exhibitor.

Clark Killam won special of five dollars for best pen of three lambs from pure bred Shropshire.

SWINE.

A large exhibit of swine was shown. A. Servant had his own way in the Poland Chinas, J. C. Corning the same in Berkshires, H. W. Corning in Chester Whites, and Wm. A. Churchill and J. C. Corning in the Yorkshires.

Some grades were shown by Edward Cann, G. W. Cook and H. W. Corning.

POULTRY.

The poultry exhibit was a little smaller than usual but of good quality, especially in White Wyandottes and Brahmas. Mr. Landry of Truro, judged the poultry in his usual efficient manner and while in Yarmouth has promoted a Poultry and Pet Stock Association.

In the hauling contest there were eight contestants the first prize going to Chas. Pinkney whose cattle weighed 2,300, load 4,100 lbs.; second prize Peter Muise, weight of cattle 2,300 load 3,800 lbs.

The sale of sheep, which was to have come off the first day of the show, did not take place, owing to the fact that the carload did not arrive. A large number of people were disappointed in this but will be able to satisfy their wants at a later date.

R. Robertson, Nappan, judged dairy cattle, Mr. Harding, Ontario, judged sheep swine and beef cattle, Mr. Cunningham, Ont., judged horses.

Victoria Co. Field Crops Competition.

The Victoria County Seed Growers' Association took up the Field Crop Competition for this year, instead of the Agr. Society as formerly.

Judging was done by Mr. Wm. Moore of Scotch Lake, York County.

There were three classes, namely—Wheat, Oats and potatoes, with eight prizes in each class.

Following is a list of those who entered the competition with the score made, the first eight being prize winners.

WHEAT.

Christian Adams, 92; J. F. Johnson, 91½; Donald Innes, 90; Frank Baird, 84; Samuel Wark, 79; C. E. Pickett, 75½; Bruce Ervin, 64½.

OATS

Elijah Sisson, 91½; Donald Innes, 91; F. E. Henderson, 87½; Bruce Ervin, 86; C. E. Pickett, 85; J. A. Graham, 84½; Charles Wallace, 83½; A. J. Jensen, 80; Robert Henderson, 71; Robert Ervin, 66½.

POTATOES.

J. A. Graham, 94; Herbert Manzer, 92½; Frank Baird, 92; Elijah Sisson, 91½; J. F. Johnson, 91; Harold Sorensen, 90; Charles Wallace, 89½; C. E. Pickett, 89; J. P. Jacobsen, 86; Robert Henderson, 83; Donald Innes, 82; Robert Ervin, 79.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

SHORTHORN BULLS FOR SALE. Walter Eaton, Upper Canard, N. S.

Pekin Ducks, one year old, for sale cheap. Also a few young ones. MARITIME POULTRY & SUPPLY CO., Moncton, N. B

FOR SALE—Well bred grade York pigs, 4 weeks old. Price reasonable. Apply to L. M. ANDERSON, Sackville, N. B.

Registered Cotswold Ram lambs, out of 250 lb. prize winning ewes. WALTER S. COGSWELL, Centreville, N. B.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

GUERNSEYS FOR SALE—1 yearling bull, and 4 between the ages of 4 and 10 months, all very fine animals. WILLIAM COX & SON, Canard, N. S.

FOR SALE—Two registered Holstein Bull calves. Also one 4 year old Bull for sale or exchange. GARFIELD CAMPBELL, Salisbury, N. B.

WANTED—Ladies to do plain and light sewing at home, whole or spare time; work sent any distance; charges paid; send stamp for particulars. National Manufacturing Co., Montreal, Que.

EXHIBITION POULTRY—We have 40 varieties of poultry, pigeons, turkeys, geese, etc. for sale. Prices right. Correspondence solicited. HARTLAND POULTRY YARDS, Hartland, N. B.

FOR SALE OR EXCHANGE—Pure Bred Registered Yorkshire Boar, Baron Lomond, for cash, or in exchange for Sow of same quality and breeding. R. G. MURRAY, St. John, N. B.

FOR SALE—One thoroughbred registered Ayrshire bull 20 months old. Also one Ayrshire bull calf, 4 months old—Gilt-edge stock. D. A. McDonald, Port Hood, N. S.

FOR SALE—Two Jersey Bulls 10 and 8 1-2 mos. old; sire, Brampton Financier, Also grade Heifers of best breeding dams, great producers. G. B. CLARK. Tatamagouche, N. S.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

FARM FOR SALE AT SUSSEX—The Hallett Farm, Hazel Hill, one of the finest situated properties at Sussex, 100 acres, fine house, barns, etc. For further particulars apply to S. H. WHITE, Sussex, N. B.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co,, Queen Street, Montreal.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shediac, N. B,, during the week ending April 20th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, Sussex, N. B.

YOUNG BERKSHIRE PIGS OF BOTH SEXES FOR SALE—These pigs are from large two and three year old sows—the best that can be obtained. As usual my customers will get only good ones. I have shipped pigs all over these Provinces and they have always given satisfaction. Send a trial order. Barred Plymouth Rocks, Cockerels and Pullets of the best breeding, fine laying strain. Write for low prices. W. S. POOLE. Box 414, St. Stephen, N. B.

Annapolis Valley Fruit Farm

One of the best apple orchards in the valley, picking 1000 bbls. in season; 96 acres; near neighbors, school, churches and depot; everything is here to make farming an ideal occupation: borders salt water; splendid 2-story, 12-room house; 2 barns, one 40x60; cuts 75 tons hay, abundant supply wood and timber; accident to owner induces him to throw in full line stock, tools and machinery; the low price for this splendid profit-producer is only $7300, part cash; for traveling instructions for this and a 228-acre fruit farm for only $1900, see page 61, our New Mammoth Illustrated Farm Catalogue No. 35, fully describing many fine bargains; write today for free copy. Box D., Sussex, N. B.

"Jane & Jake" For Sale

I bought a pair of Grey African Geese paying for them (young birds) $12. I sold the birds they raised that fall before the snow flew, for ($50) fifty dollars clearing ($88) thirty-eight dollars. I have a splendid pair for sale "Jane" and "Jake" Jane is a two-year-old, she layed (50) fifty eggs this season. Jake is a yearling and the best bird (male) I raised this season, he's enormous and an elegant bird. These birds will make a lot of money for anyone who wants to take up geese. I still have some extra fine turkeys for sale. Indian Runner ducks, Sicillian Buttercups, sired by a bird imported from Italy.

SARAH E. MOSES SMITH,
Woodward's Cove, Grand Manan.

Nitrate of Soda of Chili.

It is of special interest to note the prevailing prices of the materials supplying Nitrogen, commonly desingaed "Ammoniates," in the wholesale fertilizer market, and the very low cost of Nitrate of Soda is especially noteworthy.

All the sources of Nitrogen except Nitrate of Soda are commanding unusually high prices. In the principal North American markets the leading materials which are used by Fertilizer Manufacturers have been for several months and are now quoted as follows:

Dried Blood	$3.00 to $3.05 per unit
Tankage	2.70 per unit
Sulphate of Ammonia	2.50 to 2.52½ per unit
Nitrate of Soda	2.23 per unit

by using Nitrate of Soda!

But when it is considered that Nitrate of Soda is completely and immediately available and that none of the others possesses both these qualities, it is readily seen that Nitrate of Soda would cost the user still less. The following table, based upon the present quotations, and also upon relative availability, shows how very much less.

Dried Blood (only 73 p.c. available! $4.11 to $4.18 per available unit.

Tankage (only 62 p. c. available) $4.35 per available unit.

Sulphate of Ammonia (only 90 p. c. available) $2.77½ to $2.80½ per available unit.

Nitrate ol Soda (100 p. c. available) $2.23 per available unit.

A saving of from 19½ p. c. to 48½ p. c. by using Nitrate of Soda.

Since the above quotations are for the leading materials used in making all so-called "complete" fertilizers, why not buy your ingredients separately and mix your fertilizer yourself? You will then know that you have secured the cheapest and best form of Nitrogen, and satisfactory forms of the other elements.

The strange and deleterious acidity of Sulphate of Ammonia, which has of late been used so much by certain fertilizer manufacturers as a source of Ammoniates, is an additional reason for avoiding the use of so-called "complete" goods, and buying Nitrate of Soda.

If the manufacturer has to pay so much for his Ammoniates and uses those of acid character merely because he thinks the mechanical condition of his mixtures may be better, how can he sell you at high prices?

Lime Carried Off by Crops.

There is a continual drain in the stock of lime in the soil by the crops; thus the following crops, including grain and straw, carry off respectively:—

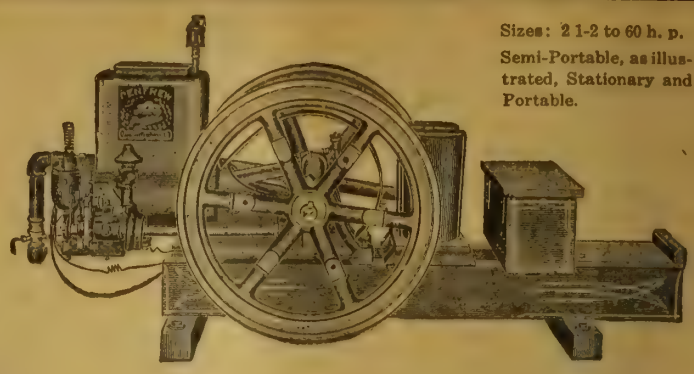
Wheat	25 bushels	13 lb
Barley	40 bushels	17 lb
Oats	50 bushels	22 lb
Turnips	20 tons	118 lb
Potatoes	8 tons	40 lb
Red Clover	2 tons	77 lb
Rye Grass	2 tons	30 lb

The above quantities are not constant, and much of the lime may be returned to the land in the straw, the tops and the manure; but still the land cannot fail to suffer a certain annual loss of lime from the above causes.

P. E. I. Stock Breeders will Continue to Support Maritime Winter Fair.

At a meeting of the P. E. Island Stock Breeders Assn. on September 25., it was decided unanimously not to hold a Winter Fair on the Island, but to continue to make the grant to the Maritime Winter Fair at Amherst, and thus make that Fair bigger and better than ever.

A local horse fair will be held at Charlottetown, in spring of 1913.—H. D. B.



Sizes: 2 1-2 to 60 h. p.
Semi-Portable, as illustrated, Stationary and Portable.

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THE success of the Standard Cream Separator has encouraged us to place upon the market a high-type of gasoline engine. This engine will be known as the

Renfrew Standard

and will, in every way, be a fitting companion for the celebrated Standard Separator. In a few short years, the Standard Separator won its way into wide favor throughout Canada solely on its merits. We believe that the Renfrew Standard Gasoline Engine will score just as rapid a success. We would be glad to send you our Bulletin describing this engine and showing the different types. Write for a copy.

Renfrew Machinery Co., Limited

HEAD OFFICE AND WORKS, RENFREW, ONT.
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BELLEVIEW STOCK FARM

Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

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EVERYHING you want in the line of Poultry Feed Remedies or Supplies. Send for catalogue.

Maritime Poultry Supply Co.,
Moncton, N. B.

Imported Clyde Stallion For Sale

The North Grant Agricultural Society is offering for sale the Clyde Stallion Burleigh imported from England by Prof. Cumming. Burleigh is a grandson of Barons Pride; won 1st and sweepstakes at St. John in 1906 and 1st at Halifax Dominion Exhibition same year, is a sure stock-getter having stood five seasons in our town. Has worked in all kinds of farm work. Will be sold at a bargain. For further particulars apply to

Alex. McDonald,
Church Street, Antigonish, N. S.

FOR SALE

Young Berkshire pigs, 5 weeks old, sow and litter took first prize at Charlotte Co. Exhibition. Each order for two pigs or more will be entitled to a Barred Plymouth Rock Cockerel free. Write for low prices.

W. S. Poole, Box 414, St. Stephen, N. B.

FOR SALE

A handsome French-Canadian bull, 1 year and 10 months old, Verville II, bred by Sir Wm. Van Horne, and sired by his great bull Verville 1865. His dam is Devise 59; sire of dam, Prince Elegant (374). This bull is in fine condition, is a sure breeder, very quiet and easy to handle. Write for price and further description.

W. S. Poole, Box 414, St. Stephen, N. B.

RASPBERRIES

We can supply plants of the best hardy varieties Red Raspberries for fall setting, including "Herbert" the great yielder which at Ezperimental Farm, Ottawa, produced at the rate of 220 bushels per acre, also King (the best early) Hiram, Cuthbert, Eaton, etc. Guaranteed to live or replaced free.

ORCHARD HILL FARM, Brown's Flats, N. B

FOR SALE

Six pure bred Jersey bulls, from one month to two years old, sired by Pogis 40th, of Hood Farm and Fohallk St. John O'Dreamwold.

JOSSELYN & YOUNG.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

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J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A, Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West. N.S.

POULTRY.

Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

Springbrook Ayrshires!

Champions in the show ring dairy tests, and winners of the Silver Tea Service over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
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Chester White Pigs for Sale.

Book your orders now for registered Chester White Pigs, ready for delivery after April 15th. I can furnish choice stock, singly or in pairs not akin.

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Sussex, N. B.

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Spring Offering

We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.

LOGAN BROTHERS,
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Raspberry Plants

Set them, and other Bush Fruits this fall. We have the leading varieties of Yellow, Red, Brown and Black Raspberries, Blackberries, Currants and Gooseberries.

Special prices for Fall delivery

Orders booked now for Strawberry Plants Fruit trees and other Nursery stock, for Spring Delivery. Let us quote you on Home Grown Plants.

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A valuable set of Veterinary Formulas by a noted English Physician and Veterinary Surgeon, inclnding the celebrated English Medicated Stock Food, Poultry Food, Liniment, Cough and Cold Cure, Spavin Cure, Heave Cure, Scratch Cure, Corn Cure, Condition Powder, Healing Salve, Hoof Ointment and Disinfectant.

These Remedies are absolutely reliable, registered under the Pure Food and Drugs act and they will save you 75 cents on the Dollar.

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Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

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Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

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NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
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Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

PRESCOTT BLANCHARD, Prop.
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Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
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Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

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Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

RIVERSIDE HOLSTEINS

We have for sale a splendid lot of young stuff both males and females that we are showing this Fall. We can fit you out with an ideal foundation herd or individuals of great merit at a very reasonable figure.

LEA & CLARKE, - Victoria, P. E. I.

BELLEVUE STOCK FARM.

Bellevue won male and female championships and all the herd prizes in Shorthorns at the 1910 fairs. The championship for Ayrshire bull has been held by us for three years with our Morton Main's Gerthrope, an Osborne bred bull. All our prize winners, with the exception of our herd bulls were bred by ourselves. Write for prices or call and see us. We breed our winners and sell them too.

C. A. ARCHIBALD, Proprietor, TRURO, N. S.

Better Sheep and More of Them

Is the cry throughout the Maritime Provinces to-day. We are told by men who know that no where on the continent is there a country better adapted to the raising of sheep. Let me start you Mr. Farmer in this industry which is on the boom. Can supply you with some beauties. Write your wants. Correspondence solicited. **SUNNY BRAE SHEEP RANCH, Jas. A. Telfer, Sussex, N.B.**

Cobequid Farm Holsteins

We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

SUNNY SIDE STOCK FARM

Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

In Chester White Swine I am booking orders for young pigs.

J. F. ROACH, 'Phone 111 **SUSSEX, N. B.**

FOR SALE
AYRSHIRE HEIFERS

2 Dropped Nov. 1911
1 " May 1912

Write for prices or come and see them.

ALLANDALE FARM, Hampton, N. B.

BARGAINS!

To make room for our young stock we are offering for sale B. P. Rock Hens, (yearlings) which will be most suitable for breeding next season.

CRAIG BROS., Amherst, N. S.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H EATON,
Canard, N. S.

FOR SALE

Choice Cocks, Hens, Cockerels and Pullets in the following varieties; Rose and Single Comb, R. I. Red and Single Comb Brown Leghorns.

WRITE FOR PRICES.

W. H. HENRY, Shubenacadia, N. S.

Big Money in Raspberries

$180.00 from 1-4 acre in 1911 is record of a grower here. Fall planting is perfectly satisfactory.

We have for sale plants of the celebrated "Herbert" (harvest yielder and frost-proof) also King (a new early) Hiram, Eaton and others. Write for prices.

ORCHARD HILL FARM, Brown's Flats, N. B.

FRIESIAN HOLSTEINS

male and female all ages, from prize winning, choice stock can be seen and purchased at the St. John, Halifax and Charlottetown Exhibitions at bargain prices for delivery after the shows.

Sea View Stock Farm,
Buctouche, N. B.

KERRY CATTLE

Breeders of Kerry Cattle are invited to forward their names and addresses to THE MARITIME FARMER. A subscriber wishes to get in touch with them.

Lawndale Stock Farm

OFFERS FOR SALE

The following Pure bred Shorthorns

A few yearling heifers and bull calves bred in the purple. Also a few aged cows in calf to our herd bull Pontiac 82710. Prices reasonable. Call or write.

Lawndale Stock Farm, I. M. Lovett, M. D., Prop.
YARMOUTH, N. S.

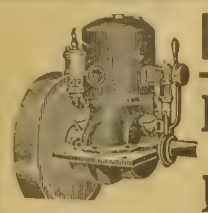
Butter Parchment

Write us about our co-operative scheme.

We can save you just half of the money you pay for Pure Parchment.

The Maritime Pub. Co., Ltd.

Direct Parchment Importers, Sussex, N. B.



ENGINES BOAT —AND— FARM

Also an engine that can be used in boats in summer and on land in winter, very handy to many people such as fishermen who farm a little and need wood sawing for fuel.

Pumping, wood sawing, towing, spraying and all general uses. Send for information it costs you nothing but a stamp.

GUARANTEE MOTOR CO. 367 Bay St., North Hamilton Ont.

To The Public

We beg to announce that we have purchased the good will and interest of the EMPIRE LINIMENT CO. Ltd. and will supply the trade for this excellent Liniment from our factory at Middleton, where all orders should be addressed.

C. GATES SON & CO.

What Says C. H. Purdy, of Bear River, Warden of Digby County, N. S.?

"I was a complete cripple with Rheumatism saw

EMPIRE LINIMENT

advertised and tried it, after every known Liniment and Rheumatic cure. Here I am to-day, sound and well, after using only a few bottles. I recommend it to all sufferers. Don't be without it.

C. H. PURDY.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

Eradicating Weeds.

James R. Buckman, writing to the Lincoln Chronicle, says that it is possible to get rid of orange hawk weed and any other kind of weed. It is a method of cultivation somewhat different from that which we have several times described, but it is such a good method that we are glad to recommend it as widely as possible. He says:

I will state that there is an effective method of eradicating not only this most serious of weeds, but also the white weed, ox-eyed daisy and buttercups from the hayfields. I have practiced it successfully on two different farms I have bought in a much run-down condition and have renovated to my satisfaction and that of my neighbors who are at times more critical than myself. The remedy is to utterly destroy the sod in the hayfields, cutting it over before the weeds go to seed and then burning the hay as it lies on the ground. I then plow deeply and let the ground lie until the latest possible date before frost comes. Then I harrow it again with the disk harrow that has followers on the disks. I then let the land lie idle until spring. I then prepare the land for a hoed crop and plant such a crop, varying it accordinf to the nature of the soil. I have used beans, sweet corn, yellow corn, cabbages, beets and turnips on such tracts. I have put in a surplus of fertilizing material and worked it in thoroughly. Then I have used the horse cultivator rather more frequently than would seem really necessary.

After pulling the crop, I bunched the tops and plowed them under. Then I sowed winter rye and let it grow as it would; the next spring I plowed the rye under and sowed grain and clover, then I turned the cattle into the clover and let them graze on it until snow came.

Then the next spring I plowed under the clover and sowed grass seed, and have not failed to secure a good catch of grass free from weeds. It might have been better, perhaps, to plow the clover under in the summer or fall, but in each case I felt that my cattle needed it to eat, so I turned them into it and they thanked me in every way they could.

There is no other way to get rid of this pest, or these pests, for I include them all in the same list. It might come hard on a farmer who does not have land enough so he could shift around from field to field for his hay crop; but hardships yet more serious may come upon us if we do not turn to and eradicate the evil. Our hay will become a drug on the market with no one to buy it or anything to eat it.

Possible Increase of a Grain of Wheat.

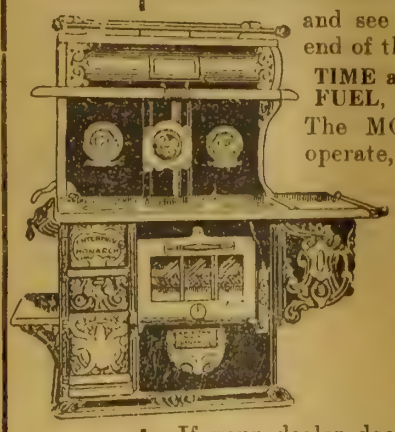
It has been calculated by a German philosopher that a single grain of wheat produces fifty grains, and that these fifty will each produce fifty grains more, and so on. Thus he finds that the grain would develop in the following way:—

In the second year, 2,500 grs.
In the third year, 125,000 grs.
In the sixth year, 15,625,000,000 grs.
In the twelfth year, 244,140,625,000,000 grs.

The third year's crop would give 300 men one meal, leaving enough bran to feed eight pigs for one day. The produce of a single grain in the twelfth year would suffice to supply all the inhabitants of the earth with food during their lifetime.

Buy Now

AN ENTERPRISE MONARCH STEEL RANGE



and see how far ahead you will be at the end of the year in

TIME and therefore TEMPER } SAVED
FUEL, which means MONEY }

The MONARCH is simplicity itself to operate, for it has no complex dampers or troublesome drafts.

Every device embodied in it is practical, neat and effective so that the MONARCH as sold today is the most compact steel range on market—handsome in design, a "tip-top" baker, and so economical in fuel that it will soon pay for itself.

If your dealer does not handle this range, fill out a p. c. with your name and address and request for copy of our new illustrated circular. One cent so invested brings Big Returns.

THE ENTERPRISE FOUNDRY CO., Sackville, N. B.

Don't buy a Piano on the Instalment Plan Buy For Cash

Perhaps you may say that this advice is all very well for those fortunate enough to have the means to act upon it. You can buy for cash any piano or organ you wish from any dealer and thus get the advantage of his lowest cash price.

This Is How You Can Do It

When you have made up your mind what and where you are going to buy, just let us know and we will see that you get the instrument at the lowest cash price. If you have not sufficient funds to make up the amount we will supply you with the cash and charge you but 6 per cent. interest, your piano or organ will be our security.
There is not a catch about it anywhere, it's a straight above board business proposition
If will cost you absolutely nothing to get full particulars and you will be under no obligation in doing so either. Every request for particulars and every transaction is altogether free of any kind of publicity.

Mercantile Assurance Association

P. O. Box 317

Halifax, Nova Scotia.

Every Eddy Match Is a Sure Safe Light

When you strike an Eddy Match it always lights easily and burns smoothly, with a steady even flame.

These perfect matches come from first class Materials and mechanically perfect machines under the supervisicn of skilled workmen.

Eddy's Matches are always full M. M. count. For sale by all good dealers everywhere.

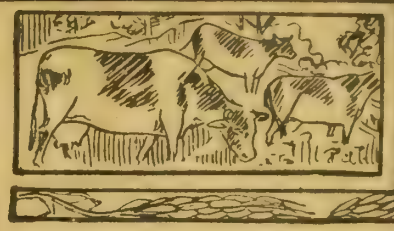
The E. B. EDDY COMPANY, Limited,

HULL, CANADA.

Makers also of Wooden Pails, Tubs, etc.

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in

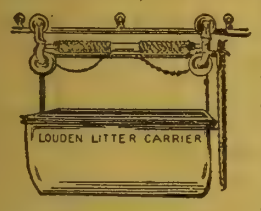
The Model Farm



Labor-Saving and Money-Making Equipment

A LOT HAS BEEN SAID about the scarcity of good farm help, and the difficulty our farmers have of keeping their sons on the farm. Well, most farmers have gone through the mill themselves, and can perhaps sympathize with the boy who seeks to get away from the drudgery that he imagines farm life has in store for him.

BUT WHY DRUDGERY? ABOUT the worst back-breaking work on a farm is stable-cleaning with old-fashioned methods. It certainly is a job any man would like to pass up. But fortunately modern methods with modern machinery have taken the drudgery out of stable-cleaning.

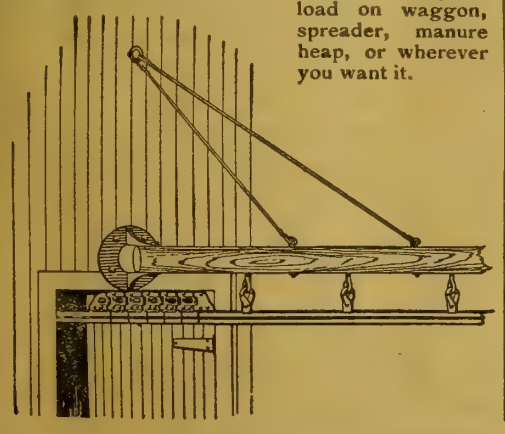


Nowadays, you fill a Louden Litter Carrier—raise it by a light pull on a chain—push the load easily and quickly to wherever you want it. Not much hard work for you in that, is there?

ALL EXPERTS AGREE THAT Liquid Manure is 50% more valuable than solid manure. Are you losing this 50%?

A Louden Litter Carrier will save it for you—and not only prevent the waste, but will make stable-cleaning an easy "chore."

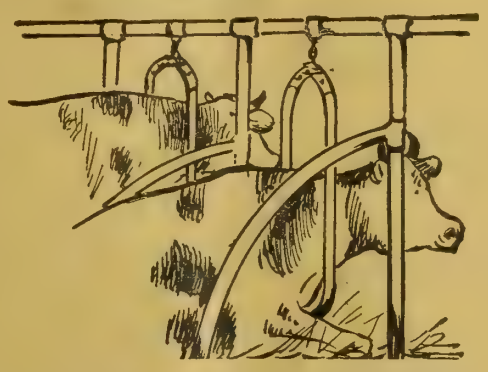
The Louden swinging equipment is an ideal way of disposing of manure. With it you get a twenty or a thirty foot swing, and can dump the load on waggon, spreader, manure heap, or wherever you want it.



A DISTINCT LOUDEN FEATURE is that you can run the loaded carrier right on to the pole while swinging at any angle. You do not have to straighten the track each load.

The *flexible hinge* permits the carrier to run over it while at an angle.

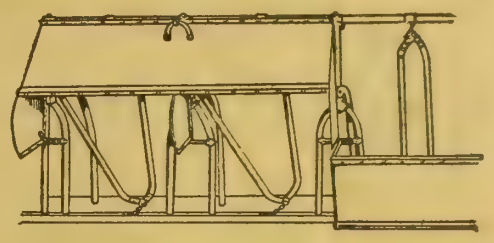
THE SUN-SHINY SIDE OF farming is the money-making side. An equipment that makes money is Steel Sanitary Stalls and Stanchions for cows. Now there is no doubt that a contented, comfortable, dreamy-eyed cow will give more milk than one housed in unsanitary, badly-ventilated quarters, where it has little freedom and comfort. And when you are thinking of cow profits, you must think of these things.



The most successful Farmers and Dairymen have thought of these things, and have equipped their stables with Cement Floors, Mangers, Steel Stalls, Stanchions, and Carriers for Feed and Litter. Stables so fitted are lasting, well ventilated and sanitary. Light and air with their germ-destroying powers fill every part of the stable. Under such conditions cows are comfortable and clean, which consequently means more and better milk, and this, in turn, means bigger profits.

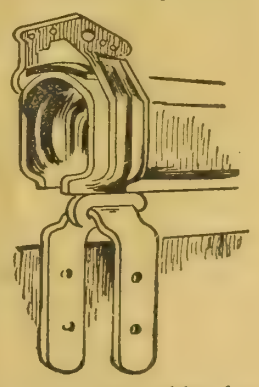
STANCHIONS. Louden Stanchions are perfect stanchions—perfect in construction—simple to lock and unlock—allow perfect freedom and comfort, yet provide a perfectly secure tie. They are made of smooth, light, strong, high carbon steel tubing, with malleable iron fittings. Construction and material are such that there are no crevices to harbor germs or dirt.

HOW DO YOU FEED YOUR cattle? Do you use the old-time shallow trough, where cows scatter their food in the feed-way, and steal each other's fodder—preventing the keeping of accurate records of feed costs and results?



Galvanized Steel Mangers are the modern way. They are convenient, and prevent feed-waste. They keep the stable tidy, too. The bottom is of cement, and the steel part is raised and lowered to allow the trough to be thoroughly cleaned. The trough can also be used for watering purposes.

EVERY FARMER HAS experienced annoyance and loss of time and temper over faulty barn-door hangers and tracks. The Louden Hangers are made in five different styles, to suit various conditions. We recommend Louden's Bird-Proof Hanger as illustrated.



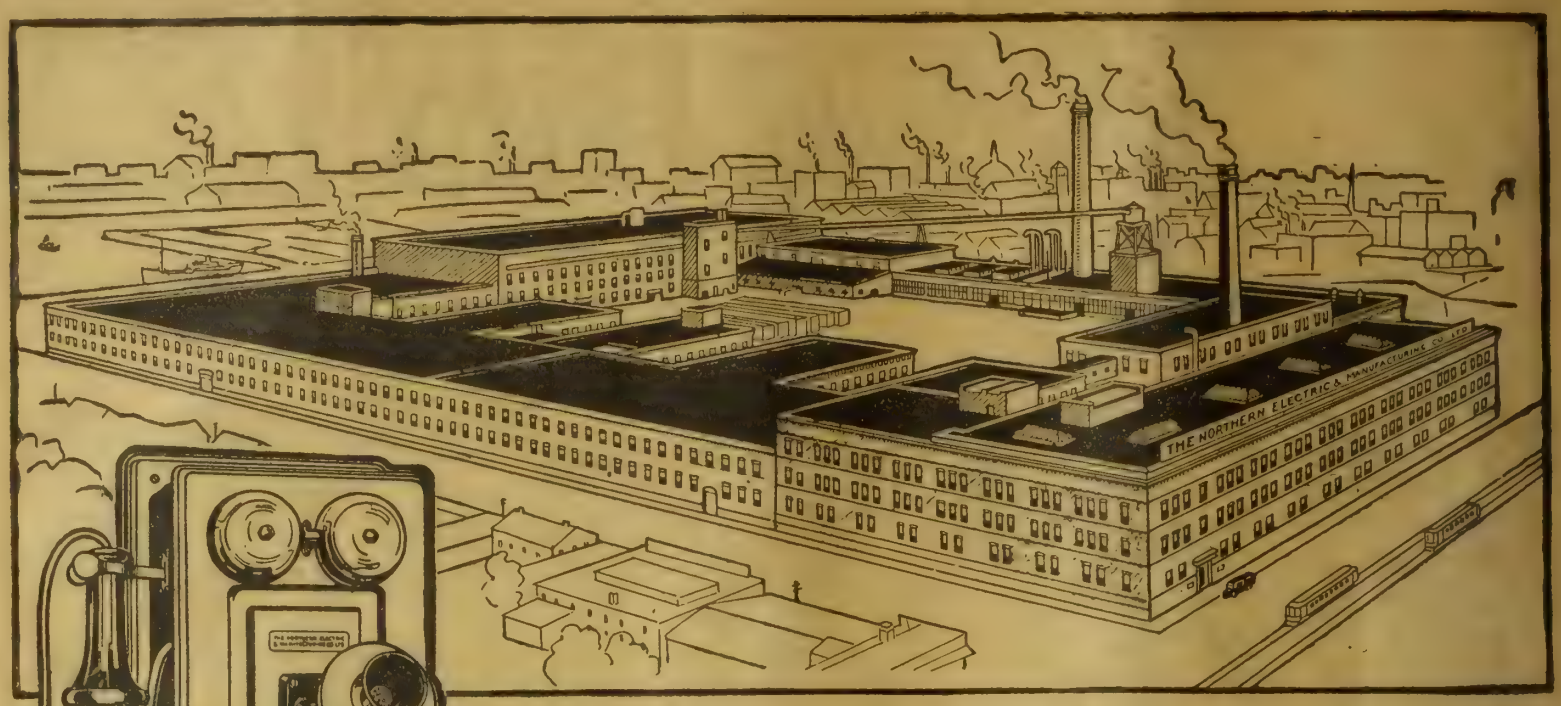
It is a hanger that gives perfect service all the year round. It always runs easily and cannot get out of order.

It cannot be clogged in any way—either by nesting birds or trash in summer, or by snow, ice or sleet in winter.

A USEFUL BOOK TO HAVE. Every farmer can find something useful in our book "Perfect Barn Equipments." It illustrates and describes many money-making, labor-saving devices, about which a farmer ought to know.

THE SERVICES OF OUR EXPERIENCED BARN ARCHITECT ARE AT YOUR COMMAND, FREE, FOR THE ASKING. TELL US WHAT YOU WANT.

THE LOUDEN MACHINERY CO. - DEPT. 18 - GUELPH, Ont.



This is the make of instrument that is on the wall of nine out of every ten telephone users in Canada.

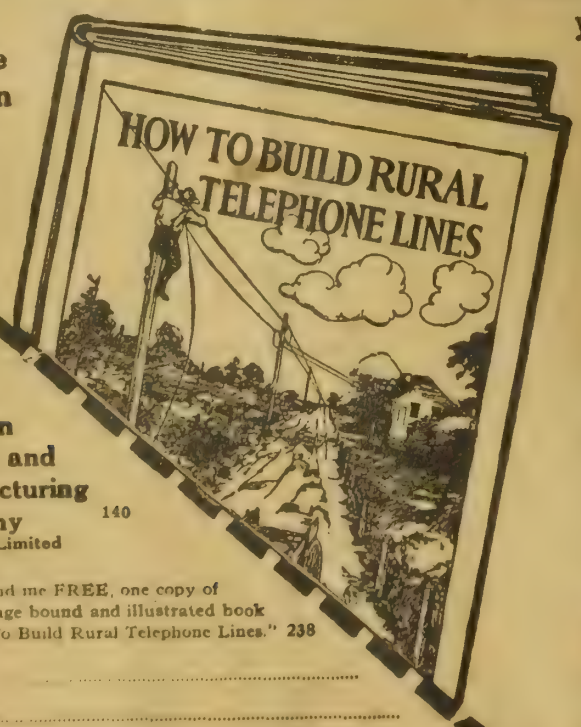
THIS PLANT IN MONTREAL STANDS BACK OF EVERY NORTHERN RURAL 'PHONE

THIS is the immense Canadian factory where Northern Electric Rural Telephones are made—in fact, where ninety per cent. of the telephones used in Canada come from. Our big organization, with its branches extending straight across Canada, is ready to help you in every detail of the formation and construction of a rural telephone line in your own community. Not only will we help you with your company-organization, line-construction, instrument-installation, etc., but our men are ready to give you much personal help out of their own telephone experience. With the help we offer, you can easily interest your friends and neighbors and operate your own self-maintaining telephone system.

Send For Our Book FREE

"How to Build Rural Telephone Lines" is an illustrated, cloth-bound book of one hundred pages, full of a carefully indexed mass of information on rural telephones. This book tells you absolutely everything in detail. No other book in existence deals so thoroughly with the subject from your standpoint. While this book has been costly to produce and we really ought to charge for it, we will send it free to anyone who, by sending us the coupon, proves that he is really interested.

Send Us The Coupon Now



The Northern Electric and Manufacturing Company 140 Limited

Gentlemen:

Please send me FREE, one copy of your 100-page bound and illustrated book on "How To Build Rural Telephone Lines." 238

Name .....

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You And Your Neighbors Can Form Your Own Telephone Company

after you have read our book, "How To Build Rural Telephone Lines." Every farmer in your district can have just as perfect telephone connection as if living in the city. With the management entirely in your own hands, you and your friends can regulate the cost of operating the line. Send us the coupon to-day and let us send you the book by return of mail with our compliments.

Let Us Show You Just How You Can Do It

and give you all the detailed information you need. When you have read "How To Build Rural Telephone Lines," you will have at your finger ends a mass of information that will enable you to give your friends, positive, definite facts, and make everyone around you anxious to help. All it needs to get a telephone system going is for some one progressive man to start the movement. You be that man. Send us the coupon.

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Manufacturer and supplier of all apparatus and equipment used in the construction, operation and maintenance of Telephone, Fire Alarm and Electric Railway Plants. Address our nearest house

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PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 18. SUSS[illegible], OCTOBER 22, 1912 No. 2

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Get this New Page Book -and learn how to equip farm, factory, home and office at factory cost.

THIS COUPON BRINGS THE BOOK — USE IT NOW!

In these days of high cost of materials this remarkable new Page Book should find a hearty welcome in every home in the land. It will open your eyes to great savings—savings that can be made in the purchase of things needed every day as equipment on the farm, in the factory, home or office. Don't pay the usual prices—get your copy of this book to-day, and learn how to buy right.

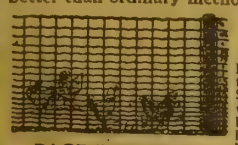
THE REGINA PNEUMATIC CLEANER

The Regina Pneumatic Cleaner is wonderfully easy to operate. Light weight. Double vacuum pump cleans far better than ordinary methods. Cost low.

37 varieties of Page Fence in weights and mesh to suit all needs.

PIANOS

Made by one of the most famous makers on the continent. Rich, pure, lasting tone. A beautiful instrument.



KITCHEN CABINETS

Finely built, beautifully finished. Save miles of walking around a hot kitchen. No bending over flour bins, no straining to reach things on high shelves. Protects food from dust, dirt, flies and mice.

PAGE "SPECIAL" POULTRY FENCE

Graduated mesh. Will turn poultry or large stock.

FAMOUS PAGE GATES

Acknowledged leaders of the world. Prices lowest.

FENCE TOOLS

We sell every tool needed in erecting any kind of PageWire, or Iron fence; post hole diggers, bolt cutters, staples, locking tools, safety blocks and tackle, iron posts, fence anchors, etc.

STEEL RANGES

This famous make saves from 15 to 20 pounds of coal a day when used continually. Magnificently constructed. Bakes perfectly in a third of the time necessary with the old cook stoves. Asbestos lined flues, anti-clinker grates.

PAGE IRON FENCING

Many designs, simple or ornate. For any purpose. Any price.

PUMPS

Made by one of the most famous concerns on the continent. Aylmer pumps are known everywhere for their fine construction and perfect work.

SCALES

Every scale is sold with a Government certificate guaranteeing its correctness. In all sizes for all purposes. Strong, compact.

HANDY WAGONS

These Handy Wagons are of the best. In all sizes, one or two horses, with or without boxes, Studebaker skeins, hickory axles, oak woodwork, steel wheels.

SOME PAGE PRODUCTS

Besides the articles illustrated, here are some of the Page products:

Lawn Fence	Fire Escapes
Poultry Netting	Waste Baskets
Marine Engines	Delivery Baskets
Wagons	Staples
Steel Posts	Horse Muzzles
Player Pianos	Jail Cells
Wire Cloth	Wheelbarrows
Wire Signs	Warehouse Trucks
Concrete Reinforcement	Tile Machines
Wire Partitioning	Paper Balers
Wire Mats	Pulleys
Window Guards	Belting
Tree Guards	Rubbish Burners
Office Fittings	Sleighs
	Grinders

and many more too numerous to list.

You can readily see what a big line of farm and home equipment the Page Company places at your disposal—and every article at factory cost.
Get YOUR copy of this money-saving book to-day—use the coupon NOW—before you forget it. Or send postal to

The
Page Wire Fence Co.
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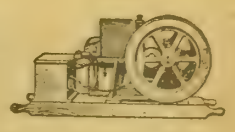
PORTABLE GAS ENGINE



1 1-2 H. P. 4 cycle. For either gasoline or kerosene. Simple, efficient and very difficult to get out of order.

SAVE BY BUYING DIRECT

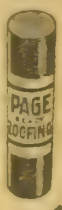
Page Wire Fences and Wire Products are known by their quality and their low price. In the same way the many lines in this new Page Book (which you get by sending the coupon) give you the greatest values the dollar can buy in each line. You buy direct and save go-between profits. You buy from a house rigidly interested in keeping up quality. Everything shown has got to be, and IS, right—a big-value bargain. Become a Page customer along with other prosperous thousands of wise buyers. The first step is to send the coupon for the catalogue. The Page Book gives items that overwhelm you with their usefulness and value to YOU in your daily needs. Send to-day.

PAGE HOUSE PAINT

Mixed ready for use. A strictly high-grade paint intended for exceptional wear. Inside or outside paints, floor varnish, etc. Send for free color chart.

PAGE ROOFING

The Roofing sold by the Page Company is the result of years of experience by a manufacturer known for the high quality of his product. It will not only afford perfect protection but will last for many years in perfect condition.



STEEL WHEELS

Can be used on old gear or put on a new farm wagon. Fit any size spindle. For any kind of wagon from a log cart to a traction engine. Finest quality of steel. Built to last forever.

FREE
Book Coupon

The Page Wire Fence Co., Limited
Walkerville, Canada

Please send me your new, free, money-saving catalog No. 9 at once.

Name .....
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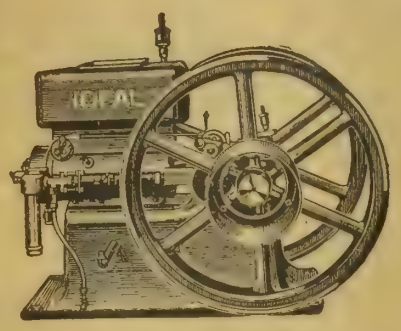
"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



Stationary, Mounted and Traction

We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
Concrete Mixers and Water Boxes

Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.

A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

OUR VALUES

are summed up briefly under the following captions:

Style and Quality

Our goods are made to suit you no matter what your occupation may be or what they are needed for.

We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited

HALIFAX, N. S.

Make Your Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
IF
GIVEN
A
FAIR
TRIAL

EVERY "Great White Llght" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

We do not sell these burners but each subscriber may get two beside one we furnish free by sending 35 cents for each additional one wanted.

HIGH CLASS

JEWELRY

18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....68 cents

18k Rolled Pendants, worth $3.00, our price..... ....99 cents

Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....$1.36

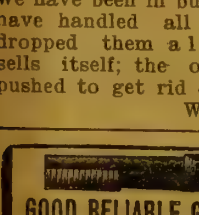
Boys Watch..... .....69 cents nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
Box D.
Sussex, New Brunswick.



ENGINES
BOAT
—AND—
FARM

Also an engine that can be used in boats in summer and on land in winter, very handy to many people such as fishermen who farm a little and need wood sawing for fuel.

Pumping, wood sawing, towing, spraying and all general uses. Send for information it costs you nothing but a stamp.

GUARANTEE MOTOR CO. 367 Bay St., North Hamilton Ont.

MAIL CONTRACT

SEALED TENDERS addressed to the Postmaster General will be received at Ottawa until Noon on Friday, the 8th November, 1912, for the conveyance of His Majesty's Mails on a proposed Contract for four years six times per week each way, OVER RURAL MAIL ROUTE FROM CUMBERLAND BAY, NEW BRUNSWICK, to commence at the Postmaster General's Pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Office of Cumberland Bay, The Range, and at the Office of the Post Office Inspector at St. John.

G. C. ANDERSON,
Superintendent.
POST OFFICE DEPARTMENT,
MAIL SERVICE BRANCH
Ottawa, 21st September, 1912

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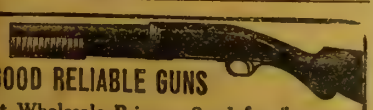

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Every sensible person wants the **best** of everything, but in many things the best is beyond their means and they must necessarily be content with something else.

In the case of the Cream Separator, however, the **best** is fortunately the cheapest as well, and it is of the greatest importance that every buyer of a separator should know this.

Moreover, the **best** is of more importance in the case of the Cream Separator than in anything else, since it means a saving or a waste **twice a day every day in the year** for many years.

It is true that DE LAVAL Separators cost a little more in first price than some inferior separators, but that counts for nothing against the fact that they **save their cost every year over any other separator,** while they last an average twenty years as compared with an average two years in the case of other separators.

And if first cost is a serious consideration a DE LAVAL machine may be bought on such liberal terms that it will actually **save and pay for itself.**

These are all important facts which every buyer of a Cream Separator should understand and which every local DE LAVAL agent is glad to explain and demonstrate to the satisfaction of the intending buyer.

If you don't know the nearest DE LAVAL agent please simply address the nearest of our main offices as below.

173 William Street, MONTREAL, CAN.

DE LAVAL DAIRY SUPPLY CO., Limited.

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The Boy, preparing for Medicine, Law, Theology, Literature, Business, etc., must, if he would succeed, have an Education. The Prospective Twentieth Century Farmer should have Equal Advantages.

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Tuition FREE to All Students from the Maritime Provinces

Next Session of Full Course begins NOVEMBER 5th, 1912

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A farmer's son attending the College, can take a full course in the various branches of Agriculture, Horticulture, Dairying, Poultry Raising, Veterinary Science, etc., and at the same time in English, Mathematics, Book-keeping, Political Economy, the various Sciences and other lines regularly studied in High Schools and Colleges.

Requirements for entrance are familiarity with farm practice and an ordinary school education. The College is especially adapted to the needs of farmers' sons who have had an opportunity to acquire a school education and now wish to improve their knowledge in all lines.

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THE MARITIME FARMER

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CO-OPERATIVE DAIRYMAN

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Volume 18. SUSSEX, NEW BRUNSWICK, OCTOBER 22, 1912. Number 2.

The Harvesting and Housing of the Turnip Crops.

Short Cuts in Labor Saving

By W. M. Lea, Victoria, P. E. I.

THE harvesting and housing of the turnip crop will soon be engaging the attention of every Maritime stockman. Every Maritime stockman should have some to harvest. Where a scarcity of labor exists any method that will hasten and cheapen the handling of this crop is worthy of consideration, even if the manner of handling is rather rough shod. That turnips are a most excellent stock food no one will deny. It is hard to grow enough of them and we all hate to see them getting scarce, as they usually do in the spring. Turnips require considerable labour and suitable housing to keep them in the best condition.

Lady Woodland IV, Rosabella of Clifton, White Maid, Lady Bright and White Prince.

First Prize Shorthorn Breeder's Young Herd at the 1915 St. John Exhibition. Bred, owned and exhibited by C. A. Archibald, Bellevue Farm, Truro, N. S.

A good root house, convenient to the stable built frost-proof of either stone or concrete is the most satisfactory, but no one should be discouraged from growing turnips because he has no such accomodation as we keep them perfectly in a pit at very little expense. Now to get back to harvesting this crop, pulling by hand will probably make the nicest job. It looks best anyway, but as the cattle consume the crop this is immaterial as they are not particular about their appearance if they keep as well, and this they certainly will do when torn out with the harrow.

I have taken out many thousands of bushels of turnips with the knife, with a hoe, and with a harrow for the past ten years and, I would never think of punishing myself or my help by going back to either of the two first mentioned.

We grow both corn and turnips, large quantities of each, and consequently we are much too busy to use any but the most rapid methods of handling. We start the turnips with a light hoe cutting off the tops which can be done very rapidly when they are slightly wilted. Then we rake with a wheel rake into windrows, which we either cart off or fork over on to cleared ground, after which we harrow crosswise of the rows with an iron spike harrow giving two cuts and coming back on the same ground. This will loosen out all the turnips. The roots will be on and if wet some clay—in dry weather very little clay adheres. If the ground or day be cold we load with a fork, but if fine by hand. This method always strikes the uniniated as a barbrous method of handling turnips, but it really does the turnip very little damage as few bruises or cuts will be noticed. We always run them over a coarse screen befor storing in cel,-ar or pit.

Many people think that it is impossible to keep turnips in a cellar without rotting, but such is not the case. They can be kept there all right if properly stored, but we must see they have plenty ventilation and the temperature kept as near freezing as we dare.

Swede turnips are splendid keepers, and there is no good reason to have them rolling in the cellar. The trouble always is over heating and poor ventilation. If stored in the cellar, space must be always left between them and the floor sufficient for a good passage of air. It is a good plan in storing to put some sort of a ventilator at even distances through the pile, something that will carry off hot air. A couple of pieces of fence posts or poles stood on end together will answer the purpose very well. We never see the turnips in a cellar starting to rot around any of the ventilators. The pile should be carefully watched during the winter and as we use them throw over the remainder, if any appearance of heating occurs.

Storing outside in a pit keeps them in better condition than any other method and if properly handled, they turn out in April or May in exactly the same condition they went in in the fall. This method gives ideal cold storage conditions with enough moisture to keep them looking fresh and crisp. The important thing here is to see that we have sufficient banking around the lower edge and not too much on top.

We select a convenient place near the stable, so we can uncover in April when danger of frost is past and feed directly from the pile. We slightly hollow out the piece of ground large enough to hold all we wish to store and make a small ridge around to turn the water and keep the edge of the pile in slope. Then we pile the turnips as high as they will lay in a high round pile, and cover with any material we have on hand. We use seaweed, putting on a tier of boughs first to keep the seaweed out of the turnips, then we cover four feet deep around the edge tapering to a little over one foot in thickness on top. If in an exposed place we again put spruce bushes around the edge to collect snow and help the banking out. If the lower part is well banked I ameasy about the top as I have often seen the cattle kick turnips out by running over the pile in the midwinter, the covering being so thin, and still we never had them freeze there. I have seen a square, three or four foot fence erected to start the pile. We have tried this plan also but it is not so good as the other plan as it is harder to pack the banking around and keep the frost out.

We usually put six hundred to one thousand bushels up this way for spring feeding and can say they keep perfectly, are very little trouble storing there and not a great bother to bank. If a farmer has an up-to-date root house, large enough to hold any quantity he can grow, he does not need to do this, but if there is any man without such a building on his farm, by all means try the method I have described. Every stockman

(Continued on page 66)

Making the Best Use of Opportunity.

Seize Your Opportunity by buying Live Stock While the Owner is Anxious to Sell.

Opportunity is a queer word. It admits of so many interpretations. A good many of them say they have never met it. Others say it has passed by them, although they did catch a fleeting glimpse of the visitor's features. Some say it knocks but once at eveey man's door while others contend that each day brings fresh opportunities and thus it runs through the whole gamut of human experience.

About four years ago an interesting article appeared in the columns of the Maritime Farmer in which a full account was given of of the manner in which Logan Bros., proprietors of Homestead Farm, Amherst Point, N. S. had seized the opportunities offered in Maritime Canada for the breeding of pure bred live stock—how, from a small beginning with Holstein-Freisian Cattle they had, by careful selection and keen judgment in proper breeding lines, gradually worked up a breed of such quality that they were able in a few short years to capture the most coveted awards, not only at the Maritime Shows but also at Sherbrook and Toronto, where they had for their opponents the pick of the choicest Upper Canadian herds.

To again rehearse the facts in our columns would almost seem like repeating ancient history, never-the-less we feel that a good story cannot be told too often, as the history of these enterprising breeders may well serve as an impetus for more of our young men to go forward and do like-wise. The opportunity is yours if you will seize it.

The Maritime Provinces offer a great opportunity for the breeding of pure bred cattle—the scrub bull is too commonly found. Draw away from using scrub sires and head your herd with a sire that will increase its value from year to year. It is said that the best time to buy live stock iswhen the owner is anxious to sell.

Readers who are alive to their opportunities and who are interested in the improvement of their herds will find on page 67 of this issue the advertisement of a bargain sale of the Homestead Holsteins. Despite the fact that Logan Bros. have been selling choice individuals in the various sections of Canada and the United States and to fill the gaps in some of the Maritime exhibition herds where they and their progeny have been winning a large percentage of the profered prizes and other individuals to uphold the honors of some notable Western herds by carrying off such coveted awards as the male championship at the 1912, Toronto exhibition and the male and female championships at the 1911 Dominion exhibition, at Regina, yet the reader will note that they still have over 80 head of pure bred, registered Holsteins to offer for sale and upwards of a quarter of a hundred youngsters are expected to arrive before the dawn of 1913.

Winter is coming on apace and in order that the main herd may be reduced within the next 30 days to a number that may be comfortably housed, they have placed a price on every individual in the herd, and they will go to purchasers at a discount of from 20 to 50 per cent.

May not this be an opportunity knocking, that may not knock again, at some of our young men's doors.

Here is your opportunity; do not let it pass by if you want to get in on the ground flour in Holstein breeding or if you wish to improve your herd at a reasonable expense. If you let it pass by you may afterwards be found among the number who say that they simply saw a fleeting glimpse of opportunities' features.

We paid Homestead Farm a hurried visit a few days ago and had an oppotunity to take a run through the stables, pens and adjoining fields where over four-score head of Holsteins were quietly feeding and the picture presented in black and white was one that spelled "prosperity" in big capital letters. We were shown a trio of bulls, six months old, from dams with official records of 24 lbs., 22 lbs., and 20 lbs. butter, respectively, in seven days. In another pen were six yearling bulls of splendid breeding, which, if distributed throughout our provinces, would do a lot towards improving the next generation of cows. There was still another trio of bulls, 16 months old, with high official backing, and a two-year-old bull from a dam with a two-year-old butter record of 18½ pounds in seven days.

In the female line we saw 15 choice heifers from one year to 18 months of age, a splendid lot to start a herd, all of uniform good quality and some that would be hard to equal in any show ring. Ten cows just freshened, include some young ones of great promise. Then there are 15 cows due to freshen during the next four weeks —the best bunch combining show and producing qualities that has been our good fortune to see in one herd. They are nearly all under six years of age and are expected to make some good official records this fall. We also saw 8 or 10 matronly old cows that we used to see in the show ring and that are still doing good service at the pail and in producing young stock.

Three pairs of Clydesdale mares, each heavy with foal and in the pink of condition grace the Homestead stables. We doubt if an equally strong, uniform, well bred sextette of mares can be found in any other stable in Eastern Canada. An equally promising trio of pure bred fillies were seen at pasture grazing away and becoming more valuable each day as they advance in age and weight.

The Homestead Shropshires are well known to our readers. We could not resist the temptation to make a hurried inspection of the flock, which has been culled down to about 20 as well covered, typical ewes as one could find in any Canadian flock. There is not a weak one among them and at the head of the flock is a Cooper ram of high quality that is the sire of some particularly choice ram lambs which are now ready to send out to improve some lucky farmers' flocks.

Logan Bros. have carried the Holstein breeding fiery torch for upwards of fifteen years. They still intended to go on carrying it. In their discount sale advertisement they offer our readers the opportunity of helping to carry the fiery flame of Holsteinism to the remote by-ways and hedges of Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland.

The Prince Edward Island Central Farmers' Institute in Annual Convention.

The second Annual Central Farmers' Institute or Farmers' Parliament of Prince Edward Island was held in Charlottetown on Oct. 15th and 16th.

Three meetings were held in the Market Hall and one in the Prince of Wales College.

Rev. Dr. Gauthier, President of the Institute, occupied the chair and presided throughout the entire series, except at the meeting held in Prince of Wales College, when Hon. Premier Matheson officiated.

Mr. Walter Simpson, of Bay View, the energetic Secretary of the Institute, was kept busy recording the various discussions.

The opening meeting took place at 2 o'clock on Tuesday afternoon and about fifty delegates from the various local Institutes and kindred Agricultural organizations throughout the Province were present.

...The minutes of the 1911 Annual were read and after some minor additions had been made they were adopted.

Prof. Theodore Ross reported for the committee appointed last year to inquire into the feasibility of having a canning industry established in Prince Edward Island. The Department at Ottawa had replied to the committees' enquiry by referring them to the bulletin of Canning fruits and Vegetables which contained a great deal of information which they were seeking.

Enquiries for information from various Ontario canneries had been forwarded by said canneries to their parental head, the Dominion Canneries, Limited, who replied that they had investigated the feasibility of establishing branches on Prince Edward Island and had come to the conclusion that certain local conditions militated against the profitable operation of such an industry.

Mr. A. E. Dewar, a prominent Island fruit grower, who had made a study of the question at issue was called on and stated that he did not believe the Island was ready for a cannery. He believed an evaporator would be more suitable. The cultivation of small fruits for canning purposes was expensive and the prices prevailing at the canneries was very low in comparison to the high quality required for the manufacture of a first-class article. He would not advise any Islander to put money into a local cannery proposition at present as he believed it would be a losing game.

He himself was experimenting this year with the canning of plums of which he had a large crop and for which he had no market—the result of which experiments he had yet to see.

The Committee on Weights and Measures reported that the law specifies that produce be sold by weight and that it was up to the farmers to stand shoulder to shoulder and demand that the buyers use weights instead of measures as is so commonly done in some sections of the Island.

The Treasurer's Financial Report showed a balance of $72.04 on the right side of the ledger.

After the appointment of the Credentials, Resolutions and By-laws Committees, Dr. Gauthier delivered an optimistic address in which he reviewed the various agricultural events that had transpired since the time of last annual meeting and pointed out some of the pressing needs of the immediate future. One of the pressing needs was the inaugurating of a system of women's institutes. He reviewed the disposition made of the resolutions passed at last years meeting. The desire expressed in the car ferry resolution was seemingly about being granted as the work along that line was progressing favorably. The resolution re good roads had been brought before the government and the demand was very urgent for widening the roads to the regulation width, the cutting of noxious weeds growing on the road-sides and the smoothing down and clearing of unsightly conditions wherever they existed on the road limits.

The dog tax resolution had been complied with. The experimental farm had been enlarged and standing fields of grain competitions and seed fairs and sheep sales had been held. He also referred to the proposed short courses and to the fact that the government had already purchased the rink at Charlottetown to be used for that purpose. He also referred to the various agricultural officers that had been appointed to carry on the good work in their respective branches and while they were all good men, tried and true, he hoped to see some of Prince Edward Island's own sons fitting themselves to accept these responsible positions, for patriotism like charity begins at home. He would refrain from dealing with the dairy industry as it would receive all necessary attention at the hands of the Dairying Association. The quantity of beef produced was not enough and something should also be done to stem the degeneracy of the Island's light horse breeding interests. He recommended the formation of local seed clubs, the extension of the provincial exhibition prize list to fourth, fifth or more places to encourage some of the smaller breeders, the selling of produce in car lots and eternal vigilance in maintaining the purity of seeds.

When farmers have seed of such quality that it may court inspection and stand the most rigid tests then, and only then, can farmers demand their price from the buyers and feel reasonably sure that they are masters of the situation.

He contrasted the educational features of the fall exhibitions and the seed fairs and let the audience draw their own conclusions as to which gave the most value for the money expended. In closing the president said a very material change for the better was being evidenced by farmers in enthusiasm regarding their own profession.

The various members of the Island Institutes had a mission to perform, they had a doctrine to preach and as the apostles of old had spread the lea-

ven that is christianizing the world. So would each and every progressive farmer help to upbuild Prince Edward Island.

Mr. Leighterizer inquired re the disposal made of a resolution passed last year asking that owing to the fact that P. E. I. poultry men are not permitted to place their birds on the second day of the winter fair that the P. E. I. Government is requested to withhold a portion of the grant donated to said fair. The resolution had been inadvertedly overlooked. A further discussion on this subject resulted in voting down of the resolution.

A resolution supported by Rev. J. McDonald, of Grand River, J. H. Gill and others asking that the government proceed as rapidly as possible with the widening of the public roads to the regulation width was unanimously adopted.

Peter Brodie favored the extension of the exhibition prize list as the smaller breeders could scarcely get any encouragement when only two or three places were allotted in each class and these were usually captured by the experienced show men. In order to provide for this extension he suggested that the Federal department be asked to grant the Island fair the sum of $2000 each year instead of $10,000 every fifty years. A resolution in line with Mr. Brodie's suggestion was drawn up and heartily approved by the Institute. Mr. Brodie thought it was very unfair to exhibitors of live stock who go to the trouble and expense of fitting their flocks and herds and bring their various animals out to the fairs in a creditable condition to be limited to only one prize when there is no competition. Under present conditions a breeder does not know whether he is to meet with competition or not and the extra expense of shipping and attending to extra animals during the fair is enormous.

A resolution asking the Government to put aside a fund from which the owners of sheep killed by dogs might be reinbursed was unanimously adopted.

THE TUESDAY EVENING MEETING.

was held in one of the Prince of Wales College class rooms. Premier Matheson occupied the chair. Education was the subject for discussion.

Premier Matheson believed the public schools of the Island were far from being satisfactory and some speedy remedy was badly needed. He solicited the unbiased opinion of the Institute members as to how the desired result might best be accomplished. Bettering the educational system of the Province merited the unanimous support of each and every good thinking citizen.

He had recently returned from a tour of Western Canada and had returned home more convinced than ever of the magnitude of the Island's developed and undeveloped resources. The bane of the Island province was the spirit of pessimism which was far too prevalent. It was responsible for a great many of our young people going away from home. He spoke of the comforts and luxuries of life on the Island compared with those of the West. Islanders should aim to put such excellency into their goods that they could court rigid inspection.

In conclusion the Premier announced that a modern equipment for the raising and loading of mussel mud was about to be installed.

Rev. Dr. Gauthier referred to the value of a trained intellect. He deplored the decadence of many of our rural schools. The case should be diagnosed and the proper remedies applied. The dearth of available teachers was getting to be a serious question. Well trained teachers were in demand and if rural schools would have their services they must pay them a living wage. He believed that teathers in some of the rural sections were receiving less money today than they were a quarter of a century ago. The West appreciates education and was offering high inducements to our best teachers and if we would retain their services we must pay them good wages.

Walter Simpson, a school trustee for over a quarter of a century said it was a gamble to get a good teacher now-a-days and it was particularly difficult to retain their services. There were many apprentices in the field but farmers should go down into their pockets and subscribe salaries that would pay for expert services. There was no question of more importance than the education of our young people—and education that will broaden their intellect and develop a manhood and womanhood that would lead to useful citizenship. Island farmers were prospering, their prospects were brightening and they should do their utmost for the cause of education.

Mr. Edmunds said the Central Institute would help the farmers to make use of their opportunities. That Prince Edward Island was producing good eduactionalists was proved by the fact that there was a demand for Island trained teachers in the West. There were resources around our doors and shores that called for development. There was an excellent opportunity for the development of the pork industry but packing conditions were very unsatisfactory and Island farmers should take a leaf out of the experiences of the Danish people in respect to developing the pork industry. Horace Wright considered the education of children should be everybody's first consideration. He would like to see agriculture given a more prominent place in the rural school curriculum. He welcomed the move for the holding of short courses and would like to see them grow to three months courses in the Prince of Wales College.

(Continued on page 50)

The Nova Scotia Horticultural Exhibition

The Horticultural exhibition at Bridgetown representing the fruit producing areas of Nova Scotia was not an unqualified success. From point of time and weather it was sandwiched in between two weeks of the best weather we have had this fall, but we fell upon evil days.

Exhibiitors left the picking and gathering of their exhibits for Monday and Tuesday of exhibition week and it rained so that about 48 per cent. of a total splendid entry of 43-00 materialized because it rained Monday and it rained Tuesday and wept Wednesday, on Thursday it sulked with more moisture while Friday the spirits of the weather alternated between grave and gay with a considerable amount of tears—even the fakers lost heart and money. And in one of the lulls of Wednesday's rain Premier G. H. Murray accompanied by his good wife, O. T. Daniels, Atty. General, A. L. Davison, Federal member for Annapolis Co. and Principal Cumming arrived at the building to open the exhibition.

The speakers were;—Principal Cumming who spoke of the past and future of the N. S. Horticultural Show, praised the display of exhibits and went on to outline some of the work in injurious insect eradication undertaken by the Province.

A. L. Davison, M. P. spoke of the possibilities of orcharding in Nova Scotia and compared her favorable with any Province of the Dominion.

Hon O. T. Daniels spoke in his usual happy and optimistic vein of the agricultural and horticultural awakening in Nova Scotia and predicted a great boom in the near future.

Premier Murray favored the small county exhibitions and felt that they were doing a good work in the county in which they were held. He spoke strongly of the splendid and varied resources of Nova Scotia. She was just waking up. He was sorry to see some of her sons leaving her but glad to see many coming back with a determination to spend the rest of their lives in their native province.

He then declared the exhibition open.

The exhibits that arrived were good and the arrangement was praised by all who saw it and we have to thank the old professional exhibitors such as Starr, the Johnsons, D'Almaine, B. F. Chesley, H. E. Burt, and a few others for giving the public something to look at.

The plate stuff was really a creditable show though the fruit was not colored as well as could be wished. A. C. Starr, H. D'Almaine, Arthur and H. Johnson, Kemp Chesley and Burt of Annapolis carried off most of the prizes in plates.

The box and barrel exhibit lacked competition and was not particularly well put up.

One exhibitor from Hants Co. had four bbls. filled with No. 3s. and culls which he bragingly exhibited for competition and kicked like a steer when the judges turned over the stuff instead of feeling asha ed for putting such trash in an exhibition.

When a man fills entries where he thinks there will be little competition with any kind of trash he can pick up easily for the sake of making a dollar he should be barred from exhibiting for he is more of an injury than a benefit.

The package itself in both barrels and boxes was rougher and poorer than ever. The old birch hoop and rough stave and head spoke ill of progress in attractiveness or appearance.

In attractiveness the N. S. apple barrel is decidedly off and it really mititates against us commercially.

In the general exhibit the barrels were more carelessly packed than in Kentville a few years ago. The barrels were not properly tailed nor were the boxes well filled and tiered.

There was an entry of 290 bbls. and 210 boxes but only about 30 per cent. of the entry filled and perhaps it was just as well as the carelessness in packing and rough appearance of package did not add to the excellence of the show.

The exhibit of the United Fruit Companies of the Valley competing for the fifty dollar Royal Bank prize was one of the best features of the show. These were packed intelligently and attractively. Some fifteen companies competed and as the entry called for three barrels and three boxes of colored export apples this made about a 90 package exhibit which was given a corner of the building by itself and attracted unusual favorable comment.

This prize was offered for competition only among the co-operative apple packing associations in the hope of stimulating the idea of box packing among the associations. It is to be hoped that the great bulk of our apples in the future will be handled by our co-operative fruit companies and the increasingly stringent enforcement of the fruit marks act will compel our orchardists to grow a higher quality of fruit and consequently to use materially the box as a package for export and sale.

Plums were a good exhibit as were the pears; most of the prizes going to Chesley Starr, Johnson, D'Almaine and Bent.

Considering the fact that most of the vegetables had to be gathered in the rain of Monday they were a very good exhibit—here again Chesley was a prominent exhibitor with Col. S. Sparr out with a number of good entries.

In vegetables the average exhibitor has yet to learn that the large, coarse specimen is not the one to win prizes and where there are medium, typical, smooth and uniform specimens in an entry.

The poultry exhibit, as a result of a very antiquated prize list which was dug up at the last moment after the printer had lost the one furnished for the firize list, was not very inspiring as far as numbers went—though there were some good birds. The white Wyandottes of F. G. Palfrey, of Lawrencetown, and Chas. Strong, of Bridgetown, were worthy of a place in any poultry exhibit.

The strong feature of this horticultural show was Ladies or Domestic Department. Mats, sofa pillows, centre pieces, all kinds of bed quilts adorned the walls, hung from the ceiling and strung in fantastic festoons from the beams, fancy work every where in bewildering and heaped up confusion.

The judge first appointed looked in awe at the array and demanded a coworker and finally these two appointed a third. And how the womens fingers itched to get hold of and finger that fancy work. A horticultural show with bed quilts and tea coseys in proximity to apples!

We hope that this year's failure will make an end of this kind of exhibition in our province. As a stimulus to better fruit growing its influence is nil. As an advertisement of Nova Scotia's capabilities in fruit growing its fame does not extend beyond the Valley in which it was held.

Nova Scoria as an apple producing country is beyond the plate or sample exhibition and now we want a horticultural exhibition held at Halifax at a later date with a prize list calling for colored entries and giving prizes worth competing for.

Below are given some of the principal prizes and prize winners:—

Royal Bank prize, fifty dollars, open to co-operative associations for the best six packages of commercial export apples, 3 bbls. and 3 boxes—won by the Waterville Fruit Company

20 sort collection of apples—Sea View Farm, Starrs' Point.

10 sort collection of apples—Sea View Farm.

Best plate Kings in show donated by F. C. Whitman, Annapolis Royal, won by Whitlock Marshall, Clarence.

Silver challenge cup offered by Chas. White and Hall won by Ralph Duncanson, Falmouth.

E. D. Smith prize of fifty apple trees for best barrel of Baldwins grown on Smith's trees—won by J. A. Kinsman, Lakeville.

Hon O. T. Daniels- prize of $25.00 for best boxes of fine commercial apples won by G. W. Banks, Paradise.

Prof. Cumming's prize of $10.00 for best bbl. Gravensteins in the show—won by Harold Robinson of Berwick.

Best collection of fruits from any farm—won by B. F. Chesley, without competition.—R. J. M.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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THE MARITIME FARMER, or
R. D. Robinson Publishing Co., Limited
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

OCTOBER 22, 1912

DATES OF ISSUE.

November 5-19
December 10-24

A GOOD INVESTMENT.

One of the best investments that a father or other interested party can make for his son or any young man is to furnish him with the necessary amount of capital required to give him a course at the Nova Scotia Agricultural College.

The Maritime Provinces are now experiencing an era of industrial development the like of which was never before known in their history. The natural resources at every hand are being developed, new centres of population are springing up, trade channels are being improved, and new lines of industry are every day being established. The result is that the consuming population is increasing with much more rapidity than is the producing population. Our markets are second to none in Canada but yet we find a great many farm products that can and are being grown to perfection in the Maritime Provinces, imported from abroad just because the home grown supply is not equal to the demand. The natural sequence is that thousands of dollars are annually sent out of our provinces that could well be retained at home.

Maritime soils cry to her sons to take advantage of their heritage. One young man who remains at home and helps to improve the agricultural conditions of his surroundings is worth more to his home district and country than half a hundred young men who leave home to work in distant cities.

The Maritime farmers are coming into their own, they are awake and it is fair to see the evidences of improvements at every hand. It is good to see farmers coming victorious out of the rut of scrub bulls, scrub cows and scrub ideas about farm equipment to a higher pitch of farm civilization. The result is grand as it means dollars to these farmers whereas under the antiquated systems the result was not infrequently a minus quantity.

It is a pleasure to drive through sections of the Maritime Provinces where the farmers are alive to their opportunities and the magnitude of their calling. Their buildings and fences are in good repair, the cattle, sheep, horses and other classes of live stock show that they are well cared for and that the owners are looking to their production as a source of revenue.

But how long will this last? These farmers cannot keep up their work forever. Who is going to take their place? Are they raising sons and educating them in advanced farming ideas? Who is going to keep this beautiful country up, or to improve on its present gauge in the future?

Is anything being done to inspire the children of these farmers with a sense of loyality and pride for all this grand so that they will carry it on and keep it up when their fathers are gone.

The splendid redemption of a country from what was its former condition, ought to be preserved. It can only be preserved by the farm boys taking up the work of their fathers. Will they do it? Will their fathers give their boys the kind of education that will hold them loyal to these grand farms? Or will the boys flee to the towns and cities and leave these farms to go down under ignorant tenant management? Such has been the fate of some splendid farming districts in the Maritime Provinces.

On Tuesday, November 5th, the next session of long courses at the Nova Scotia Agricultural College will begin. We know of no place where a young man who purposes following an agricultural career can spend his time and money to better advantage than at this college. Give your boy an agricultural education and the answers to the foregoing questions will surely be as you would have them.

Now if you are a father or a mother, ask yourself the question, "Why am I working hard?" Are not all of us, who are fathers or mothers, working hard to feed and clothe our children and to give them a little better chance than we had?

Ask yourself also, "When is the best time for me to make a little extra effort to give my boy that better chance?" Is it not, when he is from 16 to 20 or 25 years of age?

Spending on him the paltry sum to give a full course of education at the Agricultural College will be worth more than if you give him ten times that amount when he is over 30 years of age.

A year in college is more than seven months of study. A boy learns many things outside of the class room. He learns to speak in public. He learns to write articles. He hears addresses from prominent men from all parts of the country. Most important, he makes friends of a hundred or more boys who have been brought up as he had, and who with him will be the leaders in agriculture in Canada in the next quarter century.

Give your boy a chance when he can take it.

THE NOVA SCOTIA AGRICULTURAL COLLEGE.

The next session of the Nova Scotia Agricultural College, Truro, N. S. will begin on the fifth of November.

A farmer's son attending the college, can take a full course in the various branches of agriculture, horticulture, dairying, poultry raising, veterinary science, etc., and at the same time in English, mathematics, book-keeping, political economy, the various sciences and other lines regularly studied in high schools and colleges.

While the college is supported entirly by the Government of Nova Scotia, tuition is free to the sons and daughters of Prince Edward Island and New Brunswick. Some day in the near future we hope to see the Provinces of New Brunswick and Prince Edward Island join hands with their sister Province, Nova Scotia, and together help to make for Maritime Canada one of the strongest Agricultural Colleges on the American continent.

The time is not ripe for an agricultural college for each province. The revenues are not sufficiently large to give three colleges a working capital, but the three provinces working together could well speed the work so well begun and carried on at Truro.

The teaching staff of the college are men who have the best interests of the Maritime Provinces at heart and who,, were it not for that fact, could now be occupying more lucrative positions offered them by some of the other provinces and states, west and south.

We have no hesitancy in saying that a young man who takes a course at Truro can recoup, by combining science and practice, the extent of his yearly college course expenses, every year over and above the present earning capacity of the farm.

THE SHEEP SALES.

Last spring Hon. Martin Burrell, Minister for Agriculture appropriated the sum of $15,000 to the Dominion Sheep Breeders' Association for the purpose of stimulating sheep breeding interests in the Maritime Provinces and in British Columbia.

The Association decided that the best way to encourage the sheep men was to buy a large number of pure bred rams, of the various popular breeds most suited to the respective localities, and also a number of high grade ewes and have the whole lot parcelled off and sold at public auction at convenient distributing centres.

In order to ascertain the breeds needed and the approximate number required, the Minister asked Col. R. McEwen, a successful Ontario sheep man to come to the Maritime Provinces. Associated with him on the commission while touring New Brunswick was Col. H. Montgomery-Campbell, President of the Maritime Stock Breeders' Association, who is an enthusiastic sheep breeder. The Minister also sent Mr. C. M. McRae of his own department. Mr. McRae has travelled the Maritime Provinces very extensively during the past ten years on institute work as judge at our exhibitions and is as conversant with the conditions prevailing in the Maritime Provinces generally as any man in Canada. While touring Nova Scotia the commissioners had H. W. Corning, M. L. A., Secretary of the Canadian Guernset Association, who is also a successful sheep breeder, associated with them to represent his province.

When they went to Prince Edward Island, Mr. Roy Curtis joined them to represent the Island Province.

Mr. Harding, a prominent Ontario sheep breeder, was delegated to buy the number of rams and ewes called for in the Commissioners' report. He made a canvas of the various prominent flocks in Ontario and some of the larger Maritime flocks and made a personal selection of the various animals offered for sale. In order to get some of the required animals, Mr. Harding was obliged to go across the line and make draughts on prominent Illinois flocks. With the exception of a few animals, that went somewhat off their feed while in transit, the rams, as a whole were a good useful lot.

Jas. A. Telfer, acted as auctioneer and Messrs. Harding and McRae were on hand to give the breeding of the respective sheep.

It was not the intention of the Minister that any fancy amounts exacted from the farmers. All that was looked for was that the sales realize part of the expenses, and that the aftermath in increased interest in sheep breeding would amply repay the outlay.

Owing to the fact that the dates of sale were poorly advertised, the attendance at the various centres was not very large.

The ewes were a good useful lot and the greater majority of them went into good hands. With a little extra care until they beco e acclimitized they should next spring bring forth a lusty lot of lambs, which when ready far the market, should bring the respective owners the prices paid for their dams at the sheep sales.

We believe the sales will have the desired effect as the rams and ewes were sold at prices within the reach of all.

WHAT COLLEGE FOR BOYS?

"Just two kinds of boys attend college—those who come and those who are sent." So spoke the president of an agricultural college. "With the former the faculty have no trouble. Such boys mean business, and, as a rule, they make their mark in the world.

This thought should be of great assistance to the farmer confronted with the question: Shall I send my son to college? College may be the making or the marring of a career—so may staying upon the farm. Every normal father desires the welfare of his children. How decide? Watch the boy! Give him a chance in the direction his taste naturally lies. Many a boy cut out to be a merchant fails because his parents won't give him a chance. Many a boy fails as a farmer because he should have been a blacksmith or a lawyer. His heart is not in the farm, therefore he cannot succeed. Every normal boy is by nature better equipped for some one thing than for anything else. Here is the father's cue. If the son has a mania for making things cultivate and educate that mania.

The boy will largely train himself up to a certain point. Then if he wants a college education enough to work his way more or less he may safely be trusted to make a start. If he is half-hearted about being sent, it is not safe to send him. The safest college for such a boy is the agricultural college, because he will there associate largely with farmers' sons, and be in contact with farm subjects. Should he return to the farm he will not have departed so far from the farmers' line of work as he would had he been sent to a different kind of college.

Exercising Good Judgment.

Editor The Maritime Farmer;—

In your issue of Sept. 10th you have an editorial entitled "Good Judgment" in which I was somewhat interested because it applied to me as well as to many other farmers in this Province.

It is not always the fault of a man's judgment that he is often a failure as a dairy farmer or more broadly speaking in all branches of agriculture in which he is engaged. It may have been an error of judgment that nine-tenths of the farmers in this country took up the calling of their father's, or left some other vocation to engage in it, who have raised their families and fed and clothed and educated them, with the result that after all the years of toil and hardship, he has little or nothing to show in the shape of bank accounts or securities. Perhaps this farmer would like to have owned a ern machinery, a more comfortable house, and more commodious barns. was it an error of judgment that he did not have these? It certainly was not. The plain, bald truth of the matter was, he could not afford to have them, his good judgment came to his aid right there, he knew that if he mortgaged his farm to buy tested cows, and improved machinery (much as he wanted them) the probability was that some day the farm would go to pay for it. So in that case "the last state of this man would be worse than the first."

It is not always the man with the best judgment who seems to succeed the best, nearly always he who succeeds the best has the fewest drawbacks and the most money to start with. Did you ever notice what a great difference a little money, for instance, makes in a business enterprise of any kind. You have noticed how quickly a man goes under when he starts in business of any kind without capital in these strenuous lines, poor judgment you say.

I have known farmers to start in life without a dollar, buy their farms and pay for them as they went along, and a high rate of interest as well. Raise a large family and educate them as best he could. What about that man's judgment? I think his judgment something colossal, or he never could have pulled through. You will admit that the men who are in positions of responsibility on our Experimental Farms and in our Agricultural Colleges are possessed of good judgment, or they would not be where they are. Put those men on a run-out farm, without any money and how long would it be before that farm was paid for, its fields producing abundant crops, its pastures stocked with tested herds of cattle, a beautiful house and grounds and modern barns. Mr. Editor would they live long enough to accomplish it? I know they would not if they depended on their own energies. The success or failure of a farmer is not merely a matter of good or bad judgment as often as it is his environments. Place some of these so-called failures on their feet with a few thousand dollars and they would prove a huge success.—W. S. Poole Charlotte Co., N. B.

The Sheep Industry in the Maritime Provinces.

PRINCE EDWARD ISLAND.

THE sheep industry is an important branch of agriculture on Prince Edward Island. The soil and the climate are highly adapted to sheep raising, as evidenced by the quality of many of the Island flocks and the excellence of the mutton produced. As in other provinces, the numbers decreased during many years prior to 1906, when some improvement was shown. The returns for 1911 indicate an increase of about 8 per cent over 1906. Both wool and mutton have so materially improved in value that flocks are increasing in number and enlarging within themselves as rapidly as the natural increase will allow.

While many of the flocks have white faces and long wool, the use of Down sires is becoming very popular. The close fleece of the grade Down is well suited to the moist climate of fall and spring, and the compact carcasses are admirably adapted for the market requirements. Provincial census returns show that of the thousand head of pure-bred sheep on the Island about 55 per cent are Shropshire, 15 per cent Leicester, 5 per cent Cotswold, 5 per cent Oxford and the balance Southdown and Lincolns about equally divided.

The soil, a light red loam, naturally dry under foot, is admirably adapted for sheep. It is easily worked and when well farmed produces abundant crops of all classes of sheep fodder. Hay, oats and roots do particularly well, and with these foods sheep may be grown to perfection if the foundation stock is right and intelligence is exercised in breeding and treatment.

Island agriculture is suffering from the constant growing of hay and oats without adequate returns of manure. If these foods were fed to sheep and turned off as mutton and wool the fertility of the soil would be rapidly increased until in a few years the poorest farm would be yielding profitable crops. The foundation stock may consist of young healthy ewes of any grade or colour of face preferred or obtainable. If on these ewes pure-bred sires of good mutton form are bred and the produce well cared for, the males wethered and the females fattened for the market, a valuable yearly revenue would be secured from the flocks, against which there need be comparatively little expenditure for labour and buildings.

From 1902 to 1906 between 13,000 and 14,000 lambs were shipped each year, while in 1907 and later years the number had increased to upwards of 20,000. A prominent Charlottetown butcher reports that the carcasses were on an average from 7 to 10 pounds each lighter in 1907 than previously. Prices have been steadily advancing. Some years ago lambs were bought at $1.50 each, and only the best taken. The price per pound was 2 cents for all over 60 pounds. In 1907 as high as 5½ cents was paid for ewe and wether lambs over 70 pounds and one cent less for rams. These prices have since then been maintained. In spite of this great difference in price the percentage of ram lambs was about 10 per cent greater than in 1906, when one dealer deducted $572 for rams, while the following year the farmers of the Island lost $2,000 on their lambs from reduced price alone, to which may be added many hundreds of dollars from loss of weight. The dealers do not want to handle ram lambs at all, and the sooner sheep raisers realize this and guard against it the earlier will their industry prosper. The value of lambs shipped to the American market in 1906 was about $65;000; with the increased price and increased number about $75,000 worth were sent over in 1907. During the past two years much of the exports have been to Western Canada. If sheep raising were undertaken earnestly and conducted in a business way by the general farmers of the Island, the agriculture of the province would rapidly increase in prosperity.

In order to encourage the sheep industry the Live Stock Branch of the Federal Department of Agriculture in co-operation with the Provincial Department of Agriculture held auction sales of pure bred rams at central points on the Island in the autumns of 1908 and 1909.

NOVA SCOTIA.

No province of Canada is better adapted to the production of mutton and wool than is Nova Scotia. In that Province there are over a million acres of pasture land, a great deal of which is sandy, rocky or gravelly, rolling up-land. Much of it is covered with short, nutritious, native grass intermingled with white clover, yielding a rich herbage upon which sheep thrive exceedingly well. Soil and climatic conditions in Nova Scotia are extremely favorable for the growing of summer, fall and winter sheep feed, such as grass, rape, roots, clover and mixed hay. As sheep require less grain feed than other classes of farm stock, they are particularly well suited for a province where the growing of cereal crops is not now and likely never will be a very strong factor in its agriculture.

Near the sea, where the weather is at times damp and foggy, a compact medium sized sheep, with a close, dense fleece, is better adapted than a sheep with a more open fleece. In sheep, as in any other stock, good results seldom come by chance. It requires steady, persistent effort to attain the end in view. When pure-bred compact males of one breed are used and a continuous fixed course of breeding followed, in a few years a very ordinary flock will be so changed that they will have the conformation and appearance of pure-breds.

With the price of lambs at five cents per pound, weighed out of pasture, and tub-washed wool selling at 25 cents a pound, a very common ewe between fleece and lamb returns the Nova Scotia farmer from five to six dollars a year. With good breeding, careful selection and liberal feeding, no branch of the live stock industry in Nova Scotia is more profitable than sheep raising. The neglecting of two points in sheep management, however, causes serious loss: ram lambs are not castrated, and too often the ticks are not destroyed. Lambs should be castrated when between ten and fifteen days old; this would add at least 50 cents to the value of the lamb, as then they need not be disposed of so early in the autumn. If the practice of castration became more general it would relieve the market of becoming glutted in the fall, as so often happens when too many ram lambs are crowded on

No flock can thrive or do well if to it.

the ewes and lambs are pestered with ticks Early in June is the best time to get rid of these pests. About ten days after the ewes are shorn the ticks will have taken shelter on the lambs. If the lambs are then dipped it will be the means of so thinning out the troublesome vermin that the flock will thrive in peace and contentment.

In destroying noxious weeds and keeping tillable land clean, there is no other method so easy as that of pasturing with sheep. In Nova Scotia, particularly, sheep have a peculiar value in this regard. The weed known as ragwort has become a serious menace to cattle raising in the province by causing Pictou cattle disease. Sheep relish this weed, and receive no injury from it. From experiments carried on for years under the direction of the Veterinary Director General on an infested farm, it would appear as though sheep if allowed would in time entirely exterminate this plant. Apart altogether from the advantages of rearing sheep in large numbers as a profitable branch of agriculture, for the purpose of making it possible to conduct the rearing of cattle successfully, the keeping of sheep in the ragwort-infested district cannot be too strongly urged.

For a score of years ending 1904 sheep rearing in the province gradually declined, the falling off amounting to 10,000 head. Since then an improvement has taken place, more particularly in eastern Nova Scotia and Cape Breton. At present the number is about 385,000 head. The census for 1901 shows that there were killed and sold sheep and lambs to the value of $119,756. At that time however, the price of mutton was very low. The annual wool clip is a little more than one million pounds. Of pure-breds there are in the province about the following numbers: Shropshires, 600; South Downs, 80; Leicesters, 80; Oxford Downs, 100; Dorsets, 30; Hampshires, 11; Lincolns, 20; Cotswolds, 100.

In the falls of 1906 and 1907 there were taken to the province by the Provincial Department of Agriculture a large number of pure-bred rams which were sold at auction. In the autumn of 1908 the Live Stock Branch of the Federal Department of Agriculture made similar distributions by holding auction sales of high-class rams in districts that were more or less infested with the weed, ragwort, that had been proven by experiments conducted by the Health of Animals Branch to be responsible for Pictou Cattle disease. Sheep destroy this weed by feeding upon it with no injurious effects upon their health. The educational side of the sheep industry is being pushed at farmers' meetings.

Nova Scotia has over a million acres of pasture land. Owing to the roughness of the surface much of this must remain in permanent pasture. Great tracts of it are on bare, bleak, wind-swept hill sides where dairy cows or even young cattle could barely exist, but where sheep would do fairly well. The most practical way of renovating cropped out land, bringing it back to a profitable state of fertility, is by sheep farming. In some parts of the province there are far too many deserted farms upon which a fair living could be made if sheep raising were made the principle factor in their working. To buy up or lease a number of cheap farms, going into sheep raising extensively, would, if judgment and skill were used in the management, give the owners a better return and a much safer investment than purchasing land in distant countries.

Nova Scotia has a number of well managed woolen mills. The quality of their goods have a Dominion reputation. The development of the sheep industry would give them a larger supply and a better quality of raw material.

There are a great many reasons not mentioned why the sheep industry of eastern Canada should be stimulated and encouraged. It is well worthy of careful consideration.

NEW BRUNSWICK.

While the agricultural sections of New Brunswick are devoted largely to dairy farming, there are many sections of the province admirably adapted for sheep raising. According to the latest census returns the province has one cow for each two acres of pasture land, and where organized dairying is the leading industry there is little reason for largely extending the keeping of sheep. On rugged, or rolling land not already returning a profit from cows, the sheep stock might well be greatly increased.

The mutton produced in New Brunswick, as in the other Maritime Provinces, possesses a grain and flavor of unusual excellence. This fact is recognized by many of the best paying markets, with the result that buyers from Boston and New York are early on the ground each autumn contracting for lambs for the fall trade. Western Canada has also entered the field for New Brunswick lamb, and early each summer, western dealers olace orders with local buyers for shipments to be supplied during the

(Continued on page 65)

HORTICULTURE.

How an Apple Orchard Gives an Annuity of $20,000.

Thirty years ago, when I was fifteen, my father, S. P. Chute, bought a farm of one hundred and seventy-five acres for $1,400 in South Berwick near the centre of the Annapolis Valley. At that time only twelve acres were cleared and it was in grass cutting five hundred pounds to the acre; the remainder was bushes and rocky pasture land with a low meadow, cutting six to eight tons of coarse grass.

At the age of sixteen, the full control of this farm as described above, was passed over to me with a mortgage for its full value. At first I turned my attention almost entirely to small fruit. The twelve acres of cleared land was set with apple trees obtained from a nursery man anxious to sell his stock. Hence he gave me until orchard came into bearing, to pay for same. In this young orchard, for six years I grew strawberries, raspberries, blackberries, and some currants and gooseberries, with profitable results.

Among the trees obtained from the nursery man was one plum tree, which yielded three pecks for the first crop and netted four dollars. The extra ordinary result from this tree led me to purchase one thousand plum trees which were planted among the apple trees as fillers. While these plum trees were not as profitable as the first one, they gave very satisfactory results for twenty years, when they were cut down to make room for the growing apple trees.

The good care which I gave the apple orchard gave a good profit, and this led me to see the splendid opportunity in orcharding. And being blessed or, as most people thought, cursed with acres of wild, rocky land worth not more than eight to ten dollars per acre, and considered of no value for agricultural purposes, I continued to clear this land and to extend my orchard, generally growing my own nursery stock, but when necessary supplementing it by outside stock.

THE ORCHARD GAVE 4,000 BBLS.

As a result of this in 1904 I had sixty acres planted with apple trees, many acres of recent planting, and the yield that year was six hundred barrels. In 1905 it yielded one thousand barrels. In 1906 it yielded one thousand barrels. In 1907 it yielded two thousand barrels. In 1908 it yielded one thousand five hundred barrels. In 1909 it yielded four thousand barrels.

Then the prospects of fruit grwoing looked so promising that I purchased some thirty acres of young neglected orchard and by giving it proper fertilization and cultivation, I augmented my crop; so that in 1910, the year of universal failure to fruit growing on account of late frost, the crop was twelve hundred barrels, and in 1911 it was eight thousand barrels, and the prospect this year bids fair to again reach that number.

THIS IS A GOOD ANNUITY.

In the last two years I have planted over one hundred acres, making my present holdings over two hundred acres, containing about 20 thousand trees. From this orchard, before ten years, the average crop will be about twenty thousand barrels, yielding a net income of $20,000.

When you consider that an acre of bearing orchard in the Annapolis Valley is worth one thousand dollars per acre—the fact has been proved by actual results that an acre of bearing orchard gives from ten to seventeen per cent. of that valuation—the present value of my farm is equal to any gold mine. And during the past year, I have had tempting offers of nearly one hundred thousand dollars.

The question will naturally arise, "How have these results been obtained on land naturally too poor to grow profitable results?" My stock has consisted of only one cow, and teams sufficient to cultivate the orchard. But, while raising small fruit I learned that a commercial fertilizer could be depended upon to produce good crops, as well as to increase the fertility of the soil. So, contrary to the advice of friends, for thirty years I have extensively used commercial fertilizer, and many acres of my orchard have never had a shovel full of barn-yard manure, and to-day they are producing enormous crops. But the man who uses commercial fertilizer must also use cover crops or the result may be disastrous.

HOW I CULTIVATE.

My method of orchard culture has been to grow hoed crops between the trees for six or ten years, and then to give up the land fully to the orchard and cultivate it once a week during May and June, at the last cultivation seeding to vetch or clover. The fertilizer is sown before the first harrowing. I use principally acid phosphate, bone meal or basic slag for phosphorous acid; muriate or low grade sulphate of potash for potash; and depend on cover crops of vetch or clover for the nitrogen. I use for one acre, from five to eight hundred pounds of fertilizer containing phosphorous acid, and one to two hundred pounds of potash, according to the land, size and number of trees. I sow forty pounds of winter or hairy vetch; sixty pounds of summer vetch, or fifteen pounds of clover, to the acre. After the leaves have fallen I plow the orchards. This lessens the amount of spring work, and in the spring I began harrowing as soon as the frost permits. By this method the harrowing is done much earlier than when the plowing is delayed until spring, and the orchard receives more thorough cultivation.

All the trees, which I last set out, have been on the system of close planting, using such varieties as the Wagners, Williams' Favourite, and other early bearing varieties, for fillers, with the idea of cutting these out when the trees became too thick. However, after experimenting on five acres for four years, I am convinced that we can keep the full number of trees for many years with excellent results, providing the trees are kept low and well headed in— about fourteen feet high and the same in circumference is the limit. This saves in pruning, in spraying and in picking. But the regular pruning of such an orchard must not be neglected or failure is sure. To prove the profitableness of close planting and heading in, I give the results obtained during the last four years, from the five acres of orchard containing seven hundred trees.

Groaning Beneath a Load

An Emperor Apple tree in the orchard of H. G. Lyons, Berwick, N. S.

BEARING AGES AND RESULTS

9 years out, 250 bbls, which realized $625.

10 years out, 175 bbls., which realizeh $437.

11 years out, 500 bbls., which realized $1500.

12 years out, 250 bbls., which realized $500.

This year the trees are now (July) bending with the fruit, and there is every indication that the crop will exceed any previous record. I consider that the crop of five hundred barrels practically paid for the five acres of land, and for all that I have spent on the orchard. The small fruit which I grew on this land being additional profit.

5 acres of land @ $100	$500
Ploughing and harrowing 11 years @ $30 per year	330
700 trees @ 20 cents	140
Setting 700 trees at 5 cts. each	35
Fertilizer at 50 cents per tree for 11 years	350
Applying fertilizer	10
Cover crops, $2.00 per acre per year	110
Total	$1,475

Another acre, also close set, at the age of fifteeen years gave two hundred and fifty barrels which sold for five hundred dollars.

THE LABOR QUESTION.

With the large increase in my orchard, the labor question soon grew to be a great problem. At first I boarded the laborers in my home, but soon found that life was not worth living under these circumstances. So at intervals, eight cottages were built, where the men and their families live. This method has proved very satisfactory. At one time in four of these houses there were forty inhabitants, —grandmothers, fathers, motherd and children. The younger children pick berries and the older ones pick apples in the fall and pack them in the warehouses during the winter months, thus giving them employment the whole year.

We have frost-proof warehouses situateed at the railway stations, with capacity for ten thousand barrels. We pick and put into barrels from trees, then haul to the warehouses where they are packed. We ship early varieties early, but the later ones we held until winter.

Being situated within eighty miles of the English steamship line, we can defy the world for competition. For instance, with the event of the fast mail boats calling at Halifax we have shipped apples and landed the same on English markets in eight days. Comparing this with the twenty or thirty days taken in transporting Western fruit, and considering the additional cost of transportation, we need not worry over Western competition.

Fruit-growing should be extended still more. Practically the only limit to this industry lies in the people, not the conditions of this valley.

Another great advantage to fruit growing is the co-operation among the growers. The co-operative movement is growing rapidly. During the last few years some thirty companies have been formed under a special act of parliament called the "Fruit and Produce Act." Each company consists of some thirty or forty farmers who own the warehouses. Here the fruit of all the shareholders in each warehouse, is packed and shipped un-

What is a Good Roof?

Is it something like this? A roof that can't catch fire from burning embers. A roof that will wear as long as good cedar shingles used to wear. A roof that isn't going to be an expense for repairs. You get everything that makes a high-grade roof when you buy

NEPONSET PAROID ROOFING

Over 3,000,000 square feet have been used in the Panama Canal work. Leading Railway Systems are also big users, including the Canadian Pacific. Bought everywhere by farmers for high-grade barns as the best roofing value on the market. A big warehouse roofed in 1898 was torn down last summer with the NEPONSET Paroid roof in good condition. This is the roofing with a record. Make sure that you get it. Sold only by regularly authorized NEPONSET dealers, leading hardware and lumber merchants.

Send for Blue Print Barn Plans—FREE

You will like these plans as expressing the Canadian idea of a real barn.

NEPONSET *Roofings are made in Canada.*

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NEPONSET **Proslate Roofing** makes a handsome red or green roof for houses.

PANDORA RANGE

Seeing this splendid range places you under no obligation to buy. We guarantee the "Pandora" just as willingly as McClary people because we know its perfections just as thoroughly.
110

McClary's

PLAYTIME

MAKES LIFE EASIER

To lessen household drudgery and make life easier for housewives is the basis on which our establishment is founded, and the growth of our business is due entirely to the fact that we have accomplished that object.

The patented and exclusive features that make the "Playtime" superior didn't "just happen." They are the results of years of experience and study. In OUR opinion it is the best washing machine ever made for farm use. We would like YOUR opinion after a careful examination of its merits. See it at your dealer's or send to us for full information

Cummer-Dowswell Limited,
Hamilton - Ontario. 107

Rolls The Ground Better

No neck weight.—Perfectly rigid frame.—RUNS EASILY.—

The "Bissell"

Land Roller will work your soil, no matter how stiff and lumpy, better than you've ever had it done before. Write Dept. M for catalog. 54

T. E. Bissell Company Limited
Elora
Ontario, Can.

If you have young children you have perhaps noticed that disorders of the stomach are their most common ailment. To correct this you will find Chamberlain's Stomach and Liver Tablets excellent. They are easy and pleasant to take, and mild and gentle in effect. For sale by all dealers.

der one brand, and the expenses and profits shared according to the amount of stock each farmer owns, and the number of properly packed barrels of apples from his orchard.

CO-OPERATION AIDS FARMERS.

During the past season, by a further act of parliament a Central co-operative Association was recently incorporated, with which thirty of the local associations have affiliated, subscribing some twenty per cent. of their capital, thus giving this Central Association fifty thousand dollars capital. This association handles the entire crop of the thirty local associations, by selling and consigning the same; also in buying supplies such as fertilizer, pulp-heads, nails, etc., to great advantage. For example, forty-one thousand dollars worth of fertilizer was bought for cash, thus saving ten thousand dollars over the price formerly paid to local agents.—S. B. Chute, Berwick, N. S., in Farmers' Magazine.

Fruit Growing in the Gulf Garden.

In the Gulf of St. Lawrence and separated from the mainland by the Northumberland Strait, lies the Province of Prince Edward Island— "the low and beautiful land" that Cartier saw on the afternoon of June 30th, 1534.

"All this land is low, the most beautiful it is possible to see, full of stately trees and goodly meadows, which abound in white and red gooseberries, strawberries, blackberries and wild grain like rye."

It is situated north of the 46th parallel of latitude and is very deeply indented with arms of the sea so that no part of it is more than eight miles distant from the shore.

The surface is gently undulating and in places rolling and the purest of water can be obtained almost anywhere at less than thirty feet. The highest elevation is less than three hundred feet. The soil is a bright red loam, passing into a stiff clay on the one hand, and a sandy loam on the other. It rests on an open subsoil, affording good natural drainage.

The climate is moist, temperate and even, not subject to extremes either of heat or of cold. Showers are frequent throughout the summer. The location, soil and climate all combine to make Prince Edward Island the "Garden Province of Canada." I believe Prince Edward Island to be one great site for an apple orchard," said Professor Macoun.

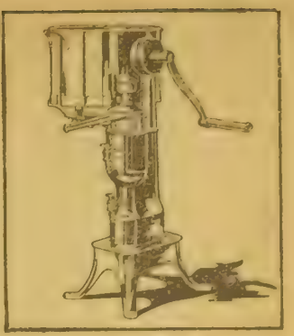
"Almost the whole Province is suited for orcharding, and the rest of it will do for cranberry growth. With these two industries the whole country should be covered."

Up to the present time very little has been done to develop fruit-growing. Nearly every farmer has set out enough apple and cherry trees for home use, but in most cases those have been neglected. There are, however, about a dozen commercial orchards, five acres or more in extent, upwards of ten years of age, and several more have been planted within the last few years. It is very difficult to obtain figures giving accurate returns of any of these orchards. It is generally expected, however, that a tree ten years of age should produce a barrel of number one apples. Mr. A. E. Dewar, of Charlottetown Royalty, has had an average of one and a half barrels each, from an orchard of Wealthy trees at this age.

It is generally conceded by those who are in a position to know, that in color and flavor, apples grown in Prince Edward Island excel. The Autumn varieties are also good shippers, as they mature about two weeks later than elsewhere. The crop is sometimes injured, but seldom ruined by late frosts, the proximity of the ice flow retarding the period of blossoming until this danger is past.

(Continued on page 64)

Both Cream and Skim Milk Are Delivered Pure and Clean

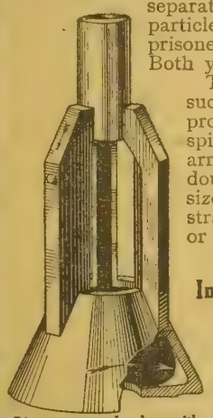


GOOD reasons are the basis of all buying. It follows then, that the best buyer is the man who has the best reason, or the most good reasons for buying. When this rule is applied to the purchase of a cream separator and each separator on the market is carefully studied for reasons why it should be chosen, the most careful buyers invest their money in

I H C Cream Separators
Dairymaid or Bluebell

Assuming for the sake of argument that the best separators are equal in skimming capacity, simplicity, and durability, there is still one best reason why your choice should fall on an I H C separator. The reason is—the dirt arrester chamber which is found only on I H C separators. More or less foreign matter is very likely to find its way into the milk before it reaches the separator. The I H C dirt arrester chamber removes every particle of this matter before separation begins and holds it imprisoned until the last drop of milk has passed through the bowl. Both your cream and skim milk are delivered pure and clean.

There are points in the construction of I H C separators, such as the heavy phosphor bronze bushings, trouble proof neck bearing, cut-away wings, dirt and milk proof spiral gears, etc., which taken in connection with the dirt arrester chamber, make I H C separators beyond any doubt the best of all to buy. There are four convenient sizes of each style. Ask the I H C local agent for demonstration. Get catalogues and full information from him or write nearest branch house.



Dirt-arrester chamber with part of side broken away to show how the impurities are collected

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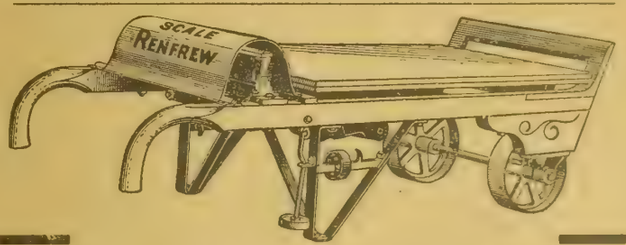
I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, tile drainage, irrigation, fertilizers, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A

"WHEEL THE SCALE TO WHAT YOU WANT TO WEIGH"



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DAIRYING.

Holsteins Best in Wisconsin.

Last year a cow-testing competition was held in Wisconsin in which prizes amounting to$1600 were offered for the herd of ten cows showing the best results at the pail and churn for the period of twelve months. Ten purebred Holsteins owned by John Erikson, carried off first prize with the remarkable average of 16044.4 lbs. of milk and 509.69 lbs. of fat, equal to 637.1 lbs. of butter. As Mr. Erickson bred all these cows, or all but one, from two families, fed and developed them into the best working herd in his state, some extracts from this report to Prof. Woll are both interesting and instructive. He says;

"To get a large production from cows one should commence with the development of the calf. It should never be stunted and should be induced to eat a great deal of roughage quite a while before the first calving. I feed so as to have them in good flesh and physical condition. At the first milking period it is very important to get a long milking habit fixed, that with right handling she will never forget. To be punctual in time of feeding and milking is important, and one should not change milkers any oftener than is necessary.

When my cows were in competition they were fed and milked three times a day till about eight months before freshening, when they were fed and milked twice a day, the time being divided as nearly equal as possible in all cases. They were fed 20 to 35 lbs. silage a day and we got them to eat as much timothy and alfalfa hay as possible.

"The grain ration consisted of bran, oats, hominy, oil meal and Ajax Flakes. These feeds were proportioned according to time of year, and also length of time the cows were along in calf. The amount fed was ten to fifteen pounds a day, sixteen pounds to a couple for a short time in a seven day test.

"Each cow was closely watched, and fed the amount she would clean dp and make use of both for production and body maintenance. After having finished the morning's feed, they were given a small handful of salt. If anything was left it was cleaned out of the manger before they were given their next feed. They had water in reach at all times supplied by a system of buckets. When not in pasture they were gone over once a day with brush and card.

"Five of the first prize ten cows were members of my Princess family, which foundation I purchased fourteen years ago, and from which I have bred ever since. They number half of my herd. They are of a strong dairy tendency and of dairy type.

"Four of the prize ten cows were of my Daisy family, which I have been breeding for the last thirteen years. They are also strong in dairy lines. Two cows of this family won the prize for two daughters of the one cow, averaging 12.83 lbs. fat."—G W. Clemons.

The Scales and Babcock Tester.

Wherein should the ability to judge be supplemented by the scales and babcock tester? This is a question which should have the earnest consideration of every breeder and dairy farmer.

Is the cow that leads in the show ring always the best producer? Many men believe that they can accurately judge the worth of their cows without going to the trouble of keeping records. Are they right? Can they keep in mind, for the whole year the production of each cow? Can they judge as to the amount of butterfat each cow produces? Can they accurately estimate the net profit made by each cow? Are they keeping some cows that do not pay for their feed? Should a breeder breed his stock for show ring purposes alone or should he breed for production as well? Should not every dairy farmer consider such questions as these?

To be a successful breeder a man must be a good judge of stock in order that he may breed toward a certain type or ideal which he must have in mind. He must be a judge as to their strength of constitution, their feeding capacity, breeding capacity and conformability to his ideal, but behind all this more is necessary. It is essential for the breeder or dairy farmer to know just what each individual cow in his herd will produce for the amount of feed she consumes.

The measure of a cow's real dairy value is the net profit she makes over and above the cost of feed. In order to measure such value it is necessary to reach a standard and the only fair standard is the number of pounds of butter-fat. By weighing to get the quantity of milk and testing to get the per cent. of butter-fat it is quite easy to find the pounds butter-fat produced by each cow. Then taking into consideration the cost of feed we have the net profit made by each cow. The poor ones may be culled out. The good cows kept and the heifers, selected from these.

Let not pedigree alone govern the man who is about to buy. The pedigree is valuable only in telling of the ancestry of the animal in question. Let the buyer demand a knowledge of the production of the ancestry If one believes in the theory "Like begets like" he should know that the animal he is about to buy is from a strain of producers.

Let the breeders breed for production as well as for show ring purposes. Let the dairy farmers breed and weed for production and the dairy stock of this country will be improved.—H. N. Flewelling, Sussex N. B.

Systems of Providing Feed.

The dairy farmer may make use of any one of four systems, any combination of the four, or all of them together, to provide feed for his herd: Pasture, soiling crops, silage or all purchased feeds. As to which system is the cheapest depends a good deal on how he is situated.

One might say at first thought that the pasture was the cheapest, but such would only be the case on comparatively cheap land. Two hundred dollar an acre land at a dollar an acre rent per month for say six months, would not pay an ordinary rate of interest on the investment, to say nothing about the taxes, upkeep of fences, etc. Even at $2 an acre rent it would barely pay the interest.

Take the same acre put in corn, and with good care it should yield twelve tons of silage, the value of which would be not far from $50. And the yield mentioned is undoubtedly a conservative estimate. Twelve tons per acre is somewhat above the average yield, but is even considerably below what the yield should be on good land intelligently handled.

So we may take twelve tons per acre yield as the low figure, especially compared with figures given by Mr. F. S. Peer in his book on Soiling, Ensilage and Stable Construction, in which he states that a very good yield would be thirty tons per acre, on which basis he estimates the full cost of production at $1.20 per ton.

Supposing the cow were fed silage the year round, an average of 30 lbs. per day. She would consume in a year less than six tons. In other words, the acre yielding twelve tons of silage would feed two cows for a full year, while the acre in pasture could hardly be expected to feed more than one cow for about six months. The acre in pasture, then, at $2 per month rent would be worth $12 with no net profit, while the acre in corn would be worth at least $50, or more as the yield was increased, at a cost of about $15, or a net profit of $35. Ofcourse the labor cost of feeding the cow daily in the case of silage is an item to be considered, but this would be more than offset by the manure saved by keeping the cows up.

In order to keep up the milk yield at its maximum a certain amount of mill feed will need to be fed whether the cows are on pasture or are kept up on silage or soiling feeds. The soiling system is one requiring more intensive methods and works successfully on high priced land and does not require large areas, but because of the great amount of labor required throughout the summer months, it is a system that is not widely used.

With the silo employed for summer feeding the bulk of the labor is done at filling time, when, in about a week's time, as good a milk producing feed as can be found, is placed in the silo where it may be fed from rain or shine, winter or summer with equal uniformity and the minimum amount of labor.

If the dairyman is going to milk cows and buy all of his feed, he may be able to make a profit by buying in large quantities and by having an exceptionally good market for his product.

Milk Signs and Actual Tests.

There is a growing appreciation of the cow-testing associations of this and other countries, the best evidence of which is the establishment of organizations in new territory, the growth of the old ones and the constantly increasing interest in the results these associations obtain.

In Germany for 16 years past tests have been conducted to determine, among other things, the difference between cows freshened in spring, and those in fall as to their milk producing capacity, the relation of high yield age to the percentage of butterfat and the correlation of form and function.

It was found by the tests that cows freshening in the winter months gave a larger flow of milk during the lactation period then beginning than when freshening in the spring. When cows produce a large flow of milk the tests indicated that a small percentage of the milk was butter-fat, but there was no appreciable change in the content of fat as cows increased in age. By carefully judging the animals on points of conformation to the dairy type as it is known in Germany, and then comparing the conclusion of the judges with the results as shown by the milk sheet and the test for fat it was concluded that a rather close relation existed between actual performance. In all there were 3,000 registered cows concerned in the inquiry and the milk production of these animals varied from 2,724 lbs. per year to 13,218 lbs., the average yield for the 16 years being 6, 816 lbs. containing a content of butter-fat of 3.64 per cent.

Dairy Notes.

Poor cows are never cheap.

If butter is oversalted or overworked, its delicate flavor is ruined.

The good dairy cow eats largely, digests amply, milks abundantly.

Handling butter beyond what is strictly necessary does more harm than good.

System in the dairy should surpass all other matters on the farm.

An even and proper temperature of the cream gives texture and solidity to the butter.

The energies of the dairy cow are convertible into a profit almost every day of her life.

Cream ripened too much will make sour butter.

For Your Wife's Sake Get an Easy-Running, Easily-Cleaned Separator

A BUSY FARMER cannot always be on hand to turn the cream separator for his wife. But if the cream separator is a

Standard

his wife will not require the services of a strong, husky man.

The makers of the STANDARD have built a separator that any woman can easily turn. A strong arm and a strong back are not necessary to make the STANDARD go. A little energy goes a long way with this machine.

The low supply can of the STANDARD also makes it essentially a woman's separator. If given her choice, no woman would prefer to pour a pail of milk into a supply can at least one foot higher than the STANDARD'S.

Your wife will prefer this machine, too, on account of its sanitary features. Milk from any source cannot reach the neck-bearing. The gearing, too, is enclosed, and is therefore dust-proof. The discs can be cleaned in a minute's time without the use of a brush.

The "Standard"

But get the STANDARD Cream Separator Catalogue and learn all about the world's greatest separator.

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7 SHARPLES

Tubular Cream Separators

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SHARPLES TUBULAR Cream Separator

They will use no other make. No disks. Twice the skimming force. Skim faster and twice as clean. Pay a profit no other can pay.

Read this letter: "Glen Let, Tarkastad, United South Africa, July 12, 1912. I have used the Tubular for years. Six Tubulars are in use in my family, and all are highly pleased with them. OSWALD HARRIS."

When whole families cast their solid vote for Tubulars, you will wisely do the same.

Why not get a Tubular in the first place and avoid expensive experience with inferior machines? Ask for Catalog No. 194 and get quick, courteous attention.

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THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

Requisites of Feeding.

The age of miracles is past. It was a beautiful day in May that a corn seed was buried in the earth. The sun shone warm and bright. Through natural chemical and physical action water and heat were absorbed, transformation took place and the small kernel increased in size and altered in character, the dormant germ became active, a new life began. A sprout and rootlet put forth. The blade appeared, then the ear and the full corn in the ear. A generation of the corn plant, one of the most common life cycles on the farm. Begun a wonder, continued a wonder, ended a wonder. How little do we actually understand of the commonest natural functions and processes that are always operating about us. Yet we do know that definite natural cause occasions every effect. This is a world of definite cause and direct effect, never a chance occurence. The vegetable is subject always to law and order; so also is the animal.

In the feeding of the dairy cow three elements of equal importance present themselves at once—the feed, er, the feed and the fed. Some one was asked, "When ought the education of a child begin?" and replied "One thousand years before its birth." The natural and acquired characteristics of the cow are of first importance to the feeder. We assume that she inherited health and strength and that in her development neither were impaired, and that she is approaching cowhood possessed of these natural attributes and the dairy function to a paying degree. Let me inject right here that of all discouraging tasks none is more disheartening than trying to make a poor cow make good.

Cow comfort is of very great consideration. We must first make our cow happy; she must be contented and at peace with all the world. I will not attempt to enumerate all things that enter into this state of being, but certainly we may list good water and plenty of it, good air and plenty of it and a good bed, a warm stall, salt ad lib, good sanitation and cleanliness. Kindness and gentleness should be insured to every cow, and let regularity be printed in large type and posted everywhere in the barn and outside.

We have an army of efficient scientific men who are delving into the mysteries of all subjects appertaining to the dairy. May their tribe increase Others who are collecting, arranging and publishing knowledge for the benefit of the great horde of us who labor to aid the cow in her endeavor to furnish mankind with wholesome udder products. But how neglectful we are to avail ourselves of this invaluable knowledge! Twice each day do we accord the humble cow her rations, but how many times monthly do we think to perfect Bossie's menu in accord with known standards of her requirements? Let us digress.

Our cow's body is composed of flesh, bones, hair, hoof and horn. Her tissue is daily being worn out and exhausted; every part of her anatomy is constantly undergoing this same breakdown. We must provide the material with which she may replace this waste to prevent emaciation and death. The urine excreted from the animals body represents a large portion of this body-waste. This, the chemist informs us, is largely nitrogenous and mineral matter plus water. Again, the animal moves about, eats, chews her cud and digests her food, and maintains a body temperature usually above the surrounding atmospheric temperature. This energy and temperature implies burning or combustion of something. A part of this fuel consumed is body tissue, a part is not; but in either case the fuel must be provided, and its source is the daily ration.

The animal's economy is powerless to create substance; this daily loss must first be made good, or we have a loss in weight—all bodily waste must be supplied in the feed. The mineral waste need not give as serious concern, since all of our ordinary cow-feeds contain the minerals needed, save salt, and in sufficient quantities. The nitrogen waste, noted in the urine, and the feed-fuel consumed in making energy and heat, are of vital consideration. Nitrogen is never found alone, and in its combinations with other elements, as found in foods, is conveniently classified as proteids. Those chemical combinations in the foods which we class as the fuel formers are carbonaceous, and are called carbohydrates. Our firewood is largely carbonaceous; it is this constituent part that affords the heat in burning. Oil will also burn, and with an even hotter flame. The scientists have told us that all cattle foods contain this carbonaceous part, and also in smaller quantities and varying amounts, oils or fats. One unit of this latter in the cow's food, the wise men have determined, is worth two and one-half units of other carbohydrates as fuel.

They also have told us after years of most careful study how much of each element the aver age cow needs daily per 1,000 lbs. of live weight. We have been told how much the cow needs and how much any food contains. We have a standard showing protein, fat and carbohydrates in the right ratio, and a ration figured to this standard is called a balanced ration. With this standard, we have also a table composition of all feeds, also our stock of feed; therefore, with paper and pencil, can we not calculate the proper ration? Is not dairying thus simply a mathematical problem? Should a cow now ever have gray hair? How pleasing, beautiful and restful are some dreams! But, alas, how frail and erroneous are some!

It is just here that science deserts us. By no known laboratory process can the palatability of a feed be told and any successful combination of feeds must be relished by the cow. She must look forward eagerly to its coming and relish the entire meal. Some feeds, when analyzed, reveal worth, but lack palatability, hence are not appetizing to the cow. Therefore, if we would use these, we must mask them with some other very inviting food. There is but one way to determine the palatability of a feed, and that is to ask the cow.

We conclude from all information available that the cow's natural food is grass. Here we find a very happy combination of palatability, digestibility and succulence. Let us in ration forming never lose sight of these and especially do we emphasize succulence. There are very many cows green feed is wanting several months whose habitat is cast in regions where of the year, but through the use of silage and roots the requisite succulence is both possible and practicable.

Three elements more should always be mixed in the feeding. They lack in digestibility, are wanting in succulence, and palatability they have not, but their practicability makes their employment imperative. I refer to lead pencils, scales and the dollar-sign. What is the whole world to a man if his wife is a widow? What if we know all and apply all known chemistry of feeding, but our ration costs more than the cows can pay for? The chemist is our friend and answers for us every question, but the court of appeal in every feed problem is the cow—ask the cow. Every cow is an individual, with definite, pronounced likes and dislikes. Know thy cows.

The reader may want three sugar lumps in his tea, while the good wife prefers but one. Uncle Bill drinks his clear, while Aunt Jennie has just a drop of milk, no sugar, and a little hot water. The children, of course, do not drink tea. What hostess but consults the preferences of those about her table? Does she not rather provide the "makings" than season a whole pot of tea and serve all from the common stock? Cows are very human. They, too, have preferences. These must be ascertained and catered to. Their palates must be tempted, then tickled. To obtain the desired information, ask the cow. Watch her as she feeds. Pile several kinds of feed separately before her. Observe which is eaten first, which last. Appetite quaestions are easily answered, but we are not done with the problem then Because a man likes rich cake, is it good for him? The feeder must be quick to observe and long on wisdom. We frequently observe cows, for illustration, that eat

(Continued on page 65)

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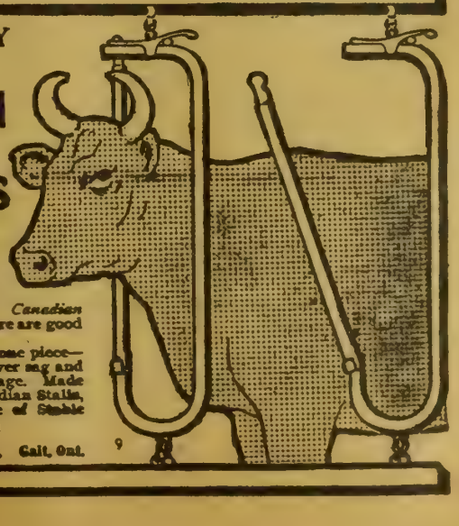

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Canadian Potato Machinery Co., Limited, Galt, Ont.

The Prince Edward Island Central Farmers' Institute in Annual Convention.

(Continued from page 43)

Peter Brodie followed expressing similar sentiments.

Superintendent of Education Campbell set forth a plea for more optimism and paid a high tribute to the Island teachers. There were many young men and young women with lots of ability for teaching and all they needed to encourage them was to appreciate their services by paying them wages in proportion to the wages paid elsewhere for their services.

Prof. Ross thought the efforts of the teachers was not fully appreciated. He dealt with the reasons why so many young people leave schooi before they complete the prescribed course and backed his statements with a review of some investigations conducted by Cornell University in regard to the question.

He also referred to the splendid classes of live stock available for demonstration at the short courses.

Rev. Fr. McGuiggan set forth a plea for more sympathy between ratepayers and teachers. Parents and guardians ought not loose sight of the fact that it is their duty to encourage the teacher by visiting the school and taking a kindly interest in its welfare.

Inspector Baxter gave instances of woefully small salaries that had come to his notice. If the Government would inaugurate a better scheme for the payment of teachers, even if they went down to defeat at an ensuing election, on account of any unpopularity incurred in this respect, they could not die a more glorious death if through their act the cause of education had been benefitted.

Rev. John McDonald thought the Island schools were not in as deplorable a condition as some of the speakers pictured. He thought the teachers in the various schools were every consideration. ...
doing their very best and deserved

Dr. Ross said it was a short-sighted policy for parents or guardians to keep their children from school for trivial reasons and that the statute of compulsory attendance of at least three quarters of the time the school is open should be enforced.

Mr. Seaman, Principal of the Prince Street school set forth a plea for better home training, industrial education and a higher wage scale.

Commissioner of Agriculture McKinnon thought the Island's present system of education favored the so-called learned professions rather than the farmers' profession. He called for the unanimous support of the Short Course plan and for a move to introduce more co-operation in buying and selling amongst the farmers.

J. A. Clark, Superintendent of the Dominion Experimental Station, eulogized the benefits occuring from short courses in agriculture and showed the avenues of opportunity open to those who take the long courses.

Mr. Cameron, a Rhodes' scholar spoke of the educational value of experiment stations and model farms.

Mr. Doble, M. P. P. would like to see more rural matters incorporated in the school text books. He also said a model young man as teacher had a great influence in developing the masculine side of a boys' nature

After a note of thanks to Premier Matheson for taking such a kindly interest in the meeting adjournment was made until Wednesday morning.

ON WEDNESDAY MORNING.

the claims of the Provincial and Central Seed fairs were set forth. The original seed fair had been started at Charlottetown but had been abandoned as it could not be made a financial success. The proposition was then tackled by Summerside and the results were so succesful that it was decided to make it an annual feature. Charlottetown was again prompted to try again so the Central Seed Fair was organized. Many persons looked on the central as a rival of the Provincial. The $400 grant donated for a provincial seed fair by the federal department had been equally divided last year on the understanding that the Central Farmers' Institute decide which fair would be recognized as the Provincial to which the total grant would go in future years.

Much ill feeling was anticipated on this question but the timely throwing of oil on the troubled waters by Rev. Dr. Gauthier and Father McGuiggan presidents of the rival fairs made the discussion a regular peace conference which resulted in the amicable settlement of the question by voting Summerside the federal grant and Charlottetown the local grant.

The conditions governing the $400 grant also called for a committee of nine Institute members to act as an advisory board to the seed fair management. Rev. Dr. Gauthier was empowered to appoint said committee.

A resolution asking that the Ottawa National Exhibition be held at a later date than in 1912 so that Island exhibitors would have an opportunity to exhibit was adopted.

P. J. D. Edmunds, Horace Wright and Prof. Theodore Ross were appointed a committee to investigate a co-operative pork packing proposition and submit their report to the various Farmers' Institutes on the Island so that the question might be intelligently discussed at a future annual meeting.

A resolution asking that the annuber of members required by statute to organize a farmers' institate be reduced from 30 members to 20 members was laid on the table.

A resolution asking for a move to standardize a price for various farm products was tabled.

A resolution asking that the annqal meeting of the Institute be held during the third week in November next year, the date to be fixed by the executive committee was adopted.

A resolution approving of the holding of short courses was passed.

ON WEDNESDAY AFTERNOON.

Dr. Gauthier thanked the ladies who had attended the meetings and a resolution asking the government to make provision for the organization of womens' institutes was unanimously adopted.

The election of officers resulted as follows:

President—Rev. Father Gauthier.

Secretary Treasurer—Walter Simpson.

Directors—Rev. Father McGuiggan, Walter Simpson and Peter Brodie for Queens County—M. J. Kelly, R. J. McLaren and Wm. Mullaly for Kings County and G. W. W. Cameron, Dr. Gauthier and Robt. Agnew for Prince County; the first named director in each group being vice-president for his county. The meeting then adjourned.

It was a pleasure to attend the various meetings and listen to the remarks of the various speakers. Their manner of address and adherence to parliamentary rules showed one of the great advantages of the education that comes through the practice of expressing ones opinions in the local institutes. If the younger men who are growing up will learn to express their opinions as lucidly as the various members of the Central Institute do they will not reflect any discredit on their education or training.

LIVE STOCK.

Lice on Pigs.

Recently W. G. W. wrote concerning the best means of getting rid of lice on pigs, adding, "I have a Middle White Yorkshire sow, and she is constantly pestered with these beasts, although I have tried means to eradicate them, but failed."

It is difficult to account for, because there cannot be recognized any such a thing as an inherited or breed predisposition, but experience goes to show that some animals seem more prone to harbour lice than others, and to be more difficult to free from them, just as some folks attract fleas while others are never troubled. This fact has given rise to the notion that some animals "breed lice," which is, of course, absurd, and while there may be something in the theory of a habit of body that is specially attractive to lice, difficulty in getting and keeping animals free from pediculi is invariably associated with imperfect dressing, failure to repeat it, and neglect to deal with the surroundings. What the average animal owner demands is a recipe for a dressing that will destroy lice, which he expects it to do in one application, and which he generally employs in a perfunctary fashion, and then, when the animal is found in the course of two or three weeks to be as badly infected as ever, he declares the recipe to be no "adjective good," and says nasty things about the prescriber or vendor. It is a great deal easier to prescribe or concoct a lice dressing than to get it properly applied. It is easy eoough to destroy mature pediculi; the difficulty is to deal with the eggs, or "nits," and provide against reinfestation. Some of the domesticated animals harbour several species of lice—the superior animal has three—but the pig plays the part of host to only one, and it is the giant of the family. It is namedHaematopinus urices, and it is the largest known species among the Pediculinae.

It is curious, but a fact, that there exists some difference of opinion as to the importance to be attached to the invasion of the skin of the pig by these large blood-suckers. They are sometimes found on pigs that are doing pretty well, and apparently causing them but slight inconvenience and from this it is, of course, but a step to declaring the presence of lice to be a sign that pigs are doing well. This is actually affirmed by some pig-keepers, but the majority are happily only too anxious to get rid of them, and recognise that lice, being parasitic, bite and irritate the animal so that it cannot rest comfortably and put on flesh. Whether a lousy pig does badly or not is very much a question of the numbers in which the parasites are present, but whether they be few or many, they cannot possibly be of any benefit to the animal, and it is simply foolishness to regard them as a sign of thriftiness. They are much more commonly a sign of bad housing, uncleanliness, and poor feeding, for poverty and lice generally go together, whether the subjects are pigs or bipeds. If poverty does not "cause" lice, as the popular method of expressing predisposition has it, lice very soon cause poverty, and, if they are allowed to increase, the pig-owner need not be surprised to find himself getting poor also, for lice cause arrest of development and loss of condition. Cases are on record of little pigs dying from anaemia and inflammation of the skin, caused by intense phthiriasis.

There is, as already hinted, no great difficulty in getting rid of pig lice, or of keeping the animals clear of them, if, in addition to repeating any dressing employed, once or twice, at intervals of eight or ten days, the bedding is cleared out and turned and the surroundings generally cleaned and disinfected. The spraying of the walls and roof with a solution of one of the well-known disinfectants, or the free use of fresh limewash to which some crude carbolic acid has been added, will tend to prevent reinfestation.

Some of the pig men get rid of lice by greasing the pig all over with lard. This is really a scientific method of slaughter, because the breathing apparatus of the louse is placed alongside the abdomen, and the fatty matter causes death by asphyxia by blocking up the organs of respiration. Neumann recommends cooking-oil, in which fish has been fried, as especially efficacious in the case of the pig. Rural visitors to the East End of London will appteciate the deadly character of this remedy from the smell. The fried-fish shop is, however, not an institution that flourishes where pigs are largely kept, and it will be found that a mixture of onepart of flowers of sulphur with four parts of lard or oil is even more effective. Some mix a ,ittle snuff with the lard, but tobacco in all its forms is dangerous to pigs, and its use requires caution. Another domestic remedy is a mixture of butter-milk and paraffin oil, but parafin, unless in small quantities and in perfect emulsion, is not a safe skin dressing for animals. A decoction of stavesacre seeds, made by boiling 1½ oz. of bruised seeds to each quart of water, can be recommended as an effective dressing. The animal should be wetted all over, commencing with the head, neck and extremities, by brushing the decoction into the skin. Washing with Spratt's dog soap is the method of destruction preferred by Mr. James Long as being "inavriably the quick effectual." Owing to the hair being thin, pigs are less difficult to wash and dry than any other animals on the farm, and for the same reasons greasy dressings are easier to apply. Whatever the agent employed, the dressing needs to be repeated in about the time stated above, in order to kill the parasites hatched from eggs or "nits," the vitality of which are not affected by any dressing that can be used without grave risk to the animal.—Pately Bridge in Farm and Home.

Fattening Beef Cattle for the Fairs.

In the few weeks that remain before the Maritime winter fair some fat can be put on the beef animals and the hide, hair and horns be much improved.

The first consideration is the selection of such types as will make good feeders and that when fitted will meet show yard standards. The ideal beef animal is low to the ground, broad and symmetrical with an especially deep covering over the back, loin, rump and quarters. The muzzle should be broad and full, indicating good feeding qualities; the face short, forehead broad, neck short, dewlap and brisket comparatively fine, shoulders well laid in and deeply covered, back broad, ribs sprung wide, loin wide and deep, rump long and wide, quarters deep and full, dressing percentage high, hide pliable and hair fine.

Choose animals meeting these requirements as nearly as possible and bring them gradually to heavy grain ration. Oats, corn, barley, bran, oil meal, cotton seed meal, roots, green oats and clover hay are widely used in beef fitting. Oats, corn or barley, bran and roots make a good ration. Green corn or oats or good pasture aid during the first few weeks of feeding. Clover makes an excellent roughage. The animal will have a better appetite, be not so liable to get off feed and put on firmer flesh if given exercise.

Frequent washings are advisable. Grooming will aid materially with hide and hair. The horns should be polished. First take off the outer dead covering with a rasp. Complete the operation with a pocket knife and emery paper. Oil with sweet oil and later polish with cloth and chamois skin. Long sled-runner hoofs must be trimmed. Cut them back and pare the soles until the animal stands squarely on his toes. Trim the long hair from around the base of the horns and over the poll and clip the tail, leaving a neat, medium-sized brush. Exercise enough with the halter that the animal will lead well, and, as with other show beasts, beef cattle should be taught to stand and stay in position. Presenting animals to the judge at their best, frequently makes the difference between standing at the top of or way down in the class.

There is a final finish or bloom that is recognized as the right condition for the show ring. This only comes on an animal in good health, rightly fed and excercised and forced for a long enough feeding period to have a deep, mellow covering of meat and with hide and hair fit.

Dirty Hog Yards.

Have you ever noticed the difference in the thrift of the animals in feed lots on neighboring farms where two farmers, apparently equally good feeders—as far as the rations which they fed—were engaged in feeding live stock for the market?

"Yes," you will say, "I have," and you will perhaps add, "but I don't know how to account for that difference, for Neighbor John feeds just as good as Neighbor Joe. In fact, I believe he feeds more grain to his hogs than John does. He never lets his hogs go hungry away from the trough, though of course Joe never does that, either."

That may be true, but haven't you noticed the difference in the condition of their feed lots? Look at the mud in John's feed yard where the hogs mutt wade about belly deep to get at the trough. The only dry spot in it is that far corner where the remains of an old straw stack afford them a dry place to sleep when it isn't raining. Then take a look at Joe's yard, nice and high and dry all over, with a good shelter back there for the hogs to be warm and dry in during any kind of weather.

"But can that make such a difference?" you may ask.

Yes, indeed! Feed is not all that the hog wants to make him grow sleek and fat. His comfort is just as important to him as his feed.—Wisconsin Agriculturalist.

Meat Piles Melting Away.

Another reason for regarding current hog prices as legitimate is rapid shrinking of meat piles in packer's cellars. No longer is the accumulation touted for bear effect.

During September the local stock of pork decreased 11,902 barrels, of lard 106,383 tierces, and of ribs 15,919,176 pounds. The figures tell how rapidly the stuff acrumulated by packers early in the year is being cashed.

With broad foreign and domestic demand for hog product no apprehension regarding winter action by the market need be entertained.—Chicago Live Stock.

Watering Cows.

More cows fail to give a maximum yield of milk from lack of water than from lack of food. At least 85 per cent of milk is water, and a cow that gives 58 pounds of milk a day must have at least 43 pounds (about six gallons) of water to put into the milk pail besides that needed for use in her system.

Just think of the foolishness of turning her into zero cold to drink two full pails of ice water and then expect her to do her best in filling the milk pail. Would it not be wise to have water before her at stable temperature, to drink at pleasure? Think it over.

"A merciful man is merciful to his cows." Is there any mercy in turning a cow out into a zero temperature, or below, and compel her to drink ice water? Did you ever stand and see that poor cow shiver and shake in the stable while warming up that ice water to the temperature of her body? Don't you know that no cow ever made a drop of milk when shivering? Wouldn't it be wiser, as well as more humane, to provide that cow with water before her at stable temperature?

Think about it.—J. S. Woodward in Maine Farmer.

What Shall We Do With the Calves?

The most important knowledge the farmer of today needs is that knowledge of absolute costs which will show him what crops are profitable for him to raise and which ones he should abandon as returning him no profit above pay for his labor and interest in investment.

By the light of such knowledge, many things we now do will remain undone, and the effect upon prices now prevailing will be tremendous.

For instance, this problem of the calf, rightly understood, will in most localities compel the selling of the calf when a day old, and, if all farmers should follow this custom, would eventually raise the price of good veal to a level where it would again become profitable to keep veal calves till four weeks old.

It is not profitable to do this in our locality under prevailing conditions.

For the sake of easy figuring, let us admit that the bother and labor of feeding the calf for four weeks is equal to the labor of milking the cow and caring for the milk—which of course it is not, but this is a minor cost, anyway, since the milking of an extra cow and the caring for her milk when she is only one of a considerable herd is but a trifle.

Now if the calf is kept and fed whole milk till four weeks old, it will sell for $10, or perhaps even $14 if especially good.

Let us put down $12 on that side of the account. On the other hand the calf will bring $1.00 when a day old, and we shall have the mother cow'smilk for 28 days. Say 16 quarts per day if a good cow—this makes 448 qdarts of new milk which in the summer time here will bring 9 cents per quart at the beach, or 8 cents per quart in the winter in the city, which makes the milk value at 8 cents total up to $35.84. To this add the $1.00 received for the calf when a day old and you have $36.84 from your cow by selling the calf when a day old, as against $12 by feeding the whole milk for the four weeks.

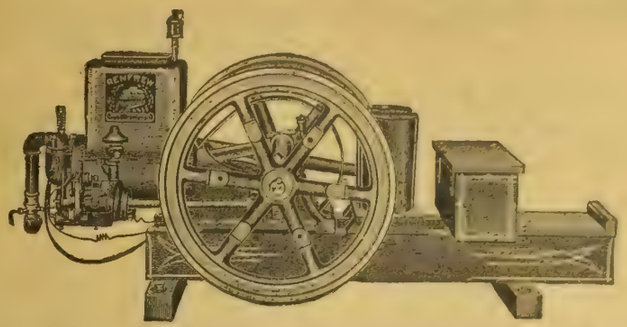
Now you will say that I can not get that price for my milk in my section, and I admit that in some places the market is not so good as is ours, so let us place the market value of the milk at 5 centsper quart, which totals $22.40 for the milk the four-weeks-old calf would have eaten. To this add the $1.00 the day-old calf would bring, and you have $23.40, against $12 in favor of turning the calf when a day old.

But you say, I do not sell milk, I have no market for it in my neighborhood, I make butter. Let us, then, figure this again. Your calf will bring $12 at four weeks of age, but the whole milk feed during this 28 days would make from a good new milch cow, say, 7 lbs. per week, 28 lbs. for the four weeks. Good butter here brings 35 cents per lb., especially good butter has brought within the past three months over 40 cents per lb.; but let us figure at 35 cents—28 lbs. times 35 cents equals $9.80. We then have, we'll say, 100 gallons of skim milk to feed to either pigs or hens.

At the present price of grain, this has easily a feeding value of 5 cents per gallon. The skim milk then totals $5.00 plus the $9.80 for butter, plus the $1.00 for the day-old calf, or $15.80, as against $12 in favor of turning the calf when a day old.

Now, again, heavy cream brings 15 cents per one-half pint jar, or 60 cents per quart during the beach season here. To be conservative, let us reckon a superior, extra heavy cream at 50 cents per quart. This same cow ought to yield 8½ quarts of such cream per week, or 35 quarts during the four weeks. This at 50 cents would total $17.50 for cream, $5.00 for the skim milk, and $1.00 for the day-old calf, or $23.50, as against the $12 for the four-weeks-old calf.

Will someone tell me wherein my figuring is wrong or how anyone can afford, at prevailing prices, to keep a calf till four weeks of age and feed same on whole milk? By just such deals as this we are getting beaten every year. Let us wait till four-weeks-old calves bring from $20 to $25 before we return to selling such veal, lest we wish to donate so much value to the poor meat trust and the friendless, down-trodden calf dealer.—R. W. Dow in Maine Farmer.



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THE HORSE.

Harness Accessories.

Cases frequently arise in which it is found expedient to use one of the various special pieces of gear or harness accessories designed to meet certain particular requirements and contingencies in harnessing horses, and it is well that a horseman should have some knowledge of these different contrivances, which include the so-called false collar, the breast or Dutch collar, the burr, nose-net, and false back-band, besides several other devices of more or less usefulness in certain eventualities. The first-named is probably the one most often seen used. Its name describes it pretty aptly, as it has the shape of a collar and goes underneath the ordinary harness collar, its object being to protect the skin on the shoulders when there is any special tendency on the part of a horse to suffer from collar galls or sores. A false collar acts practically the same part under the collar as a saddle-cloth or numnah does under a saddle. It is made either of leather or of felt, the former undoubtedly being the more practical. A long felt false collar is, however, oftentimes used, for it is a widely-held idea that because felt is such a soft and thick material it is specially effective in protecting the shoulders from the pressure of the collar; but, as a matter of fact, leather is found in practice to answer the purpose a good deal better. The objections to felt are, first, that it is unduly thick for being placed underneath the collar, and by reason of its thickness prevents the latter from fitting properly; secondly, that it is very hot; and thirdly, that it is practically impossible to keep clean for long, for sooner or later it gets very hard and dirty through becoming impregnated with the sweat and sebaceous secretions of the horse, when it not alone ceases to be of any use in affording protection to the skin, but actually becomes liable itself to cause the trouble which it is intended to prevent. A leather false collar, cut from a nice soft piece of leather of medium thickness, is free from these objections, while it is easily kept clean, and merely requires to be oiled at frequent intervals in order to keep it thoroughly soft and pliable. Of course, it is necessary to see that it fits well, and it must not throw any wrinkles or folds when the collar is placed over it.

A SUBSTITUTE FOR THE ORDINARY COLLAR.

A breast collar, which some people call a Dutch collar (the latter term being derived from the fact that it was copied from the Dutch, who almost universally employ this kind of collar in harnessing their horses), is used in the place of the ordinary harness collar, and it is principally resorted to in cases where the latter is found constantly to cause galls in the horse. There are occasionally horses to be met with that apparently cannot wear an ordinary collar without getting galled by it, and in a case of this kind the substitution of a breast collar is often the best way out of the difficulty, though a false collar may first of all be tried. In cases where a horse is suffering from galls or sores inflicted by the collar, a breast collar is also found to come in very useful for tem porary use until the shoulders are well again. This pattern of collar answers very well for light and even medium draught, though it is certainly not so efficient as the ordinary collar, because it does not distribute the draught so widely, but concentrates it on the breast and lower portion of the shoulders only. It is very usually worn with light American trotting harness, and in recent years has come to be increasingly used with the harness of show horses; in fact, the breast collar is now distinctly fashionable for show purposes.

A BIT REINFORCEMENT.

A so-called burr consists of a circular, flat, fairly thick piece of leather with a hole in the centre, and it is fitted round the mouthpiece of the bit at either end, close to the cheeks or—in the case of a driving snaffle—to the cheek rings. These burrs are chiefly used with the object of preventing the bit from being drawn through the horses mouth and also of increasing the effectiveness of the bit in making the horse turn to right or left, and they are undoubtedly useful for this purpose, though there is ordinarily no need to resort to them; but they come in specially handy when a horse is hard mouthed and does not readily obey the indications given with the reins when wanted to turn to either side. Burrs are also sometimes fitted to a bit for the purpose of obviating the possibility of the corners of the mouth being pinched by the bit where the mouth-piece and cheeks or rings join. The objection to burrs is that they look clumsy. When they are used one should be careful to have an extra wide bit, to allow for the room which they take upon the mouthpiece. If a bit is only just wide enough for the horse's mouth without the burrs, the fact of the latter being fitted on it will make the mouthpiece too narrow, and discomfort is in consequence caused to the horse.

TO COUNTERACT PULLING.

A nose-net, which is drawn over a horse's muzzle and fastened to the nose-band by means of small billets and buckles, is used for horses that pull much. It prevents the horse from opening its mouth, and it is for that reason that it counteracts pulling, though it will not usually overcome this trouble entirely, but serves merely to mitigate it. A false back-band is comparatively rarely seen. It comprises a thick, fairly broad strap, with a tug at each end, which is placed across the horse's back immediately behind the saddle-pad, the shafts of the trap being passed through the tugs or loops at its end. The idea of a false back-band is to have an extra strap to support the weight of the shafts, and which will serve to keep them up in the event of the real back-band passing over the saddle-pad giving way. The idea is perhaps somewhat far fetched, for with harness which is in proper condition and repair there should be no reason to apprehend that the back-band is likely to break. However, there are some who prefer to use a false back-band when a special strain falls on the real one on account of the trap or cart being heavily loaded.

OTHER CONTRIVANCES.

As coming within the category of accessories here discussed, mention may briefly be made of the following:—There are some horses which, owto an unduly tender skin, are specially subject to be galled or rubbed sore by the girth-band and belly-band of the harness on the brisket just behind the elbow. A rough and ready expedient adopted in such cases is to tie back girth and belly bands with a piece of twine, which is fastened to the breeching stops on the shafts, in order to keep them clear of the part where the skin gets chafed, but a special narrow strap is often used for this purpose, which, though it has no recognized name, is well known to

(Continued on page 65)

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevents the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for alland every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR :--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

Hillsboro, N. S.

DEAR SIR :--I have used Dr. J Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

W. A. C. RANDALL, M. D.

MESSRS FRASIER THORNTON & CO., Cookshire, Que.

GENTLEMEN :—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

FRASIER THORNTON & CO., Cookshire, Que.

DEAR SIRS :—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
March 28th, 1911.

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will remove them and leave no blemishes. Cures any puff or swelling. Does not blister or remove the hair. Horse can be worked. $2.00 per bottle delivered. Book 6 E free.

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Succeeded in Curing His Horses

MR. J. B. MORIN :—
I, the undersigned, Henri Talbot, carter, declare that I bought VIGORA for my horse which was troubled with breathing. A few bottles of this remedy cured it immediately and my horse is now well.
HENRI TALBOT, carter, Quebec.

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Safe, Speedy and Positive Cure for
Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.
As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
The Lawrence-Williams Co., Toronto, Ont.

POULTRY.

Hints for Molting Time.

Many of the hens ought to be pretty well along with their molting by this time, and many of them are, while the late ones are just beginning to shed their feathers in good shape. Some of these late ones might easily have been hurried along by what is termed the starving method, and would have very likely been laying steadily again when prices are highest. Many consider this a wise method, and perhaps it is, but one thing seems clear to me, and that is that hens which are forced either in laying or molting are shorter lived, or at least have a shorter productive period, and must be hastily disposed of and replaced by birds of greater vitality if one is to have a profitable flock at all times. There is doubt in my mind if it is not better, on the whole, to let nature take its course in these respects, going only so far as to provide suitable quarters and an abundance of well-balanced rations, without any attempt at forcing. The important thing is to make a good profit from every bird as long as they are fed and cared for. There are still widely-varied opinions as to how this may best be done, even among expert poultrymen. Perhaps the hens that are several years in wearing out their reproductive vigor pay best in the end.

At all events the hens require careful attention during the molting period, and specially careful attention to rations. It is best to feed considerable oily food such as linseed meal in the dry mash; in the south and some other localities this is called oil cake meal, and it is not well known by that name in Canada. At this time, fat meat also is good, provided it is wholesome and is not pork. Fat pork is no better for bird or beast than it is for man. At this time, also, corn ration may be somewhat—in fact, considerably—increased, without danger of over-fattening. The oil in the food not only softens the outer skin to which the quills adhere, but provides the material of which they are largely composed, and the feath will form and grow much more rapidly than when these materials are present only in small quantities. This is an important matter, for while it is in no way forcing the molt, it enables the birds to grow their winter coats and recover from the effects of this heavy drain upon their systems under the most favorable circumstances, and materially decreases the period of inactivity which always accompanies this change of plumage. It requires from two to three months from the time molting begins until the hens begin to lay again, for the important change to take place, and it is largely dependent upon feeding and other conditions, whether the period shall be long or comparatively short. I have a small flock of Indian Runner ducks which laid up to the middle of July, constantly, from the time they began in February. Then they began to molt and laid no more until the second day of Septembes, completing the molt and recovering their vigor in six weeks, under conditions which were as favorable as they could be made. Hens will show nearly or quite as good results from proper care, not only at this time, but at all times. These particular ducks are three and four years old, and have never before begun moulting until about the time they were through this year, and I am confident that they will now lay until well into the winter, for often they will not lay at all after molting time, until February, when they begin a new season's work.

It is necessasy that the biddies have plenty of green stuff, not only at this time, but at all times; but now this green stuff is turning brown and soon there will be nothing green for them in the garden. Lawn clippings should have been saved all summer, and in cold weather make fine green food by steaming and serving warm and moist, or may be chopped fine and used to good advantage mixed in the dry mash. Of course there are cabbages, mangel beets, blood turnip beets, carrots, rape and the like to be gathered for winter feeding, and all these should be carefully preserved, as nearly as possible in their natural state. It is also a good plan to gather as much clover hay as convenient, dry and chop it fine for winter use, and don't forget to gather a good supply of leaves for winter ,itter, for you are likely to need it.

Probably the dust bath has not been much used during the summer while the hens were out on the range, and very likely it is now deep buried in the litter. This same litter should be removed from the pens, which should be thoroughly cleaned, then whitewashed and a spray of zenolium or some other disinfectant equally good should be thoroughly sprayed into every crack and crevice, as well as over the entire surface of the interior of the pen until there is no doubt about its being clean and sweet Then the dust bath should be replenished with a fresh supply of road dust, and a good supply of dust should be put away for winter use, so the bath may be renewed occasionally as it needs it. It is not often done, but it is a pretty good idea to g ve the hens a dip in Kreso or some other good preparation, at the time of this general renovation, then for a time it is not difficult to feel confident that the hens are free from lice, mites or other parasites. But even then a good dusting powder should be used frequently and thoroughly, for the parasites that infest poultry and poultry houses are produced by millions, and to keep a pen or house of poultry free from them, constant vigilance and constant labor are necessary.

This is the time to patch up the cracks in the poultry house, look after the windows that need it, and if you have no cloth windows by means of which there is always a constant supply of pure air in winter, without danger of the birds being injured by cold, then by all means put them in. The semi-open front house is best for the Maritime climate, and the worst for any climate is the perfectly tight house without any good means of ventilation, and the heated house. Both these styles of poultry houses were once popular, but they are no longer, the frost and dampness which is bound to collect in houses of this kind being one of the greatest dangers to poultry that ever existed. All the cracks on the north and east sides must be given particular attention, for from these directions the cold winds come.

This is also the time for culling the undesirable birds from the flocks, the time to select next year's breeders, both male and female, and the work of preparing them for this important work should begin soon after the new feathers have grown. They should be good layers, but not hens that never skip a day, for the eggs of such hens are less fertile than those of the hens that lay regularly every other day, and the eggs of these moderately good layers are the ones to select for the breeders. Of course other qualities are to be considered, as color, shape, type and general appearance, first year's egg record, etc. Anyway, the selection should be made in the fall, and may be continued again as the birds develop,even up to the last moment; in fact, continual culling is the only means by which the flocks may be continually and permanently improved, and this can hardly be carried to far.

The cockerels that are going along with the old hens and the cull pullets, to the butcher at Thanksgiving, should be put in a pen by themselves where they will have little chance for exercise, and stuffed on corn and wheat until they are large enough and fat enough to send to market, and then they should be sent without delay, for once they are in condition for sale, they begin to eat their heads off, as the saying goes.

There are many other things that should be done at molting time, but these are the ones I consider most important, and the things that I am doing myself, and that I have done at this season with such satisfactory results that it has been found necessary to vary the routine but little from year to year in order to obtain satisfactory results.—H. L. Goodwin.

Intruding Upon the Hens.

We often hear it said, "The more you are among your fowls the better." While this may apply to the raising of young chicks, I am sure it needs liberal qualifying with respect to the laying hens. The excluding of the egg is a delicate process. It depends largely upon the nervous state of the bird, and birds of the smaller breeds in particular like to feel assured of a period of quiet before they set the machimery in motion to deposit the egg. Any intrusion or racket is certain to retard the operation which is in a degree voluntary. I have known a Leghorn hen that set out to lay in the morning, get so wrought up by continued interruptions of a trivial nature that it was late afternoon before she succeeded. Such delay, of course, means not only loss of valuable time for the hen, but a clogging of the work going on among the undeveloped eggs. Pullets, too, when preparing to lay their first egg, almost invariably vacate the nest at the entrance of a person, and may thus easily be driven to lay in the litter, forming a habit which is not always easy to break. For this reason, therefore, I enter the pens only when necessary, during the forenoon, when the most of the laying is being done.

It is a well-recognized fact that a change of quarters diminishes the egg yield for a period but it is not perhaps so generally known that working in the laying pens, for the purpose of making repairs or alterations, is likely to produce the same result. I once did a job of closing in the roosts of a pen of 25 pullets which had been laying admirably through December. It occupied about two days. I worked carefully so as not to alarm the birds, and they hovered about me almost constantly, apparently too interested or curious with respect to my work to think of producing eggs. At any rate, their yield suddenly fell off at least 50 per cent., and though I did my best the greater part of January passed before I could bring them out of their slump. Through February they again did nicely. I thought it merely a coincidence at first, but after repeated similar experiences, coupled with the testimony of others, I know to the contrary.

A brother breeder, for another instance, had a high-producing pen of Plymouth Rock fowls. He worked a few days finishing off a bantam pen in one corner of their quarters, and though he placed it at an elevation, so as to take nothing out of the floor space, and was careful to interfere in no way with the admission of sun or light, the fowls promptly took a slump and loitered out half the winter. The breeder believes as thoroughly as I do that the less sawing and hammering done around laying hens the better. Nor is it advisable, I am equally sure, to be frequently bustling in among them during the hours of laying.—N. E. H.

Eggs Should be Very Fresh.

An egg is not an egg just because it may have a shell—sometimes the interior of the shell may be little better than the contents of a garbage can that has stood a week in hot weather. The season is at hand when farmers and poultrymen need to be careful with their eggs. It is a season when hens are broody, and it does not take many hours for a broody hen to bring an egg to the point where incubation begins. We will say that the germ of an egg has started to grow, and then it is removed from the nest and suffered to become cold—what takes place? The germ dies, and as soon as it is dead, decomposition sets in and spreads very rapidly. It behooves producers of eggs to be watchful of their hens' nests, especially just at dark, to make sure that no eggs have been left in the nests to be incubated over night. The person who locates a hen's nest in an out of the way place and takes it up with its dozen or more eggs and mingles those eggs with the daily pick-ups, has no business to complain if he losses customers.

The only safe egg is the one that is gathered the day it is laid—to be uncertain about the freshness of an egg is equivalent to having one stand in fear of having his customers quit him in favor of some other producer who is more careful in the way he handles his eggs. The selling price of eggs at the country stores would range considerably higher if there were fewer haymow-gathered eggs pawned off as fresh. We have a good deal of sympathy with the owner of the country store who has to take in eggs and ship them out to a distant market, because when they reach the market the price is set according to the average of the lot, and too often that average is low because of bad eggs received from careless producers.—Conn. Farmer.

Here is a woman who speaks from personal knowledge and long experience, viz., Mrs. P. H. Brogan, of Wilson, Pa., who says, "I know from experience that Chamberlain's Cough Remedy is superior to any other. For croup there is nothing that excels it." For sale by all dealers.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

A GOOD THANKSGIVING.

Said old gentleman Gay on a Thanksgiving Day
If you want a good time, then give something away
So he sent a fat turkey to shoemaker Price,

And the shoe-maker said, "What a big bird! How nice!
And such a good dinner is before me I ought
To give Widow Lee the small chicken I bot"

"This fine chicken, oh, see!" said the pleasant Widow Lee,
And the kindness that sent it how precious to me!
I would like to make someone as happy as I—
I'll give washwoman Biddy my big Pumpkin Pie."

"And, oh sure" Biddy said, Tis the Queen of all pies!
Just to look at its yellow face gladdens my eyes.
Now its my turn I think; and a sweet ginger cake
For the motherless, Finnigan children I'll bake."

Said the Finnigan children—Rose, Denny and Hugh—
"It smells sweet of spice, and we'll carry a slice
To poor little lame Jake, who has nothing that's nice."

"Oh I thank you, and thank you!" said little lame Jake;
"Oh, what a bootiful, bootiful, bootiful cake!
And oh, such a big slice! I will save all the crumbs,
And will give them to each little sparrow that comes."

And the sparrows, they twittered, as if they would say,
Like old gentleman Gay, "On a Thanksgiving Day,
If you want a good time,
Then give something away."

David Copperfield.

By Charles Dickens.

(Continued from last issue)

All this, I saw in the first glance after I crossed the threshold—childlike, according to my theory—and then Peggotty opened a little door and showed me my bedroom. It was the completest and most desirable bedroom ever seen—in the stern of the vessel; with a little window, where the rudder used to go through; a little looking-glass, just the right height for me, nailed against the wall,, and framed with oyster shells; a little bed, which there was just room enough to get into; and a nosegay of seaweed in a blue mug on the table. The walls were whitewashed as white as milk, and the patchwork counterpane made my eyes quite ache with its brightness. One thing I particularly noticed in this delightful house, was the smell of fish; which was so searching, that when I took out my pocket handkerchief to wipe my nose, I found it smelt exactly as if it had wrapt up a lobster. On my imparting this discovery in confidence to Peggotty, she informed me that her brother dealt in lobsters, crabs and crawfish; and I afterwards found that a heap of these creatures, in a state of wonderful conglomeration with one another, and never leaving off pinching whatever they layed hold of, were usually to be found in a little wooden outhouse where the pots and kettles were kept.

We were welcomed by a very civil woman in a white apron, whom I had seen curtseying at the door when I was on Ham's back, about a quarter of a mile off. Likewise by a most beautiful little girl (or I thought her so), with a necklace of blue beads on, who wouldn't let me kiss her when I offered to, but ran away and hid herself. By and By, when we had dined in a sumptuous manner of boiled dabs, melted butter and potatoes, with a chop for me, a hairy man with a very good-natured face came home. As he called Peggotty "Lass," and gave her a good hearty smack on the cheek, I had no doubt, from the general propriety of her conduct, that he was her brother; and so he turned out—being presently introduced to me as Mr. Peggotty the master of the house.

"Glad to see you, sir," said Mr. Peggotty. "You'll find us rough, sir, but you'll find us ready."

I thanked him, and replied that I was sure I should be happy in such a delightful place.

"How's your Ma, sir?" said Mr. Peggotty. "Did you leave her pretty jolly?"

I gave Mr. Peggotty to understand that she was as jolly as I could wish, and that she desired her compliments —which was a polite fiction on my part.

"I'm much obleeged to her, I'm sure," said Mr. Peggotty. "Well, sir, if you can make out here, for a fortnut, 'long wi' her," nodding at his sister, "and Ham, and little Em'ly, we shall be proud of your company."

Having done the honours of his house in this hospitable manner, Mr. Peggotty went out to wash himself in a kettleful of hot water, remarking that cold would never get his muck off." He soon returned, greatly improved in appearance; but so rubicund, that I couldn't help thinking that his face had this in common with the lobsters, crabs, and crawfish—that it went into the hot water very black and came out very red.

After tea, when the door was shut and all was made snug (the nights being cold and misty now), it seemed to me the most delicious retreat that the eye of man could conceive. To hear the wind getting up out at sea, to know that the fog was creeping over the desolate flat outside, and to look at the fire and to think that there was no house near but this one, and this one a boat, was like enchantment. Little Em'ly had overcome her shyness, and was sitting by my side upon the lowest and least of the lockers,, which was just large enough for us two, and just fitted into the chimney corner. Mrs. Peggotty, with the white apron, was knitting on the opposite side of the fire. Peggotty at her needle-work was as much at home with St. Paul's and the bit of wax-candle, as if they had never known any other roof. Ham, who had been giving me my first lesson in all-fours, was trying to recollect a scheme of telling fortunes with the dirty cards, and was printing off fishy impressions of his thumb on all the cards he turned. Mr. Peggotty was smoking his pipe. I felt it was a time for conversation and confidence.

"Mr. Peggotty!" says I.

"Sir," says he.

"Did you give your son the name of Ham, because you live in a sort of ark?"

Mr. Peggotty seemed to think it a deep idea, but answered:

"No, sir. I give him no name."

"Who gave him that name, then?" said I, putting question number two of the techism to Mr. Peggotty.

"Why, sir, his father giv it him," said Mr. Peggotty.

"I thought that you were his father!"

"My brother Joe was his father," said Mr. Peggotty.

"Dead, Mr. Peggotty?" I hinted, after a respectful pause.

"Drowndead," said Mr. Peggotty.

I was very much surprised that Mr. Peggotty was not Ham's father, and began to wonder whether I was mistaken about his relationship to anybody else there. I was so curious to know, that I made up my mind to have it out with Mr. Peggotty.

"Little Em'ly," I said, glancing at her. "She is your daughter, isn't she, Mr. Peggotty?"

"No, sir. My brother in law, Tom, was her father."

I couldn't help it. "—Dead, Mr. Peggotty?" I hinted, after another respectful silence.

"Drowndead," said Mr. Peggotty.

I felt the difficulty of resuming the subject, but had not got to the bottom of it yet, and must get to the bottom somehow. So I said:

"Haven't you any children, Mr. Peggotty?"

"No, master," he answered, with a short laugh. "I'm a bacheldore."

"A bachelor!" I said, astonished. "Why who's that, Mr. Peggotty)" Pointing to the person in the apron who was knitting.

"That's Missis Gummidge-' said Mr. Peggotty.

"Gummidge, Mr. Peggotty?"

But at this point Peggotty—I mean my own peculiar Peggotty—made such impressive motions to me not to ask any more questions, that I could only sit and look at all the silent company, until it was time to go to bed. Then, in the privacy of my own little cabin, she informed me that Ham and Em'ly were an orphan nephew and neice, whom my host had at different times adopted in their childhood, when they were left destitute; and that Mrs. Gummidge was the widow of his partner in a boat, who had died very poor. He was but a poor man himself, said Peggotty, but as good as gold and as true as steel—those were her similies. The only subject she informed me, on which he ever showed a violent temper or swore an oath, was this generosity of his; and if it were ever referred to, by any one of them, he struck the table a heavy blow with his right hand (had split it on one such occasion), and swore a dreadful oath that he would be "Gormed" if he didn't cut and run for good, if it was ever mentioned again. It appeared, in answer to my inquiries, that nobody had the least idea of the etymology of this terrible verb passive to be gormed; but that they all regarded it as constituting a most solemn imprecation.

I was very sensible to my entertainer's goodness and listened to the woman's going to bed in another little crib like mine at the opposite side of the boat, and to him and Ham hanging up two hammocks for themselves on the hooks I had noticed in the roof, in a very luxurious state of mind, enhanced by my being sleepy. As slumber gradually stole upon me, I heard the wind blowing out at sea and coming on across the flat so fiercely, that I had a lazy apprehension of the great deep rising in the night. But I bethought myself that I was in a boat, after all; and that a man like Mr. Peggotty was not a bad person to have on board if anything did happen.

Nothing happened, however, worse than morning. Almost as soon as it shone upon the oyster-shell frame of my mirror I was out of bed, and out with little Em'ly, picking up stones upon the beach.

"You're quite a sailor, I suppose?" I said to Emily. I don't know that I supposed anything of the kind, but I felt it an act of gallantry to say something; and a shining sail close to us made such a pretty little image of itself, at the moment, in her bcight eye, that it came into my head to say this.

"No," replied Em'ly, shaking her head, "I'm afraid of the sea."

"Afraid!" I said, with a becoming air of boldness, and looking very big at the mighty ocean. "I an't!"

"Ah! but it's cruel," said Em'ly. "I have seen it very cruel to some of the men. I have seen it tear a boat as big as our house all to pieces."

"I hope it wasn't the boat that—"

"That father was drowned in?" said Em'ly. "No. Not that one, I never see that boat."

"Nor him?" I asked her.

Little Em'ly shook her head. "Not to remember?"

Here was a coincidence! I immediately went into an explanation how I had never seen my own father; and how my mother and I had always lived by ourselves in the happiest state imaginable, and lived so then, and always meant to live so; and how my father's grave was in the churchyard near our house, and shaded by a tree, beneath the boughs of which I had walked and heard the birds sing many a pleasant morning. But there were some differences between Em'ily's orphanhood and mine, it appeared. She had lost her mother before her father; and where her father's grave was no one knew, except that it was somewhere in the depths of the sea.

"Besides," said Em'ly, as she looked about for shells and pebbles, "your father was a gentleman and your mother is a lady; and my father was a fisherman and my mother was a fisherman's daughter, and my uncle Dan is a fisherman."

"Dan is Mr. Peggotty, is he?" said I.

"Uncle Dan—yonder," answered Em'ly, nodding at the boat-house.

"Yes. I mean him. He must be very good, I should think?"

"Good!" said Em'ly. "If I was ever to be a lady, I'd give him a sky-blue coat with diamond buttons, nankeen trousers, a red velvet waistcoat, a cocked hat, a large gold watch, a silver pipe, and a box of money."

I said that I had no doubt that Mr. Peggotty well deserved these treasures. I must acknowlehge that I felt it difficult to picture him quite at his ease in the rainment proposed for him by his grateful little neice, and that I was particularly doubtful of the policy of the cocked hat; but I

A Windsor Lady's Appeal

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kept these sentiments to myself.

Little Em'ly had stopped and looked up at the sky in her enumeration of these articles, as if they were a glorious vision. We went on again, picking up shells and pebbles.

"You would like to be a lady?" I said.

Emily looked at me, and laughed and nodded "yes."

"I should like it very much. We would all be gentlefolks together, then. Me, and uncle, and Ham, and Mrs. Gummidge. We wouldn't mind then, when there come stormy weather.—Not for our own sakes, I mean. We would for the poor fishermen's, to be sure, and we'd help'em with money when they come to any hurt."

This seemed to me to be very satisfactory, and therefore not at all improbable, picture. I expressed my pleasure in the contemplation of it, and little Em'ly was emboldened to say, shyly,

"Don't you think you are afraid of the sea, now?"

It was quiet enough to reassure me, but I have no doubt if I had seen a moderately large wave come tumbling in, I should have taken to my heels, with an awful recollection of her drowned relations. However, I said "No," and I added, "You don't seem to be, either, though you say you are;"—for she was walking much too near the brink of a sort of old jetty or wooden causeway we had strolled upon, and I was afraid of her falling over.

"I'm not afraid in this way," said little Em'ly. "But I wake when it blows, and tremble to think of Uncle Dan and Ham, and believe I hear 'em crying out for help. That's why I should like so much to be a lady. But I'm not afraid in this way. Not a bit. Look here!"

She started from my side, and ran along a jagged timber which protruded from the place we stood upon, and overhung the deep water at some height, without the least defense. The incident is so impressed on my remembrance, that if I were a draughtsman I could draw its form here, I dare say, accurately as it was that day, and little Em'ly springing forward to her destruction (as it appeared to me), with a look that I have never forgotten directed far out to sea.

The light, bold, fluttering little figure turned and came back safe to me, and I soon laughed at my fears, and at the cry I had uttered; fruitlessly in any case, for there was no one near. But there have been times since, in my manhood, many times there have been, when I thought, is it possible among the possibilities of hidden things, that in the sudden rashness of the child and her wild look so far off, there was any merciful attraction of her into danger, and tempting her towards him permitted on the part of her dead father, that her life might have a chance of ending that day. There has been a time since when I have wondered whether, if the life before her could have been revealed to me at a glance, and so revealed that a child could fully comprehend it, and if her preservation could have depended on a motion of my hand, I ought to have held it up to save her. There has been a time since—I do not say it lasted long, but it has been—when I have asked myself the question, would it have been better for little Em'ly to have had the waters close above her head that morning in my sight; and when I have answered Yes, it would have been.

This may be premature. I have set it down too soon, perhaps. But let it stand.

We strolled a long way, and loaded ourselves with things that we thought curious, and put some stranded starfish back into the waterMI hardly know enough of the race at this moment to be quite certain

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3

whether they had reason to feel obliged to us for doing so, or the reverse—and then made our way home to Mr. Peggotty's dwelling. We stopped under the lee of the lobster-house to exchange an innocent kiss, and went in to breakfast glowing with health and pleasure.

"Like two young mavishes," Mr. Peggotty said. I knew this meant, in our local dialect, like two young thrushes, and received it as a compliment.

Of course I was in love with little Em'ly. I am sure I loved that baby quite as truly, quite as tenderly, with greater purity and more disinterestedl ness, than can enter into the best love of a later time of life, high and ennoblig as it is. I am sure my fancy raised up something round that blue-eyed mite of a child, which etherealized, and made a very angel of her. If, any sunny afternoon, she had spread a little pair of wings, and flown away before my eyes, I don't think I should have regarded it as much more than I had reason to expect.

We used to walk about that dim old flat at Yarmouth in a loving manner, hours and hours. The days sported by us, as if time had not grown up himself yet, but were a child too, and always at play. I told Em'ly I adored her, and that unless she confessed she adored me I should be reduced to the necessity of killing myself with a sword. She said she did, and I have no doubt she did.

As to my sense of inequality, or youthfulness, or other difficulty in our way, little Em'ly and I had no such trouble, because we had no future. We made no more provision for growing older, than we did for grow, ing younger. We were the admiration of Mrs. Gummidge and Peggotty, who used to whisper of an evening when we sat lovingly, on our little locker side by side, "Lor! wasn't it beaatiful!" Mr. Peggotty smiled at us from behind his pipe, and Ham grinned all the evening and did nothing else. They had something of the sort of pleasure in us, I suppose, that they might have had in a pretty toy, or a pocket model of the Colosseum.

I soon found out that Mrs. Gummidge did not make herself so agreeable as she might have been expected to do, under the circumstances of her residence with Mr. Peggotty. Mrs. Gummidge's was rather a fretful disposition, and she whimpered more sometimes than was comfortable for other parties in so small an establishment. I was very sorry for her; but there were moments when it would have been more agreeable, I thought, if Mrs. Gummidge had had a convenient apartment of her own to retire to, and had stopped there until her spirits revived.

Mr. Peggotty went occasionally to a public house called The Willing Mind. I discovered this by his being out on the second or third evening of our visit, and by Mrs. Gummidge looking up at the Dutch clock, between eight and nine, and saying he was there, what was more, she had known in the morning he would go there.

Mrs. Gummidge had been in a low state all day, and had burst into tears in the forenoon, when the fire smoked. "I am a lone lorn creetur," were Mrs. Gummidge's words, when that unpleasant occurrence took place "and everythink goes contrairy with me."

"Oh, it'll soon leave off," said Peggotty—I again mean our Peggotty—"and besides, you know, it's not more disagreeable to you than to us."

"I feel it more," said Mrs. Gummidge.

It was a very cold dgy, with cutting blasts of wind. Mrs. Gummidge's peculiar corner of the fireside seemed to me to be the warmest and snuggest in the place, as her chair was certainly the easiest, but it didn't suit her that day at all. She was constantly complaining of the cold, and of its occasioning a visitation in her back which she called "the creeps". At last she shed tears on that subject, and said again that she was a lone lorn creetur' and everythink went contrairy with her."

"It is certainly very cold," said Peggotty. "Everybody must feel it so."

"I feel it more than other people," said Mrs. Gummidge.

So at dinner; when Mrs. Gummidge was always helped immediately after me, to whom the preference was given as a visitor of distinction. The fish was small and bony, and the potatoes were a little burnt. We all acknowledged that we felt this something of a disappointment; but Mrs. Gummidge said she felt it more than we did, and shed tears again, and made that former declaration with great bitterness.

Accordingly, when Mr. Peggotty came home about nine o'clock, this unfortunate Mrs. Gummidge was knitting in her corner, in a very wretched and miserable condition. Peggotty had been working cheerfully. Ham had been patching up a great pair of waterboots; and I, with little Em'ly by my side, had been reading to them. Mrs. Gummidge had never made any other remark than a forlorn sigh, and had never raised her eyes since tea.

"Well, Mates," said Mr. Peggotty, taking his seat, and how are you?"

We all said something, or looked something, to welcome him, except Mrs Gummidge, who only shook her head over her knitting.

"What's amiss?" said Mr. Peggotty, with a clap of his hands. "Cheer up, old Mawther!" (Mr. Peggotty meant old girl.)

Mrs. Gummidge did not appear to be able to cheer up. She took out an old black silk handkerchief and wiped her eyes; but instead of putting it in her pocket, kept it out and wiped them again, and still kept it out ready for use.

(Continued in next issue)

Professor H. H. Dean Prepares a Course On "Dairying"

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But to go into full particulars about this course is impossible in this space. To state the matter briefly, it covers almost everything from the origin and development of dairy cattle and the various breeds to modern dairy stock management. The subjects of "Feeding" and "Breeding" are alone worth many dollars to the man who will apply what he learns.

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2. What are the three main theories relating to origin of species?
3. What is the limit of milk production in a dairy cow?
4. What are the strong and weak points of the Ayrshire breed? The Jersey? The Holstein?
5. What is the reason for the high percentage of butter fat in Jerseys' milk?
6. What is the "upward principle" in breeding? (This principle is more important than heredity.)
7. Why is it important to look out for "sports" and "mutants" among cows? How would you discover them, there being no noticeable difference in appearance?
8. What is Nutritive Ratio? Why is it so vastly important for dairying purposes? What are the German, American and O.A.C. Tables of Nutritive Ratio?
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C. H. PURDY.

Flour and Breadmaking.

(Continued from last issue)

II. SPONGE AND DOUGH METHOD

1 cake compressed yeast.
2 quarts liquid at 90 degrees F.
2 level tablespoons salt.
2 level tablespoons sugar.
2 level tablespoons lard or butter.
Flour.

Mix the yeast and half of the sugar in ½ cup of warm water, and let it stand at a temperature of 80 degrees F. for 15 or 20 minutes to start fermentation.

Measure the shortening, salt, and rest of sugar, into kneading pan, stir in the rest of the liquid, and mix in flour enough to beat without spattering. Then add the well-fermented yeast and beat with a wooden spoon until it looks smooth and elastic.

From this point treat just the same as in the ferment, sponge and dough method.

VARIATIONS.

1. The above calls for strong flour. Soft flour may be used for the dough stage, but must then be kneaded down before it has quite doubled in volume each time.

2. The second rising of the dough may be omitted, but the extra rising makes a loaf of rather finer texture. When a large batch is being made, this may be taken advantage of to delay the baking of part until the first part is out of the oven.

3. The liquid may be all water, part water and part milk, or part potato-water and part milk.

4. Home-made yeast may replace the compressed yeast. Use one cup home-made yeast and only 3½ pints liquid.

5. If the flour is taken from a cold place in the winter, it should be brought to a temperature of 80 degrees F. before mixing it into either sponge or dough. When one has learned by experience what quantity of flour the liquid will take up, it is a good plan to measure the whole quantity into a kneading-pan, mix the sponge into another dish, make a well in the rest of the flour in the kneading-pan, pour in the sponge and stand the whole in a warm place to rise; then when the sponge is risen the rest of the flour can be kneaded in.

III. QUICK METHOD.

¼ cup milk.
¾ cup water.
1 cake compressed yeast.
1 teaspoon salt.
1 teaspoon sugar.
1 teaspoon lard or butter.
Flour.

Put the sugar and yeast into a cup, add ¼ cup of water warmed to 90 degrees F., mix until the whole is smooth and the sugar dissolved, and stand in a temperature of 80 degrees F. for 15 or 20 minutes to begin fermenting. Put the milk on to scald. Measure the salt and shortening into the kneading-pan, pour in the scalded milk, add the rest of the water and bring the temperature to about 90 degrees F. Add strong flour enough at the same temperature to make a batter that will beat without spattering; add the yeast, now fermenting vigorously, and beat with a wooden spoon until it looks smooth and elastic. Mix in at once enough warm flour to make a dough that will not stick to the fingers, turn out on the moulding board and knead as usual. Return to the warm geased kneading-pan, cover closely and stand in a temperature of 70 to 80 degrees F. until risen to rather more than double in volume. This will take 2 to 3 hours.

Knead lightly in the pan for a minute to get rid of the larger bubbles, and stand back in the warm place to rise again until double in volume. This will take 1 to 2 hours.

Shape into loaves that will half fill the bread tins, kneading only to get rid of large bubbles, and smooth the surface. Let rise until doubled in volume, then bake and cool as usual.

VARIATIONS.

1. Soft flours may be used for the whole process in this method, but care must be taken to knead it down at the proper time. It should be allowed to rise the first time to a little less than double in volume, and succeeding times still a little less. Once over-risen, soft flour dough is very hard to make into a good bread.

2. This process may be used for setting over night, using one cake of yeast to six times the quantity of all the other ingredients, and allowing it to rise 9 to 10 hours the first time. The longer time will develop a delicious flavour which can never be attained by the short process.

3. Home-made yeast may be used omitting the water. Bring the yeast to 80 degrees F., add the sugar, and allow it to stand 10 to 20 minutes to begin working before adding it to the sponge.

HOME-MADE YEAST.

4 medium sized potatoes.
½ cup hops.
1 quart boiling water.
½ cup sugar.
1 cup flour.
2 level tablespoons salt.
1 compressed yeast cake.

Boil the potatoes, drain away the water, and mash the potatoes until free rfom lumps. Pour the boiling water, which may contain the water drained from the potatoes, over the hops and simmer 15 minutes. Measure into a three-quart bowl, or crock, the flour, sugar and salt, and mix them thoroughly. Strain the hop water, and add at once to the crock, stirring rapidly all the time. Add the mashed potatoes and give the whole a thorough beating. Cool to 70 or 80 degrees F., and add one compressed yeast cake soaked in ¼ cup of warm water for half an hour. Keep at a temperature of 70 degrees F. for 3 or 4 hours, stirring down as often as it comes to the top. Bottle and keep in a cool place. Do not cork it tightly at first.

One cup of yeast is equal to one compressed or one dry yeast cake.

ROLLS.

1½ cup milk.
½ cup water.
1 cake compressed yeast.
2 level teaspoons salt.
2 lever teaspoons sugar.
2 level teaspoons butter.
1 level tablespoon lard.
Flour.

Put the yeast cake and one tablespoonful of the sugar in a cup, add

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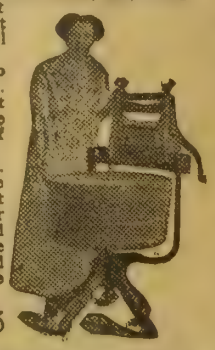
A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.



So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

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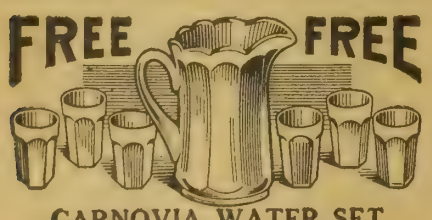

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¼ cup of the water warmed to 90 degrees F., mix until smooth and the sugar is dissolved, and stand in a temperature of 80 degrees F. for 20 minutes. Put the milk on to scald. Measure the butter, lard, salt, and the rest of the sugar into a kneading-pan, pour in the scalding milk, add the remaining ¼ cup of cold water, and allow it to come to 90 degrees F.

Add enough flour to make a batter that will not spatter when beaten, stir in the fermenting yeast, and beat until it looks smooth and elastic.

Mix in enough more flour to make a dough that will not stick to the hands. Turn out on the board and knead until smooth, velvety and even textured. Return to the warm, greased bread-tin, cover closely, and keep at 80 degrees F. until nearly tripled in volume.

Knead down in the pan, and let rise again at 80 degrees F. until double in volume.

Shape into small rolls, remembering that they will increase greatly in size, put them into greased pans, and stand in a temperature of 80 degrees F. until doubled in volume. Take care that the surface does not dry. If it is not possible to keep them covered closely, it will be necessary to moisten the top occasionally with warm milk or water.

Bake in a little hotter oven than used for bread for from 20 to 35 minutes, depending on the size of the rolls and the heat of the oven. The oven must not be too hot at first or it will prevent the expansion of the rools, and may result in doughy centres.

Cool quickly by exposing as much surface as possible to the air.

SUMMARY.

The essentials of sucressful home breadmaking are:

1. Good bread flour.
2. Good yeast.
3. Dough of the right consistency.
4. Control of the temperature at all stages.
5. To remember that soft flour has not the expansive power of strong flour, and that soft flour doughs must never be allowed to rise longer than necessary. If it rises to the point of falling back, results will not be good.
6. To avoid drying out of the surface at all stages, as this makes a dark streak through the baked loaf.

MACDONALD INSTITUTE RECIPE FOR BAKING POWDER BISCUITS.

4 level cups flour.
1 level teaspoon salt.
2 level tablespoons shortening.
2½ level tablespoons baking powder.
About 1½ cups milk.

The shortening may be sweet lard, or dripping, or butter, or a mixture.

See that the shortening is soft enough to run easily. Place the board, mixing knife, rolling pin, cutter, and pan ready and see that the oven is hot.

Sift the salt and flour into a bowl; rub the shortening into it with the fingers; sift in the baking powder, and mix well. Mix into a soft dough with the milk, using a broad-bladed, flexible knife, in order to cut and mix it quickly. Flour the board lightly, turn the dough out, and roll it round to coat it with flour. Knead just enough to make the dough smooth, roll out about an inch thick, and cut into small biscuits.

Place them in a pan, wet the tops only with hot milk or water, and bake in a hot oven about 20 minutes.

The secret of success is a slack dough, quick mixing, and little handling.

(Continued in next issue)

Sick headache is caused by a disordered stomach. Take Chamberlain's Tablets and correct that and the headaches will disappear. For sale by all dealers.

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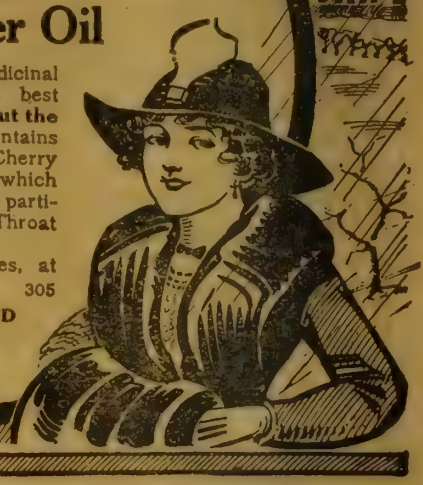

Simple Treatment for Childish Ailments.

VOMITING.

Withhold food until the stomach becomes quiet—from twelve to twenty-four hours in severe cases. Nature is trying her best to effect a cure by emptying the stomach. Give water that has been boiled and cooled If the stomach is sour, lime water is efficacious. The white of an egg stirred—not beaten—in a glass of water may be given in teaspoonful doses; the stomach seldom rejects it. One-tenth grain of calomel should be given every hour until ten doses are administered, followed by a dose of castor oil.

Nothing allays nausea and vomiting so quickly as mustard applied to the stomach. A poultice for an infant is made by moistening two parts of flour wth one of ground mustard; egg albumen incorporated with it lessens the tendency to blister. It is also well to anoint the site of application with vaseline.

Caution.—Do not moisten the mustard with boiling water. It destroys the essential oil upon which the mustard depends. Neither should the poultice be heated after it is prepared.

COLIC.

Search for the cause; if found, remove it. Abdominal bands should not be tight; an infant breaths with its abdomen. Avoid remedies containing habit-forming drugs; baqies need little medicine. Peppermint water, asafetida and ipecac are uaually harmless and may do good; they expel gas from the stomach or cause slight nausea with resulting relaxation. A little weak camphor water is also a good remedy. Teas create gas on the stomach and derange digestion; the same is true of syrup of pepsin and other syrupy agencies.

Whisky relieves colic by lulling the little one into a stupor, but its use can seldom be sanctioned. The writer observed one case in which a babe was given whisky nightly for some time, the result being a diminutive tippling habit which was in itself about as alarming as the original ailment. The moral side of this matter is obvious.

DIARRHOEA.

This often depends upon retained fecal matter in the bowels. If the diarrhoea is persistent, clear out the bowels with an enema of warm water and follow this by one of cool water to which starch has been added. Regulate the secretions with small doses of calomel, followed by castor oil or syrup of rhubarb. Cool barley water helps to control diarrhoea. If the babe is bottle-fed the milk should for a while be pasteurized—which is heating to 167 degrees. A homely substitute for this consists in dipping the bottles of milk in boiling water for a few minutes, then cooling. Give no starchy or indigestible food. A young child has feeble capacity for digesting gruels of oatmeal, barley, arrowroot and other farinaceous articles. These are for the child of eight or ten months.

FAULTY DIGESTION.

Indigestion and poor assimilation cause most of the ills mentioned. They all have their origin either in improper feeding or inherent weakness in the child. Mothers are prone to

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Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

err in feeding too often; the stomach must have intervals of rest. A babe three months old should not be fed oftener than every three hours. If cow's milk is used, see that it is fresh and pure in quality; a certified milk is to be preferred. Dilute the milk to a point where it is retained and assimilated. When a babe throws up, the milk is too strong for its digestion or it is getting too much of it.

Tablets for making lime water of official strength may be purchased at the drug store. Use freely in the milk, but not enough to give it an ill taste or flavor. For sweetening the milk cane sugar is not so good as milk sugar. The latter is a fine white powder which can be purchased in pound cartons.

Note.—Milk sugar being only one-half as strong as common sugar, it must be used in double quantity. It makes the milk more easily digested.

Give the baby plenty of cool water. It requires a drink almost as often as an adult. It is often well to give water just before feeding, and it will not overfeed for the purpose of satisfying thirst. Begin early and teach the babe to drink water from a nursing bottle, and from a cup as he grows older. Give him all the pure air and sunshine possible and avoid jolting and rocking.—W. T. Marrs, M. D.

Is This True ?

Ell Wheeler Wilcox says:

The successful home maker must possess certain old-fashioned virtues and put them into daily practice.

She must be orderly in her mind and her habits first of all, and she must have high ideals of womanhood, of motherhood, of wifehood, and of the importance of the home as an institution on which the security of the nation rests.

She must realize the necessity to make and keep her home and herself attractive and to live a life that is above reproach, while she shines as a centre for bright, intelligent, clean social life. It is astonishing and disappointing to see how few American women live up to these requirements.

It is indeed to be hoped that with woman's larger outlook and by her business education she will develop into the real homemaker—the real home keeper. And that the home—the absolutely successful home, the home which is an inspiration to all who enter it, a haven of peace and beauty and comfort to all its inmates, the home where wholesome and sane pleasures abound, the home with no skeletons in the closet, and no discords within its walls will be the rule, not the exception as it is today.—Exchange.

Care of Lamps.

A manufacturer of lamps has the following to say in regard to their care:

"The reason lamps smell and give poor light is because they are not kept clean, or because the wick is poor or clogged by having been used too long or else the chimney is wrong

" A lamp should be cleaned, trimmed and filled daily. Trim by rubbing the char off the wick. This leaves it even. Wick should never be cut, because it is impossible to do it evenly. Keep the tiny holes in the floor of the burner clear for draft.

Lamps should never be quite full, because the oil expands with heat, and if there is no escape then an explosionis liable to take place.

"Boil the burner in strong soda water once a month and empty the fount whenever any sediment appears.

Never open a lamp while hot. Some persons even need to be told never to fill a lighted lamp. There is explosive vapor in a hot lamp.

"Light a lamp with the wick turned low and raise gradually. Some gas is very quickly generated if the wick is turned high at once, and there is, too, more danger of the chimney breaking.

"When a lamp has stood long enough to get hot it should be moved with very great care."

BABY'S OWN SOAP

Best for Baby *Best for You*

THE particles of pure vegetable oil which are rubbed into the open pores of the skin with the creamy fragrant lather of Baby's Own Soap renew the life of the skin—help nature along. It assures a soft, white, healthy skin and its use delights both young and old. Baby's Own is for sale almost everywhere.

1-12

ALBERT SOAPS LIMITED, MFRS., MONTREAL.

Cleaning Bottles and Decanters.

Bottles, decanters, etc., may be cleaned by dropping crushed egg shells into them with soapy water. This is a safe method. Potato peel, also bits of paper, may be used in the same way. For coarse glassware or for very bad stains a handful of tacks or shot will be effective. If the stains refuse to budge, then a weak solution of commercial muriatic acid will remove them. The vessel should be thoroughly rinsed after cleaning with the acid.

When decanters or glass bottles have a musty odor they might be sweetened by mixing a little powered charcoal with warm water, using it for thoroughly rinsing.

HAD DYSPEPSIA FOR TEN YEARS

COULD NOT KEEP ANYTHING ON HER STOMACH

Dyspepsia is caused by poor digestion, and to get rid of this terrible affliction, it is necessary to place the stomach in a good condition. For this purpose Burdock Blood Bitters has no equal.

Mrs. Norman A. MacLeod, Port Bevis, N.S., writes:—"For the last ten years I suffered dreadfully with dyspepsia, and I could not keep anything on my stomach. I tried several kinds of medicines, but none of them seemed to do me any good. At last a friend advised me to try Burdock Blood Bitters, which I did, and after using five bottles I was completely cured. I would advise any one troubled with stomach trouble to use B.B.B. I cannot recommend it too highly."

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The Relation of Footpounds to Brake Horse Power.

Brake Horse Power is the term usually applied to the power an engine or motor has lift to deliver to the purpose of driving other machinery, after driving itself. Therefore an engine must first produce sufficient energy to drive itself, before it can be relied upon to supply energy for the purpose of driving other machinery.

Whatever energy a motor is capable of developing over and above that which is required to hrive itself represents the brake horse power. But how is brake horse power measured? Nearly every gas engine reader is familiar with the devices or contrivances necessary to make a brake test, and that by means of friction applied to the fly-wheel or belt pulley the engine is held down to a full load.

The means of measuring this friction necessary to absorb all the surplus energy of the motor is based upon foot pounds, the established unit of measuring applied energy. Now what is a foot pound? It requires a certain standard of force to lift a pound weight a foot high in one minute, then to lift ten feet high would require ten times the standard unit. This force or energy necessary to raise the one pound weight one foot high in one minute is called a foot pound. And the force of energy necessary to raise the weight ten feet high is designated ten foot pounds, or a weight of ten pounds one foot high in one minute would constitute ten foot pounds.

Hence in establishing the unit foot pound, three factors, energy, time and distance are considered. And to establish mechanical horse power it was estimated and established that the avreage horse strength is equal to 33,000 foot pounds. Consequently 33,000 foot pounds is accepted as representing one mechanical horse power.

An explosive impulse of gas in the cylinder behind the piston imparts to it a certain amount of energy, which is converted through the connecting rod and crank shaft into a rotary motion of the fly wheel. It is in this form of rotary force that we are called upon to measure its power for work. And the simplest form of brake or friction device that we can contrive is to fasten one end of a rope to a spring weighing scale fastened to the floor and then make one full turn of the rope in the direction the fly wheel turns around the face of the fly wheel and enough more to let the other end of the rope hang near the floor on the opposite side of the wheel from the spring scales.

If the motor is now started and after running up to its normal speed a sufficient pull is made on the loose end of the rope to tighten it onto the face of the flywheel until there is sufficient friction to put the engine under full load, the scale will register the rotary frictional effort in pounds, as well as the pull on the other end of the rope. The torque registered on the scales less the pull on the end of the rope represents the force absorbed by the friction of the rope on the fly wheel force and is energy that moves; the distance of the circumference of the wheel at each revolution. Consequently if the friction torque on the scale registers 30 pounds, and the cirrumference of the fly wheel is 9 feet, then the engine is doing the work of lifting 30 pounds 9 feet high at every revolution of its wheel, and if it turns 300 times in a minute it will do the work of lifting 30 pounds 2,700 feet high in a minute. or it will be doing 2,700 times 30, which equals 81,000 foot pounds. And since 33,000 foot pounds equals 1 horse power, 81,000 foot pounds equals 2 5-11 horse power. The reader will notice all the way through this calculation that energy, distance and time are considered.

Energy is represented by the 30 pounds registered by the scales.

Distance by the 2,700 feet travelled by the rim of the fly wheel in its 300 revolutions.

Time, one minute.

We find that many persons, who are fairly well posted as to the means employed for brake test do not understand the principles they are instructed to follow in order to arrive at the power results.

In the above example the engine is not only driving itself, but it is constantly lifting, in addition, 30 pounds of the rim of its fly wheel at the rate of 2,700 feet a minute.

YOUR VITALITY CAN BE RESTORED

Strong, vital, healthy manhood fascinates all who come within its influence. As true as you are a living, breathing human being, I can restore your VITAL strength; there is not a shadow of a doubt as to what I can thus do. BUT there is a single condition, one restriction I put, a certain solemn promise I exact from you before you can exact a promise from me; namely: you must unconditionally agree now at once and forever to discontinue all dissipation; with this out of the way I will do the rest. Remember what I say; no matter what your present condition; no matter what has happened in the past, just forget it and put yourself in my hands; everything will come out as you wish it. I use no drugs, no lotions, no medicines; I place no foolish restrictions upon you; just lead a natural life, get all the enjoyment you possibly can, but cease dissipation; always remember that. I can then restore your vital energy: I can take you out of the half-man class and put you in the spotlight of full, healthy, contented vigor; I can make you feel young again and keep you feeling young to a ripe old age, because I drive into your system the one thing which keeps the whole organism in balance, namely, VITALITY. My HEALTH BELT with suspensory attachment is the greatest single self-treatment remedy or VITALITY RESTORATIVE that the world has ever known, or probably ever will know. It is worn comfortably about the waist all night and every night for two or three months. Thus while you are sleeping it sends a great, soft, potent, life-giving current of VITAL FORCE into your blood, your nerves and your organs. There is not a moment's wait. It helps you immediately; it commences from the first time worn, to show you the sunshine of new energy; it takes the kink out of your back in one night; it makes a man of you after you have given up in despair, simply because it supplies you with VITAL POWER—which means health. Just stop to think. You have the same organs, nerves and fibre, the same make-up exactly that healthy, vigorous men possess, the only difference being you are under tone; you need a foundation of NEW VITAL RESERVE, and it is this I give you. There is no reason why you should not be as strong, healthy and vigorous as the best fullest-blooded man of your acquaintance. The matter is easy if you do your part. Never mind about buying a HEALTH BELT as yet; first get in communication with me; read over my booklet, and if you want to do so tell me your physical ailments that I may advise you; then a little later we can arrange in some way for you to try my HEALTH BELT. But first fill in the coupon and get the book free, or call at my office. My HEALTH BELT also cures Rheumatism, Kidney, Liver and Stomach disorders.

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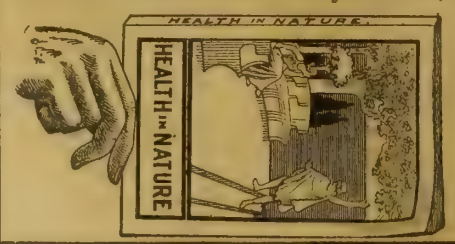

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J. W. Copeland, of Dayton, Ohio, purchased a bottle of Chamberlain's Cough Remedy for his boy who had a cold, and before the bottle was all used the boy's cold was gone. Is it not better than to pay a five dollar doctor's bill? For sale by all dealers.

Actinomycesis or Hard Tongue in Cattle.

This disease is met with in most parts of Great Britain under such popular names as Hard Tongue, Wooden Tongue, Wens, Lumpy Jaw, Big Head, &c. In this country cattle are principally attacked, but the disease may also occur in pigs, sheep, horses or man. According to a leaflet issued by the Board of Agriculture and Fisheries Actinomycosis runs a chronic course and is characterized by the formation of tumors in various parts of the animal body. These tumors interfere with the functions of the organs in which they are situated and usually burst or ulcerate. If untreated the animal steadily wastes away, especially if the tongue be affected, and it eventually dies.

The disease is caused by the entrance into the animal, and the propagation in its tissues, of the parasitic fungus Actinomyces. This fungus grows on grasses and most cereals, particularly on barley, flourishing luxuriantly on damp rich soils. Injuries to the skin and to the mucous membranes of the mouth and tongue, caused by hard straws or barley awns as well as the teething troubles of young animals, predispose cattle to this disease by favoring the entrance of the Actinomyces to the tissues.

The disease is usually local or confined to one organ of the body, and the symptoms are largely determined by the part attacked. Nodules of varying sizes often form on the skin of the head and neck, at times being firm to the touch, while sometimes the skin is broken and the nodules are granular, soft, yellowish in colour, and covered by a crust. The skin covering the lips, being very liable to injury, is frequently attacked, the lips then becoming hard and enlarged to such an extent that food is gathered with difficulty. The tongue, however, is the most common seat of the disease. The presence of the Actinomyces in this organ excites a growth of fibrous tissues, causing the tongue to become hard and immobile, hence the name "wooden tongue." This gives rise to a constant dribbling of saliva and quidding of the food, which causes the mouth to be examined, The hardness and painfulness of the tongue and the presence of ulcers at its base, render this form of the disease easy of diagnosis. Tumours can sometimes be felt under the skin in the muscels of the cheeks. The jaw bones, usually the lower, may be invaded by the Actinomyces from the soft tissues of the mouth and possibly through the sackets of the teeth. Great swelling of the attacked bone is noticed, and the head sometimes swells to a great size. Pus collects in cavities in the bone, eventually breaking through the skin, and forming wounds which constantly discharge. In this condition the jaw is easily fractured and the teeth drop out. A very common form is met with when the glands of the neck are affected—a swelling or "wen" appears between the angles of the jaw, which steadily increases in size until breathing and swallowing are interfered with. These tumours often burst and discharge a characteristic, granular yellow pus. The presence of tumours (polypi) attached to the musous membrane of the mouth and the back of the throat can often be recognized by the snoring grunt which accompanies breathing, and by the difficulty in swallowing. Actinomyces also occurs in the udder, and in the spermatic cord of castrated animals, giving rise in each case to fibrous enlargement of the organs.

TREATMENT.

In districts where the Actinomyces flourishes it is almost impossible to prevent animals being attacked. 1. Drainage of land is said to have diminished the number of cases by checking the growth of the fungus. 2 If barley straw must be fed to stock, it should not be given to young animals when changing their teeth, as the fungus then has an excellent opportunity of then entering the tissues through the gums. 3. Although prevention is difficult, the disease responds to treatment. Whenever possible, the tumours caused by the disease should be removed by a veterinary surgeon. When their position renders an operation impossible, medicinal treatment will generally check or cure the disease. Treatment should only be attempted by a skilled surgeon, as the tumours have usually to be removed from the region of the head and throat, while the success of the medicinal treatment depends on giving iodide of potassium under expert supervision until symptoms of poisoning by this drug appear, when its administration must immediately be stopped. Affected animals should be isolated during treatment. 4. No evidence is forthcoming that the disease has ever been established on a hitherto clean farm by the importation of infected animals; nevertheless, it is not advisable to introduce a diseased animal among a clean herd. 5. Farmers who have cattle suffering from this disease should consult a veterinary surgeon.

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This winter overcoat will excite the envy of your friends who have paid three times as much.

The fleece lining is a new feature—will keep you warm in the coldest weather. The coat is double-breasted style, with belt behind. In fact, this garment is a chance to Canadians to get a coat to their own requirements at the English price, from a leading London firm of tailors—and London style leads the world.

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The "Regoette" Raincoat is right up to date in cut, style and finish. Light in weight, it may be carried over the arm without inconvenience, whilst as a walking coat in cool weather it is just right. Easy fitting and good looking. The excellence of both material and tailoring is apparent at once to discriminating men. It carries an absolute guarantee to keep out the water or money refunded.

This is a smart, dressy raincoat, of which thousands are being worn by well-dressed men in England—men who are notoriously hard to please in the matter of clothes.

(American or English cut.)

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Have your garments made to your measure. Maintain individuality in your dress.

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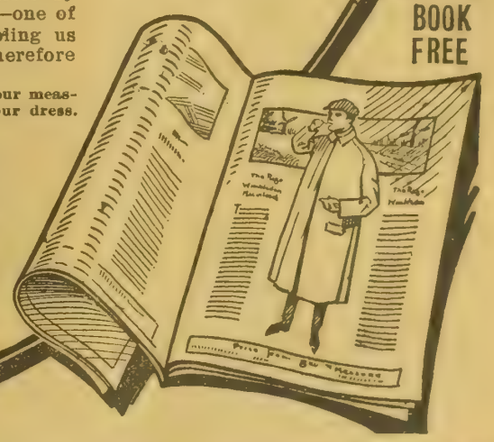

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THE REGO CLOTHIERS, LIMITED,
122 Cheapside, London, E.C.

P. E. I. October Circular.

The weather continues rainy and cold. The longest period of fine weather during the month was from Sept. 24th, to 27th, inclusive.

Harvest is not yet complete. In the lower lying sections there is still a lot to cut and only about half is harvested. Of the total grain crop about 10 per cent. is yet to save, 10 per cent. has been, or will be cut green and will be used for cattle feed. The wheat that is being threshed is turning out poorly; the oats splendidly, frequently yielding over a bushel to the stock. Where properly saved the quality is excellent.

Potato digging has been begun, but it is not yet general. The crop will probably be about 70 per cent. average. They are generally reported as being small and numerous. Some correspondents report dry rot.

The turnip crop will be much below average.

Apples are a fair crop and the quality is good. Plums have been very abundant and are now bringing 5 cts. a quart.

The milk supply at the present time is much better than for this month last year. Eggs are plentiful.

The following are the market prices for Oct. 10 th 1912.

Oats, Black	44 cts. per bus.
Oats, White	42 cts. per bus.
Straw	$7.00 per ton.
Eggs	25 cts. per doz.
Chickens	90 cts per pr.
Lambs	5 cts. per lb.
Potatoes	25 cts. per bus.
Butter	22 cts per lb.
Hay	$13.50 per ton.

The cheapest, because the most easily prepared, moist food for poultry is sprouted grain. Wheat, barley or oats may be sprouted to furnish green food for fowls. Select a sheltered place, pour out the grain, dampen with water, then cover lightly with sand or good soil. In a few days it will be sprouted, when it should be fed to the fowls. Where one has no time to plant a green crop this is a good method of supplanting the fowls with green food occasionally.—W. M. Phillips.

Had Indigestion, Sour Stomach and Severe Headaches

FOR OVER A YEAR

Mr. W. Moore, 132 Lisgar St., Toronto, Ont., writes:—"After having been troubled with indigestion, sour stomach, and severe headaches for over a year, I was induced to try Milburn's Laxa-Liver Pills. One vial greatly benefitted my case, and three vials completely cured me. I can heartily recommend them to any one suffering from stomach or liver trouble."

Milburn's Laxa-Liver Pills stimulate the sluggish liver, clean the coated tongue, and remove all waste and poisonous matter from the system.

Price, 25 cents per vial, or 5 vials for $1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

MAXWELL'S
HIGH SPEED CHAMPION

is in a class by itself—the easiest running, the most substantially built, the most satisfactory washer, ever invented.

Only washer worked with crank handle at side as well as top lever—and the only one where the whole top opens up.

Ask your dealer to show you the "Champion" Washer.

"Favorite" Churn is the world's best churn. Write for catalogue.

DAVID MAXWELL & SONS
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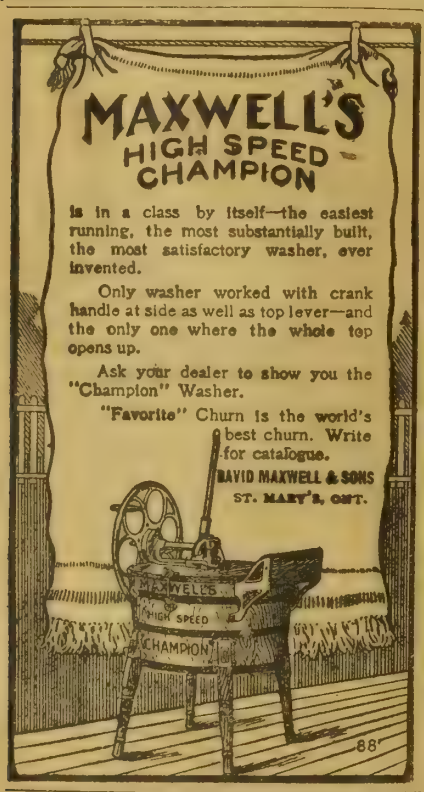


BUILT low, especially for farm use, a T-A Handy Farm wagon saves much hard work. It is easier to load and unload, and will haul bigger loads without tiring horses, more than a small load.

T-A Handy Farm Wagons and Wide Tire Steel Wheels

T-A Wide-Tire Steel Wheels are lighter, stronger, cheaper, and better in every way than ordinary wooden wheels. Make your old wagons new by fitting them up with these superb wheels.

Our free booklet (which, please ask for) tells how you can make farm work easier and more profitable.

TUDHOPE-ANDERSON CO. Limited, Orillia, Ont.

If You Have Live Stock For Sale Advertise it in the Maritime Farmer.

Facts About Tubercolosis.

It is an extraordinary fact that a cow may present a perfectly healthy appearance, thrive well upon her feed and give a good flow of milk, and yet be in a badly diseased state with tuberculosis. This is very clearly brought out in a pamphlet prepared by the International Commission on the Control of Bovine Tuberculosis. Photographs are shown af fine looking animals that are known to have been diseased for years without cough and otherwise apparently healthy, and yet constantly passing tuberculosis germs that when consumed by hogs produced the disease. Such animals are a constant menace not only to the health of the herds to which they belong, but also to the people who use their milk, or are otherwise associated with them. Apart from the health standpoint, the disease causes the loss of millions of dollars annually in cattle and hogs besides materially decreasing the food supply of the country. The disease is commoner in some regions than in others, in some districts it being no uncommon thing to find as many as 70 to 80 per cent. of the cows in a herd diseased. In order to lay these and many other important facts regarding the disease before cattle raisers and others interested in live stock, a large issue of the pamphlet known as the Tuberculosis Primer was printed by direction of the Honourable, the Minister of Agriculture. Those who have not already received a copy may do so by applying to the Publications Branch of the Department of Agriculture at Ottawa.

New Professor for Acadia University.

The following new Professors have been appointed at Acadia University:

Mr. Ralph P. Clarkson has been appointed to the Ivan Curry Professorship of Engineering. Mr. Clarkson is a graduate of Worcester Polytechnic Institute having taken his work in Electrical Engineering; he also included most of the Mechanical subjects. Besides practical work he has taught one year in the University of Vermont and left there to accept an important position in the Patent Office in Washington. There Mr. Clarkson has been employed as a government expert in the examination of applications for United States patents in Engineering subjects passing judgment on the operativeness, usefulness and novelty of machines submitted. Mr. Clarkson will take up the work in Engineering formerly done by Professor Durkee.

Harold Garnet Black has been appointed Professor of English. Mr. Black was a native of Pugwash, Cumberland County; prepared for college in Sackville Academy anh graduated from Mt. Allison in 1907 when he was valedictorian of his class. The following year he taught in the Mt. Allison Ladies' College and since then has been doing graduate work in English at Harvard. He has received his M. A. from the latter Institution and has almost completed his residence for his Doctor of Philosophy requirements. Mr. Black comes to Acadia with the highest recommendations and the authorities feel assured of his success.

Slaughtering Hogs.

A pen of hogs ready for killing should not be fed within twelve to twenty-four hours previous to slaughtering, but should have a chance to clean and cool out. On many large farms where from thirty to fifty hogs are to be killed, the work begins about 2 o'clock in the morning. The first preparations are made the day before. A sufficient amount of wood is on hand to keep the great pot boiling and all other needed paraphernalia is got ready. A whiskey or

Big Ben

Big Ben ends the over-sleeping of Farm Hands

Will you spend Two-Fifty to insure yourself *for years* against that everlasting bother—*getting the farm hands in the fields on time?* Will you spend it to insure *a full days work* from each man six days out of every seven.

Then, spend it for Big Ben. He's doing it on thousands of farms every day right now. More than a million people have spent it for Big Ben to help them get to work on time. Don't you want to join the Big Ben Army. Don't you want your farm hands to be members?

Alarms are sold at $1.00 and $1.50 less than Big Ben costs but such alarms are merely things to *wake up* by, not to wake *on time* with. They enable you to make a *guess* at the right time, that's all.

Big Ben enables you to *know* the right time. *When he* wakes you he does it at the time you *want*, the *right time.*

Then, cheap alarms *may* last a year but Big Ben *actually* lasts for years *and* years. He's built of *steel.* He's a handsome *clock* plus a punctual alarm. You can use him all day long in any room for he fits bed room, parlor, dining room or hall.

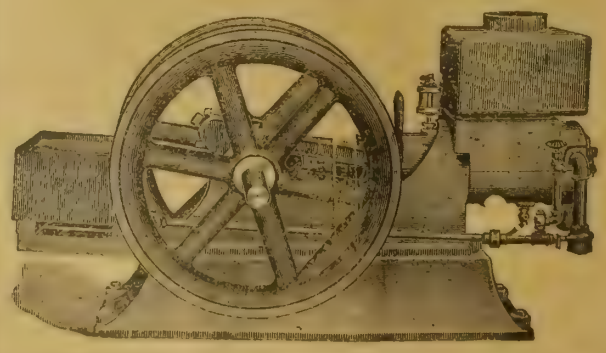
The city man can get the right time of his neighbor or by picking up a telephone but that's not so convenient for *you.* You need a reliable timekeeper always in the house. That's why you need Big Ben more than you need a plain "alarm."

Big Ben rings just when you want and either way you want *five straight minutes* or *every half minute during ten minutes unless* you flag him off. His big keys make winding easy and his great open face and large hands tell the time plainly across the largest rooms.

Big Ben is sold by 5,000 Canadain dealers. His price is $3.00 anywhere.—If you cannot find him at your dealer's, a money order sent to his designers, *Westclox, La Salle, Illinois,* will bring him to you duty charges paid. Put him right now on your Xmas list.

AN HOUR'S WORK ONE CENT

That is the average cost per horse power per hour when doing the work with



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vinegar barrel is the best to scald the hogs in. Care should be taken to ascertain that the temperature of the water is exactly right before the hog is dipped; otherwise the hair will be set, and it will be a hard matter to have the carcass well cleaned.

The hair from feet and ears and head should be got off as clean as possible as soon as the hog is dipped, in order to avoid so much scraping with a knife afterward. After the hog has been scraped clean, hang him up to cool and insert a corncob or chip in his mouth.

If the hog pen is far from the house haul the carcasses up in wagons or carts, putting clean, fresh straw in the bottom. It is best not to pile the hogs in indiscriminately on top of each other, as the carcasses will get soiled from the blood that drips from their mouths or from the gashes in their throats where they were stuck. Each carcass should be thoroughly rinsed off with cold water after being scraped and then hung up.

Be most careful in opening the carcasses not to cut into the entrails. Whoever has charge of the work should be familiar with it and have a steady hand. Let the entrails drop into a clean tub and remove the liver and heart. Drench the abdominal cavity, now emptied, with one or more buckets of cold water; then leave out of doors to cool out well.

Take down the carcass at night and place on the floor of the smoke-house, seeing that the floor has been properly cleaned. When all the animal heat has left it, which will be by the following morning if weather conditions are right, begin the work of cutting up and salting down.—Sylvanus Van Aken.

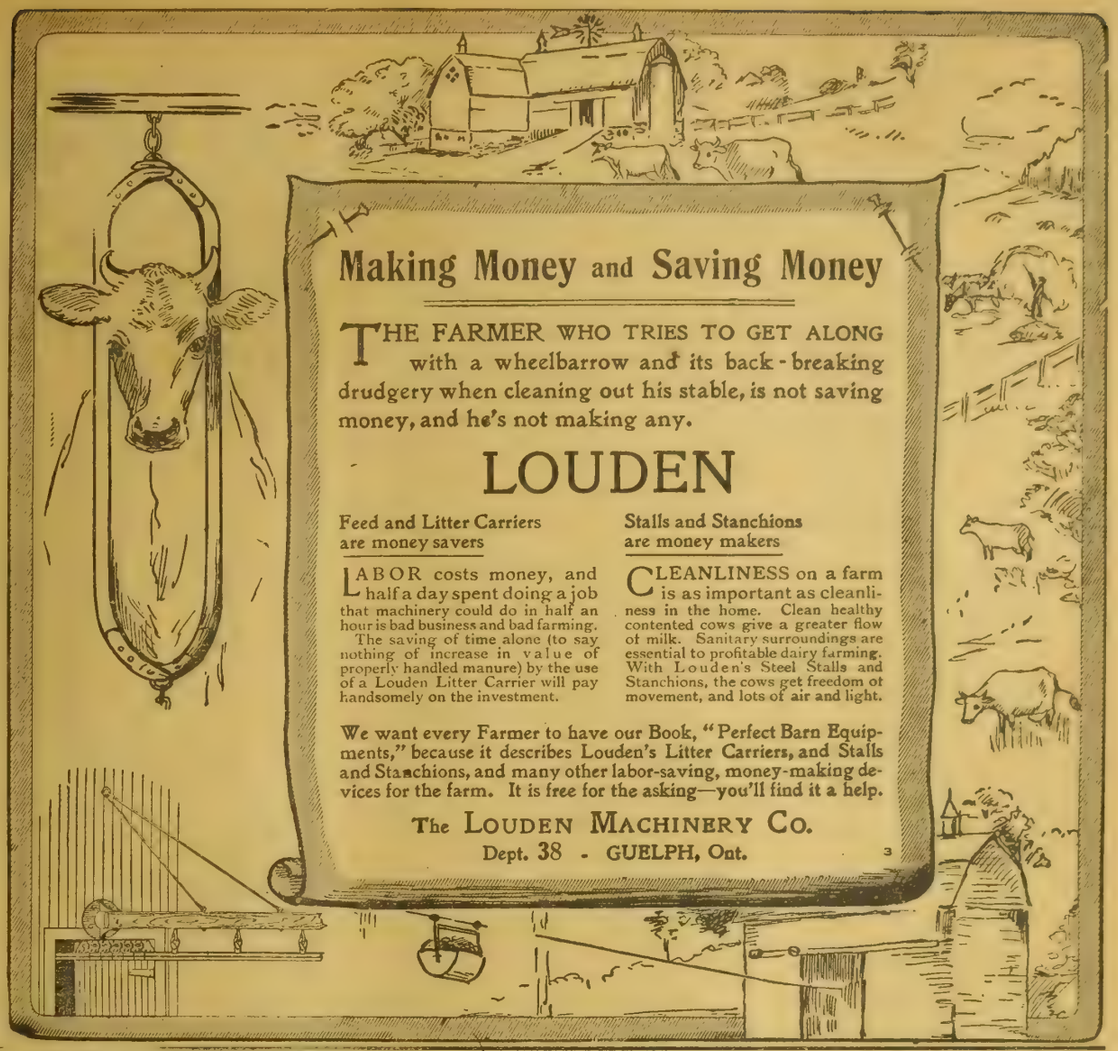
Improving a Small Apiary.

The man who has only a few bees usually lets them take care of themselves, especially in regard to their queens. Certain colonies, with apparently no better show than the rest, will produce more than others in the yard. Now that particular colony should be the one to raise queens from for all your bees.

If you desire only a few queens all that is necessary is to search out the queen of your choice colony and set her one side on a frame of brood, leaving the bees with the rest of the brood on the old stand. After 10 days go to your hive and take out the brood with the queen cells, which will by this time be capped over, and divide it up into as many nuclei as it will furnish one cell each for. As soon as the queens are hatched destroy the queens in the colonies you wish to requeen, and introduce these young queens.

If you have no introducing cages, make one by wrapping a strip of mosquito screen around the finger and tie with a couple of the loose strands. Pack one end with crushed comb, put the queen in and then pack the other in the same way. Put this cage with the queen in your hive at the same time you take out the old queen, and by the time the bees have gnawed through the comb packing the new queen will have acquired the hive odor, and will be accepted without any trouble.—Leon C. Wheeler, Mecosta Co., Mich.

When you have a cold you want the best medicine obtainable so as to cure it with as little delay as possible, Here is a druggist's opinion. "I have sold Chamberlain's Cough Remedy for fifteen years," says Eno Lollar, of Saratoga, Ind., "and consider it the best on the market." For sale by all dealers.



Making Money and Saving Money

THE FARMER WHO TRIES TO GET ALONG with a wheelbarrow and its back-breaking drudgery when cleaning out his stable, is not saving money, and he's not making any.

LOUDEN

Feed and Litter Carriers are money savers

LABOR costs money, and half a day spent doing a job that machinery could do in half an hour is bad business and bad farming. The saving of time alone (to say nothing of increase in value of properly handled manure) by the use of a Louden Litter Carrier will pay handsomely on the investment.

Stalls and Stanchions are money makers

CLEANLINESS on a farm is as important as cleanliness in the home. Clean healthy contented cows give a greater flow of milk. Sanitary surroundings are essential to profitable dairy farming. With Louden's Steel Stalls and Stanchions, the cows get freedom of movement, and lots of air and light.

We want every Farmer to have our Book, "Perfect Barn Equipments," because it describes Louden's Litter Carriers, and Stalls and Stanchions, and many other labor-saving, money-making devices for the farm. It is free for the asking—you'll find it a help.

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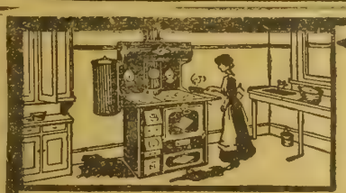

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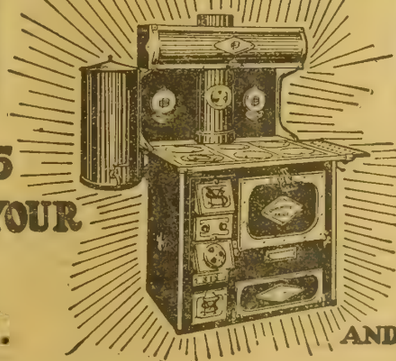

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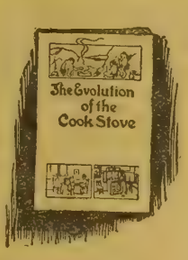
$41.00 TO $49.00 AND WE PAY THE FREIGHT

You Can Buy "DOMINION PRIDE" RANGE At Factory Price

Direct From The Largest Malleable Range Works in Canada

IF you want to save from $25 to $30, and at the same time get the most satisfactory kitchen range made, write for our Catalogue and look into the merits of the "DOMINION PRIDE," at from $41 to $49.

If we sold you identically the same range in the usual way, through a dealer, you would have to pay from $69 to $78 for it. You would be paying two extra profits—to wholesaler and retailer—which would add $25 to $30 to the cost of your range, but absolutely nothing to its value.



"The Evolution of the Cook Stove"

TELLS about cooking from the time the Cave Dwellers dropped hot stones into the pot to boil it. It also tells all about "Dominion Pride" Ranges. Whether you need a Range just now or not you will enjoy reading this book.

Write for Free Copy.

Besides costing much less than other ranges in its class, the "DOMINION PRIDE" is much more satisfactory. It is made of tough, strong, malleable iron and the best blue polished steel—materials which will not warp, crack or break.

The polished steel does not need blacking—simply rub it over with a cloth. With its cold rolled steel plate oven—sectional iron fire-box lining, with air chambers—and double-walled flues lined with asbestos—the "DOMINION PRIDE" is the most economical range you can buy. Actual tests have proved that it saves over 30% of fuel, burning either wood or coal.

WE PAY THE FREIGHT

A "DOMINION PRIDE" Range, with high closet shelf and elevated tank or flush reservoir, with zinc sheet to go under range, 8 sections blue polished steel pipe and two elbows, will be delivered to any station in Ontario, Quebec or the Maritime Provinces for $41, or to any station in the four Western Provinces for $49—$5 to be sent with order and balance to be paid when the Range is delivered at your station. If not convenient to pay cash we will arrange to accept your note.

Canada Malleable & Steel Range Mfg. Co., Limited, Oshawa, Ont.

When writing it will be a distinct favor to us if you will mention this paper. 7

Root Culture.

In a paper regd befose the Senate Committee on Agriculture and Forestry, Mr. John Fixter, Farm Superintendent at Macdonald College, Quebec, takes the ground that dairymen and beef producers find that when roots are fed animals keep in better condition, and the flow of milk and the production of flesh increase with lessened cost. Poultry keepers and hog raisers find that when there is no grass roots form the best and cheapest substitute. There is nothing fed to animals that is more relished. Roots appear to act as a tonic and help to make all dry feed palatable. Mr. Fixter points out that the average yield of roots over Canada is 402.36 bushels per acre and that the yield secured at the Mcdonald College farm was more than 1000 bushels per acre. He goes on to describe how large yields may be secured in every province of the Dominion and then tells how to successfully harvest and store the crop. This paper, which is issued in pamphlet form for free distribution by the Publications Branch of the Department of Agriculture, Ottawa, concludes by saying that the greatest success in growing roots will be obtained when the following are observed: A systematic rotation of crops; roots to follow a fresh clover sod; manure once in the rotation; thorough cultivation in preparation for the crop and after the roots are sown.

Small Fruit Culture.

The failure of many who occupy land to grow an abundance of small fruits, at least for their own use, is due to a mistaken idea that it requires too much time to look after a garden. This is the view taken by Mr. W. T. Macoun, the Dominion Horticulturist, and expressed in a paper read by him last winter before the Senate Committee on Agriculture and Forestry. This paper, which constitutes a pamphlet of thirty-five pages, is an exhaustive treatise, expressed in the plainest terms, on the culture of small fruits The fruits dealt with are the strawberry, raspberry, blackberry, gooseberry, and the several classes of currants. Besides giving full instructions for planting and cultivation, notes are given on the relative merits of varities

This pamphlet contains an interesting table on the cost of growing and the returns from an acre of strawberries. At a selling value of five cents per box, a net profit of eighty-four dollars is shown. A section is devoted to the preparation and application of insecticides and fungicides that are useful in fruit growing. Having the information of this paper to guide him, there is no good reason why every farmer should not have a productive fruit garden. A large edition has been printed to be sent free to all who apply to the Publications Branch, Department of Agriculture, Ottawa.

Authentic Yearly Milking Records.

According to Report No. 4 of the Record of Performance for Pure Bred Dairy Cattle just issued by the Live Stock Branch of the Federal Department of Agriculture, nearly 500 cows in Canadian herds have won, on performance of milk production and regular breeding, certificates of Record of performance. This has been accomplished within the six years that the tests have been in progress.

In an introductory paragraph this report points out that while this work is of great benefit to the raisers of pure bred stock, it has an even wider influence in furnishing to the owners of grade herds reliable and valuable information to govern the selection of bulls to place at the head of their herds. The chief aim of this work is stated to be to develop and perpetuate high producing strains of dairy stock under normal conditions of management and feeding.

In addition to the rules and regulations, standards for registration, etc., this report furnishes a complete index of the owners of qualified together with the record, age, etc., of each successful animal. Anticipating a keen demand from breeders and owners of both pure bred and grade herds of dairy cattle, the Hon. Martin Burrell, Minister of Agriculture, has authorized the printing of a large edition of this report which is distributed by the Publications Branch of the Department of Agriculture, Ottawa.

Fruit Growing in the Gulf Garden.

(Continued from page 47)

The hardier varieties of trees make very rapid growth, and pests are not as numerous or as persistent as in the neighboring provinces. Dr. Bryce, one of the members of the Technical Educational Commission, who visited this Province in July, 1909, said of a young orchard owned by Mr. John Annear, of Lower Montague, that he had not seen one more promising in his travels, and a Professor of McDonald College said of this same orchard that it had two years' advantage in growth over the College orchard set out the same year.

Plums do exceptionally well. Trees from eight to ten years should yield about five bushels in a favorable season and net the owner from nine to twelve dollars a year. The only difficulty met with in the growing of plums is the black knot, but those who spray regularly do not find it serious.

Tourists tell us that there is no other place in America where strawberries are grown to the same perfection as in Prince Edward Island. They are large, firm and of excellent flavor. The average yield is 8,000 boxes to the acre, and some growers very seldom take less than 10,000. They go on the market during the month of July and do not meet competition with other Provinces. The producer generally nets from eight to ten cents per box. The growing of Bush Fruits has been much neglected. There are a few plantations of gooseberries and currants and they have proved very profitable.

For the last two years, one-half acre yielded upwards of one hundred bushels, wnich netted the owner $250.-00. There is room for a great expansion of berry growing.

The difficulty in the way of development of fruit-growing in this province has been the marketing. Three short hauls mean heavy charges, too much handling and much delay. The Car Ferry, will overcome this and fruit-growing will become a most important industry. Suitable land can be purchased at from $20 to $50 an acre, and its location, soil and climate combine to produce the conditions essential to the growth of the highest quality of fruits and will ultimately make "the Garden Province of Canada."—Theodore Ross, P. E. I., Secretary for Agriculture in Farmers' Magazine.

Canadian Seed Growers' Association.

The Eighth Annual Report of the Canadian Seed Growers' Association which is now being distributed by the Publications Branch of the Dominion Department of Agriculture, Ottawa, is replete with matters of interest not only to those concerned in the production of high class seed but to all who are interested in rural progress generally. In addition to the report itself there are included several addresses by such prominent authorities as the Hon. Martin Burrell, Dr. Jas. W. Robertson, Prof. C. C. James, Prof. L. S. Klinck, J. H. Grisdale, etc. Of special interest perhaps, is the paper presented by Mr. Rufus Stimson, Agent of Agricultural Education, Boston, Mass., on "Vocational Agricultural Education for Boys and Girls." The means adopted in Massachusetts and other States of the Union in interesting the boys in farm work and in correlating the work of the school with ordinary farm work is most suggestive and should be carefully studied by all who are interested in the more efficient education of boys and girls in rural communities.

The above report may be had free of charge by applying to the Publications Branch, Department of Agriculture, Ottawa.

Let Us Help You to Get More Money Out of Your Sugar Bush

Do you know about the "Champion" Evaporator. and what it can do for you, by saving time, labor and money, and producing better sugar and syrup than you have ever had before?
Do you know that nine-tenths of prizes for maple products, at the Fall Fairs. go to users of the "Champion" Evaporators!
Do you know that no matter what size your maple grove may be, there is a "Champion" made especially for it?
Do you know that the "Champion" is the best Evaporator on the market, and that you can get one on such easy terms of payment. that you won't miss the money?
This is all true. Not because we say so, but because we can prove it, and will do so gladly if you'll give us the chance. Write us now for copy of our new illustrated catalogue free.

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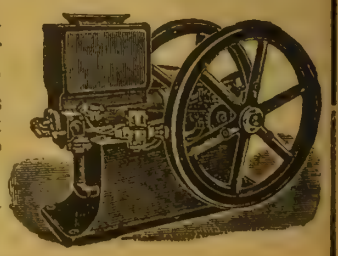
Write Quickly---"Monarchs" Make Light Work



Cut out the hard work with a "Monarch" best-made of all farm engines. Own one this winter. You can move it around easily. It will saw wood, grind chop, pulp roots, pump water—do scores of back-breaking chores. Write quickly for easy terms and full particulars. Made in 1 1-2 to 35 horse power. By acting now you save winter work wonderfully.

Send a postal for our two-color circular and price list, giving interesting details

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This Wife and Mother

Wishes to tell you FREE How She Stopped Her Husband's Drinking

By all Means Write to Her and Learn how She did it.

For over 20 years James Anderson of 193 Spadina Ave., P.B. Toronto, Canada, was a very hard drinker. His case seemed a hopeless one, but ten years ago his wife in their own little home, gave him a simple remedy which much to her delight stopped his drinking entirely.

To make sure that the remedy was responsible for this happy result she also tried it on her brother and several of her neighbors. It was successful in every case. None of them has touched a drop of intoxicating liquor since.

She now wishes everyone who has drunkenness in their homes to try this simple remedy for she feels sure that it will do as much for others as it has for her. It can be given secretly if desired, and without cost she will gladly and willingly tell you what it is. All you have to do is write her a letter asking her how she cured her husband of drinking and she will reply by return mail in a sealed envelope. As she has nothing to sell do not send her money. Simply send a letter with all confidence to Mrs. Margaret Anderson at the address given above, taking care to write your name and full address plainly. *(We earnestly advise every one of our readers who wishes to cure a dear one of drunkenness to write to this lady today. Her offer is a sincere one.)*

The Sheep Industry in the Maritime Provinces.

(Continued from page 45)

autumn. Provided the quality of the product is kept up and improved there is very little danger of a decrease in the value of the maritime lamb, even though the supply is greatly augmented. The needs of the market already looking to New Brunswick are not readily supplied, in fact there is every probability of a constant growing demand from various quarters.

The latest available figures show the sheep stock of the province to number 190,800 head, an increase of 8,276 since 1901.

Owing to the increase of values of both wool and mutton during the past few years the larmers in some sections of the province are increasing their flocks. The use of pure-bred males is also increasing. With a view to encouraging this improvement the provincial government purchased 100 pure-bred sheep in Ontario, and sold them at auction in September, 1907. They were purchased principally by agricultural societies, who resold to members, so that they were fairly well distributed throughout the province. With the improvement that is sure to result from the better breeding, the industry is destined to go forward. What is needed is better care of the flocks in the direction of providing changes of pasture in summer and a variety of suitable fodder crops for use during the housing season. With due attention to these, the wethering of the grade males, and the judicious culling of the ewes the agriculture of New Brunswick will have a valuable branch, year by year growing in importance, in the sheep raising industry.

Requisites of Feeding.

(Continued from page 49)

gluten with a relish yet do not show proper milk flow; but an equivalent of cottonseed meal or distillers' grain will cause a noticeable increased milk flow. If you would know these things, ask the cow.

A few cows are fed for maximum records regardless of cost of production, but the feeder is only rarely instructed to know this work. His daily duty is to so know his cows, their likes and dislikes as indicated in the manger and in the pail, and so employ this knowledge as to show largest economical production. He must print the dollar-sign before every cow and read the results from the pail. And no man living can do this without pencil and scales.

We keep cows for profit. Pardon a personal reference. The writer last season assumed charge of a dairy milking 250 cows that showed a gross monthly production of $5 per cow. These cows were asked pertinent questions, and 103 were sent to the block. It was a pay-or-go game and the remainder showed a gross product of $11.75 per cow per month.

In the purchase of feeds (for what farm produces all the feed that it is practicable to feed?), first consideration should always be given to that on hand; then purchase so as to improve the ration. We are told that George Washington once threw a silver dollar across the Potamac, and that no baseball idol of today can equal that feat. We are told the reason is that a dollar would go farther in Washington's time than today. By the same token, in the purchase of supplementary feeds, make yous dollars go as far as possible. In those great sections where the alfalfa plant provides nine-tenths of all the cow eats the ration is narrow, too nitrogeneous, and the addition of carbonaceous foods is advantageous, such as the grasses, small grains or corn, while in the east feeds of a highprotein content are generally indicated. Every feeder must be an experimenter. Ask the cow what she likes best, and read your answer out of the milkflow. Ask the question so carefully and accurately and so control environmental conditions that any variation will be traceable to the feeding. In the purchase of feeds, try them experimentally first, then reduce the results to purchasing power of the dollar and throw this where it will go the farthest in udder products. It is of equal importance to count the cost of those farm-grown feeds. Use the pencil—know the cost. Institute a pay-or-go system among both crops and animals.

The cow should have about six weeks of rest, during which she should be fed liberally of easily digested, cooling feeds, as grass, alfalfa, clover, silage, bran, linseed meal, etc. But we should see to it that at the period of parturition she is fat and that her bowels have been kept lax. A good dairy worker will not get too fat in six weeks on above indicated feeds. Other more heating feeds are permissable under certain conditions, but their use may be attended with some degree of risk. For a short time after freshening she should be lightly fed. As she again regains normality her feed can be increased, but kept as a narrow ration till indications show signs of losing flesh, when the ration should be widened to cause her to retain her flesh. Feed with careful, watchful attention, and if possible, do not allow full flow of milk to be obtained till 45to 60 days after freshening. Then open the valve and drive at high speed. Keep the pencil busy, the dollar-sign bright and dust off the scales.

Feeding cows is an art of high order worthy of any man's time, closest attention and highest abilities. The art can never be loaned to the printed page. Rules are easily printed, but feeding and caring rightly for cows is a chain of exceptions to definite rules, and he is a successful feeder only who quickly recognizes and interprets these and amends the conditions to his advantage. However, the following ten thoughts are offered, hopeful that they may be helpful:

1. More cows are underfed than overfed.
2. Profit comes only from food consumed in excess of bodily maintenance requirements.
3. A large producer must be a liberal consumer. A cow has no power to create substance.
4. No man can be a successful feeder who guesses at food consumed or products returned.
5. Always use as large a variety of feeds as practicable.
6. Feed every day as nearly alike as possible.
7. In changing feeds, make haste slowly, and in such a manner as will permit definite conclusions.
8. Know the cost.
9. Cobwebs in the stable are no advantage to the cow.
10. Do unto her as you would that she should do unto you.

No bed of roses is the dairyman's lot, though roses too often thrive in the pasture. His days are long and his nights are short. His weeks are full and in his years are few holidays. His profits are not large, but his revenue is regular. But with good cows and good breeding, good feed and good feeding, clean product and clean milking—there comes good health, right thoughts, right living and long life. And when Gabriel's call is sounded and the neighbors and friends follow the solemn wagon to the little churchyard, must not all respect his purpose, his industry and his useful life? Will some one please define success?—M. M. Frisbie, California.

JOHNSON'S ANODYNE LINIMENT

Used 102 Years for Internal and External Ills.

Gives speedy relief from coughs, colds, cramps, diarrhoea, muscular rheumatism, bruises, etc.

25c and 50c everywhere

I. S. JOHNSON & CO. Boston, Mass.

Parsons' Pills Aid Bilious People

Harness Accessories.

(Continued from page 52)

harness makers. I always call it a brisket-strap, which describes it fairly accurately. It is best to have a wide loop at its one end, through which the girth and belly bands are passed, while its other end should be made to buckle into the breeching-stop. There is, further, the so-called neck-strap, this consisting of a broad band which goes across the horse's neck in front of the collar, it being secured at either end to the trace slots in the harness by means of a billet and buckle. The object of this contrivance is to keep the collar off the whithers, and it is sometimes resorted to when the horse is unusually liable to get this part galled by the collar. Finally we have the overcheck bearing rein, sometimes used in connection with a so-called upper jaw bit; and a special form of kicking strap, for use with double harness, which is secured to the splinter bar, to be used when a horse kicks or in breaking a young horse to go as one of a pair.—Argus.

Prevention of Damage by Frost in Orchards.

Experiments were carried out in 1911 on two orchards of 19 and 250 trees respectively. The minimun temperature recorded during the experiments was 24.7 degrees F. in the case of the first orchard, and 22 degrees in the case of the second. Temperature was kept up by creating a thick smoke by burning oil in vessels holding about three gallons each. At the first orchard 24 "heaters" were used, and eight heatings were required, the longest lasting eight hours. The amount of oil consumed was 358 gallons, or 18.7 gallons for each tree protected. At the second orchard, 200 "heaters" were employed, and thirteen heatings were required, the longest lasting 10 hours. The amount of oil consumed was 4,125 gallons or 13.7 gallons for each three protected.

With a few exceptions the protected trees of the first orchard were heavily laden with fruit, while those in the neighboring orchard beyond the range of the smoke were barren. At the second orchard apple trees did well, but other fruit trees suffered severely from frosts before the experiments were commenced.

At the first orchard the total cost of the eight heatings was 96 cents per tree; at the second the thirteen heatings cost 70 cents per tree. Importance is attached to the provision of efficient hedges around the orchard to maintain the pall of smoke during a strong wind, or to ensure an economical heating in calm weather.—Journal Board of Agriculture.

RAW FURS

Are you a trapper? Are you a dealer? Are you seeking a reliable firm to ship to? Many thousands of shippers say we give best returns, good reasons—we pay as we quote, give a square grade and send your money as quick as the return mail can bring it to you. We post you reliably.

No Commissions. No Express Charges.

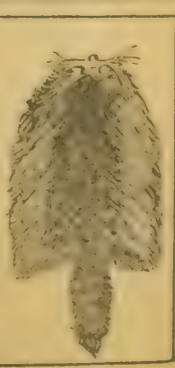
Write at once for price list, tags, envelopes, invoices, etc.

BENJAMIN DORMAN, Inc.

RAW FURS, GINSENG, GOLDEN SEAL

147 West 24th Street, New York. (Mention this paper.)

References: Greenwich Bank, N. Y. First [illegible] National Bank, N. Y.



The Harvesting and Housing of the Turnip Crops.

(Continued from page 41)

should have about all the corn and turnips his cattle can consume from now on until spring.. New clover should never be pastured. About all the after grass is done. Cattle won't eat short grass when getting turnips fed on the field, and it is just as well they won't as it is good business to let as thick a bottom as possible go into winter quantities.

Not nearly enough early turnips of the Mammoth variety are grown; these grow very fast on fairly rich soil and can be sown up to the first of August, and as they set on top of the ground are very easily pulled. No other forage crop with which I am acquainted, can be handled so rapidly, which is a great thing in their favor; we grow all that our stock require for two months in the fall. There is nothing like having plenty of green fodder always on hand; it is good for the stock, good for the owner and good for the farm upon which they live.

Halifax Prices.

GRAIN—Wheat, new, 55c. to 56c., old, 59c.; Peas, round, $7.00 to $7.25 bbl.

FEEDSTUFFS—Bran, $26.00 to $27-00 ton; Shorts, $28.50 to $29.80 ton; Middlings, $29.50 to $30.50 ton; Oil. Cake, $2.30 to $2.35 bag 100 lbs.; Gluten Meal, $1.65 to $1.70 bag 100 lbs.; Corn Meal, $1.80 to $1.85 bag.

LIVE STOCK—Hogs, 8c. to 9c. lb.

DRESSED MEATS—Beef (carcass), 8c. to 13c. lb.; Beef (retail), 15c. to 24c. lb.; Mutton, 14c. to 18c. lb.; Pork, 12c. to 16c. lb.

HORSES—Drafters, $250.00 to $300. 00; Roadsters, $200.00 to $250.00; Carriage, $200.00to $300.00.

DAIRY PRODUCTS—Creamery Butter, 29c. to 30c. lb.; Dairy Butter, 25 c. to 27c. lb.; Cheese, 15c. to 16c. lb.

POULTRY AND POULTRY PRODUCTS—Eggs, 27c. to 28c. doz.; Fowl, 15c. to 16c. lb.; Chickens, 16c. to 17c. lb.; Ducks, 15c. to 16c. lb.; Geese, 15c. to 17c. lb.; Turkeys, 22c. to 24c.

FRUIT—Apples, $1.50 to $3.00 bbl.; Pears, $2.50 bbl.; Plums, 30c. to 40c. basket; Cranberries, $12.00 to $13.50 bbl.

MISCELLANEOUS—Hay, $15.00 to $16.00 ton; Straw, $8.00 to $8.50 ton.

VEGETABLES—Carrots, 40c. to 50c. doz. bunches; Potatoes, 50c. to 55c. bushel; Turnips, 85c. to $1.00 bag; Beets, 50c. to 60c. doz. banches.

Charlottetown Prices.

GRAIN—Oats, white, 40c. to 43c., black, 43c. to 45c.

FEEDSTUFFS—Bran, $27.00 per ton; Shorts, $30.00 per ton; Middlings $32.00 per ton; Oil-Cake, $2.25 per bag; Cottonseed Meal, $1.80; Corn Meal, $2.00 to $2.15.

LIVE STOCK—Butcher's Cattle, 4½ c. to 5½c.; Stockers, $18.00 to $35.00; Milch Cows, $25.00 to $40.00; Sheep, 3½c. to 3¾c.; Lambs, 4c. to 4¾c.

DRESSED MEATS—Beef (carcass), 8c. to 12c.; Beef (retail), 6c. to 18c.; Mutton, 10c. to 14c.; Pork (carcass), 8½c. to 9½c., (retail), 14c.

HORSES—Drafters, $125.00 to $200. 00; Roadsters, $125.00 to $200.00; Carriage, $125.00 to $200.

DAIRY PRODUCTS—Creamery Butter, Prints, 28½c. to 29½c., Solids, 27½ c. to 28½c.; Dairy Butter, 22c. to 25c.; Cheese 13c.

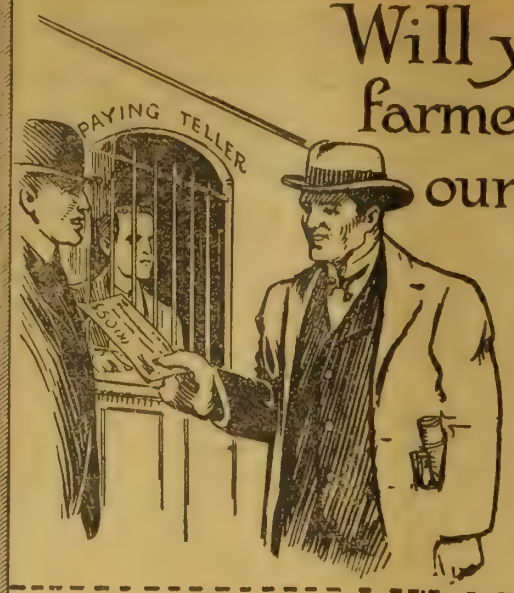
POULTRY AND POULTRY PRODUCTS—Eggs, 25c.; Fowl, 10c. to 12 c.; Chickens, 12c. to 14c.

FRUIT—Apples, $1.30 to $3.00 bbl.

MISCELLANEOUS—Hay, $13.00 to $14.00; Straw, $6.50 to $7.00; Wool, 24c.; Beef Hides, 10½c.; Sheep Skins, 75c. to 85c.; Lamb Skins, 70c. to 80c.

VEGETABLES—Carrots, 45c. bush.; Potatoes, 22c. to 25c.; Turnips, 14c. to 15c.; Beets, 40c.; Parsnips, $1.00 to $1.15 per 100 lbs.; Cabbage, 70c. to 80c. per 100 lbs.

Since last report farmers have been very busy with fall plowing and harvesting potatoes, and supply of produce is limited. White oats are in fair supply and prices firm. Black oats are scarce and prices higher. Potatoes are plentiful and market lower, other vegetables are offering freely in sufficient quantities to supply demand. Hay is scarce but prices easier and farmers are not disposed to push sales. Horses are in poor demand and beef cattle are not plentiful. Butter is high and cheese market is easy.



Will you be one of the 108 farmers who will receive our Prize Contest checks?

THERE will be twelve cash prizes in each of the nine provinces (108 in all) in the 1912 Prize Contest for Canadian Farmers. The 1911 Contest was so successful in awakening interest in the use of Concrete on the farm, that a second contest, in which three times as many prizes are offered, was decided upon for this year.

The Contest this year is divided into three classes, "A," "B" and "C," and there will be four prizes in each class. (First prize, $50; Second prize, $25; Third prize, $15; Fourth prize, $10.)

Thus there are three $50 Prizes, three $25 Prizes, three $15 prizes, and three $10 Prizes, *for each province.*

DESCRIPTION OF CLASSES

In Each Class there will be First, Second, Third and Fourth Prizes ($50, $25, $15, and $10) for Each Province.

CLASS "A"—Prizes to be awarded to the four farmers in each province who use most "Canada" Cement on their farms in the year 1912.

CLASS "B"—Prizes to be awarded to the four farmers in each province who send photographs of the *best concrete work* done with "Canada" Cement on their farms in 1912.

CLASS "C"—Prizes to be awarded to the four farmers in each province who send in the best *description*, telling how any piece of concrete work was done with "Canada" Cement. (Entries for this prize must be accompanied by photographs of the work.)

Don't think that you must use a large quantity of cement in order to win a prize. The quantity of cement used does not count in Classes "B" and "C." Many of last year's prize winners used very little cement.

When you enter the Contest, you have a chanee to win a cash prize of $50 as well as the certainty that you will add a *permanent improvement* to your farm. If you haven't a copy, be sure and ask for our book, "What the Farmer Can Do With Concrete." It will not only suggest many improvements that you can use in entering the Contest, but will tell you all about the use of concrete on the farm.

Just write your name and address on the attached coupon, or use a postal card, and we will send full particulars of the Prize Contest and a copy of "What the Farmer Can Do With Concrete" to you absolutely free.

COUPON

CANADA CEMENT COMPANY
LIMITED
Herald Building, Montreal

Please send me full particulars of the 1912 Farmers' Prize Contest, and a free copy of your book "What the Farmer Can Do With Concrete."

Name _____

Address _____

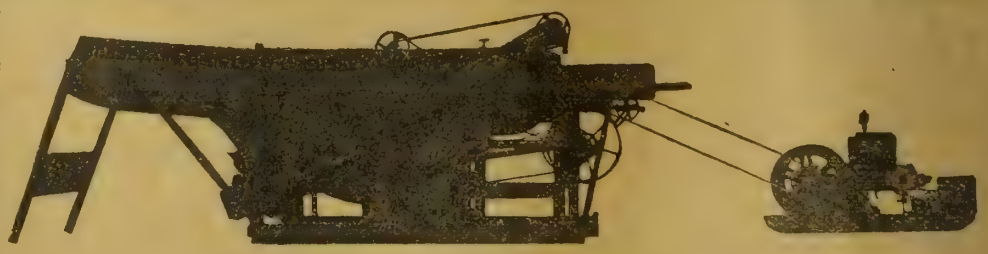
_____

Address Publicity Manager
Canada Cement Company
Limited
501 **Herald Bldg. - - Montreal**

CANADA CEMENT COMPANY LIMITED PORTLAND CANADA CEMENT MONTREAL

Order Your Thresher At Once from The Sussex Manufacturing Co., Ltd.

THE threshing season will soon be at its best and you will want a Thresher in a hurry. We have ready for shipment, Two, Four and Eight Horse Power separators. Either of these machines can be supplied with Tailings Elevator, Bagger and equipped with Trucks. Every machine is given a thorough testing before leaving the factory and is fully guaranteed.



Four Horse Thresher with Tailings Elevator.

Are you thinking of buying a Root Pulper or Farmer's Feed Boiler this season ?. If you have not one, you certainly should have. We have a large stock and you can have circulars on same for the asking.

We also have, for the farming trade, Hay Presses, Wood Cutters, Garden Seeders, Grain Grinders, Rubber Belting, etc. Write at once,

THE SUSSEX MANUFACTURING COMPANY LIMITED, SUSSEX, N. B.

Farm Yard Improvement.

I was talking the other day with a man who had just returned from a trip to the British Isles. He said that one of the things that most impressed itself on his mind was the neatness and cleanness of the stock yards and farm yards.

He told me that he made it a practice during his tour to visit as many farms as possible to get milk to drink.

Being an old countryman myself, it may interest your readers to know some of the conditions that exist in Scotland.

As every farmer knows, the average farm yard is one of the most difficult things to keep tidy in this world, so some of the agricultural societies give handsome prizes for the best kept farm yard. A committee is formed and one of the committee takes his turn and drops in on the farm yards at any time and gives the farmer his marks. At the end of the year the farmer with the greatest number of marks gets a handsome cup.

The average farmer realizes that the first thing to be done to keep things tidy and clean is a good thick layer of gravel all around the buildings. On many farms cement is used but where that cannot be afforded many hours might be spent hauling gravel.

I wonder if the farmer would not keep his door yard well graveled if he had to go down on his knees and clean up the dirt that is trailed into the house three times a day out of a dirty door yard?

For my own part, we are especially blessed, as we have the best of shore gravel with only a short haul, and lose no opportunity in hauling it everywhere I can around doors and yards. But if the fair committee would vote, say, $200 towards the best kept farm and door yard, it might go a long way to encourage some of our farmers to keep the yards a little tidier. There is nothing looks better than a well kept house, yard and surroundings, and it is surprising how long it takes every week to keep the place tidy. But when once tidy, it is well worth the trouble and time spent on it.—Melville Anderson in Maine Farmer.

A Few Pig Hints.

I have learned and noted the results of many trials:

1. Liberal feeding is the key to growth.
2. Park making requires more study than grain farming.
3. That sour milk as a food is equal to sweet milk.
4. That the time to make pork is during pighood.
5. That a 250-pound pig can be made during the first eight months than "if fitting for market" is left of pig life easier and at less expense until the next spring.
6. That the feeder should study how to avoid feeding "just to keep in condition," as that is a waste.
7. That it takes from one-third to one-half more food to "fit hogs for market" when improperly sheltered than it does where the stock is properly sheltered—summer or winter.
8. That from one-fourth to one-third of the grain food is gained if fed on pasture, over the feeding without growing clover.
9. That pasture and dairy wastes are not the equal of pasture and grain.
10. One should so feed on pasture that the hogs will be in condition to be sent to the early market.
11. That mixed feeds bring better results in the first eight months of hog life than the feeding of any one grain alone.
12. That all pigs should be provided shelter, but that shelter must not provide drafts or be without ventilation.
13. The growth of the pig depends upon a liberal feed with good pasture from the beginning of its life. "Liberal feed" meaning as much as it can stand and digest.
14. Breeding from immature sows or sires are not profitable in the "long run".

Test the Dams of Your Bull Calves.

Recently in these columns appeared an advertisement of several bull calves for sale. All the dams of these calves except one had made upwards of 450 lbs. of butter in one year, and that one had a grandam that had a record of the same kind. These calves were offered at a very reasonable price and we feel sure did not go begging for buyers. Publishing the record of the dam of a bull calf offered for sale is not only good for that one occasion but affords prospective buyers a place to look for future herd headers, as the demand of bull buyers for production records of dams is growing in all sections of the country.—Exchange.

Silage vs. Soiling Crops.

That cows like silage better than green soiling crops, and give more milk when fed silage, has been shown by careful experiments conducted at the College of Agriculture of the University of Wisconsin. Larger yields of silage than of soiling crops can be grown per acre, and silage may be gathered in the fall instead of in the summer when other farm work is more pressing. Two silos are now being filled at the dairy barn of the College of Agriculture. One of these is 18 ft. by 35 ft., with a capacity of 150 tons. The silage in this will be used for winter feeding, while that in a smaller one will be used when pasture gets short next summer.

ONE CENT A WORD

WANTED to buy a Yorkshire boar seven or eight months old. A. N. McDONALD, South Cove, Victoria Co., C. B.

25 FANCY CHRISTMAS AND NEW YEAR'S CARDS, only 25c. Also 100 free. High Grade. Very handsome. Beautifully colored and gold embossed. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Four Yearling Ayrshire heifers. Choice lot. Price for lot $100.00. Also one pure bred Yorkshire Boar, 18 months old. Price $15.00. A. FITZ RANDOLPH. Bridgetown, N. S.

FOR SALE—Yorkshire boar three years old. Yorkshire boar one year old. Also one large Berkshire boar over seven months. All prize winners and registered. STEWART BROS., Alliston, P. E. I.

WANTED.—A man and wife for the winter. Man must be a good milker, and understand barn work. Woman to do general housework and plain cooking. Apply giving references to Mrs. DAVID GRIMMER, care of Grimmer & Keay. St. Andrews, N. B.

Jersey Cows For Sale

Four pure bred Jersey cows, all young and good. For prices and particulars, apply to

R. A. BACKMAN, Hillside Farm, Lunenburg, N. S.

Maple Grove Ayrshires

For immediate sale several young Bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N. B.

Cheap Fairs via I. C. R. for Thanksgiving Day.

The usual holiday excursion fares will prevail on the Intercolonial Railway for Thanksgiving Day. Round Trip Tickets at first class one way fare will be issued on Oct. 25, 26, 27 and 28 between all stations on the railway and to points on connecting lines, good for return Oct. 30th.

BARGAINS IN HOMESTEAD HOLSTEINS

Over 80 Head Pure Bred Registered Holsteins For Sale

The time to buy stock is when the owner wants to sell

OWING to shortage of stable room we have decided to sell part of our stock at a greatly reduced rate and for the next 30 days we will set at from 20 to 50 p.c. discount the following stock :—

25 young cows, fresh or ready to freshen.
15 young heifers.
15 calves.
10 yearling bulls, serviceable age, and several bull calves.

We are not going out of business but we must sell some stock in order to get the main herd comfortably housed for winter and in order to do this we will make no reserves but will place a price on every individual in the herd.

Artis Jake

Champion Holstein bull at Halifax. 1911. Bred and exhibited by Logan Bros.. Homestead Farm, Amherst Point, N. S.

Animals bred on this farm and thier progeny have won the highest awards in Holstein classes at all the leading shows from Halifax to Vancouver, and yet we are satisfied that so far as show ring and producing qualities are concerned we have in our herd to-day more good individuals than ever before.

If you want to improve your herd, DO IT NOW. All prospective buyers will be met at Amherst Station. Enquiries by letter cheerfully answered. Long distance 'phone at the farm.

LOGAN BROS., Homestead Farm, - Amherst, N. S. RURAL ROUTE 1 'Phone 602-3

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issie. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

SHORTHORN BULLS FOR SALE. Walter Eaton, Upper Canard, N. S.

J. GEORGE CARVER, Charlottetown, P. E. I. You are missing it if you've not tasted Lobster Rarebit. Oysters and Lobsters wholesale.

Pekin Ducks, one year old, for sale cheap. Also a few young ones. MARITIME POULTRY & SUPPLY CO., Moncton, N. B

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

GUERNSEYS FOR SALE—1 yearling bull, and 4 between the ages of 4 and 10 months, all very fine animals. WILLIAM COX & SON, Canard, N. S.

FOR SALE—Two registered Holstein Bull calves. Also one 4 year old Bull for sale or exchange. GARFIELD CAMPBELL, Salisbury, N. B.

BROTHER—Accidentally discovered root will cure both tobacco habit and indigestion. Gladly send particulars. S. T. STOKES, Mohawk, Florida.

GUERNSEY BULL FOR SALE, 16 months old Gold Coin 7th, after first prize good butter cow. Price right, good size. HUGH FRASER, Elmsdale, Hants Co., N. S.

JERSEY BULL FOR SALE. Four years old, sire Ferror (Imp.) No. 391, dam Brampton Regan, No. 439. Apply to J. J. CLARK, Sect. Tatamagouche, N. S.

WANTED—Ladies to do plain and light sewing at home, whole or spare time; work sent any distance; charges paid; send stamp for particulars. National Manufacturing Co., Montreal, Que.

EXHIBITION POULTRY—We have 40 varieties of poultry, pigeons, turkeys, geese, etc. for sale. Prices right. Correspondence solicited. HARTLAND POULTRY YARDS, Hartland, N. B.

FOR SALE OR EXCHANGE—Pure Bred Registered Yorkshire Boar, Baron Lomond, for cash, or in exchange for Sow of same quality and breeding. R. G. MURRAY, St. John, N. B.

FOR SALE—One thoroughbred registered Ayrshire bull 20 months old. Also one Ayrshire bull calf, 4 months old—Gilt-edge stock. D. A. McDonald, Port Hood, N. S.

FOR SALE—Two Jersey Bulls 10 and 8 1-2 mos. old; sire, Brampton Financier, Also grade Heifers of best breeding dams, great producers. G. B. CLARK. Tatamagouche, N. S.

FOR SALE—1 five year old Oxford ram. A very fine thick set well wooled sheep. Cost forty dollars in Ontario. A few of his pure bred ram lambs. Real good ones. Prices reasonable. E. J. PETERS & SON, Elmhurst, N. B.

WANTED—An active man used to farm work, including care of dairy stock, getting firewood, etc. An agreeable man who would appreciate a good home. Wage for winter twenty dollars per month and board. CHAS. PETERS, Elmhurst.

FIFTEEN DOLLARS and EXPENSES WEEKLY for Trustworthy man or woman to act as Traveling Representative. Previous Experience not required. Traveling Expenses advanced. Commence in home territory. Winston Limited, 174 Spadina, Toronto, Ont.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free,—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

FARM FOR SALE AT SUSSEX—The Hallett Farm, Hazel Hill, one of the finest situated properties at Sussex, 100 acres, fine house, barns, etc. For further particulars apply to S. H. WHITE, Sussex, N. B.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co., Queen Street, Montreal.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shediac, N. B., during the week ending April 20th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, Sussex, N. B.

FOR SALE

My Harness Business in the town of Shubenacadie doing a good business. Also my Farm consisting of six acres in good cultivation, only 200 yards from depot and school. Good house and barn, wood house; all in good repair. For further particulars apply to

W. H. HENRY,
Shubenacadie, N. S.

Tree Surgery.

It has been proven by at least one enthusiastic tree surgeon that trees may be mended and healed of diseases and go on to a good and useful life, when without the aid of the surgeon's knife they would perish. In care of a fruit tree that has attained bearing size, one fruitful year would repay the cost of treating it. In care of a shade or ornamental tree the value of the work could hardly be estimated as an old stately tree could not be replaced in a life time.

Decay of trees is caused by either fungi or bacteria. Some of these germs are dependent for their life on air and moisture. Other forms work under the sealing bark in the heart of the tree and may be unsuspected until the inside of the tree is largely decayed. These are the hardest forms to treat, but they may be held in check by watching for toastool growths on the outside. There is where they multiply, and by cutting these out to where the wood is found and filling the cavity with cement, the life of the tree may be prolonged for many years. This form of disease can seldom be wholly cured.

Forms that work in air and moisture may be permanently cured by cutting away as large a portion of the diseased wood as may be done without causing the tree to be too weak to withstand the wind. These cavaties are washed out with a strong solution of sulphate of iron then filled with Portland cement mixed about as used for building. This is tamped in hard that there may be no chance for air or water to get between it and the wood. In case of large cavaties small stones may be imbedded in the cement colored with lamp black to about the color of the bark. As the tree grows from year to year the bark will gradually close over it and in time seal the wound. In cutting away dead or living branches the stumps should be painted oyer with coal tar. This cleansing, healing and disinfecting stuff is therefore preferable to paint for this purpose.

Spring or fall is preferable to the growing season for this work, and there is practically no difference which time it is done, as growth does not begin till spring, provided all wounds and cavaties are painted so as to exclude air and water, one time is as good as another.

In the natural order of things trees should live to be very old. That they do not is because of disease. After years have been taken to grow a tree to either useful or ornamental size it is a distinct loss to have them die or become unsightly. Mr. Ormsbee of Vermont has given practically his whole time for six years to the renovating of old and decayed trees, and finds that it is possible to raise them after they are quite badly decayed and the work in most cases is as permanent as the original growth of the trees. If care is taken of young trees to nip all signs of decay in the bud no serious trouble will come to them. —Leigh Hunt.

Watch the Feet and Legs.

Too much care cannot be given to the legs and feet of horses. This is especially true with farm horses. Hours are spent in brushing the hair, mane and tail, but the legs and feet receive slight attention. Many horses are permanently injured because the feet are neglected. The most beautiful horse is worthless without sound limbs and feet.

Every horse should be properly shod. The legs should be thoroughly rubbed when horse is curried. Wash the legs after a hard day's work, and rub them dry. If you have any time to spare it will pay to bandage each leg for a short time after very long drives or extra hard work.

Increased Use of Machinery on Farm.

A corps of engineers has recently visited some of the farms where electrical power has in some degree displaced animal power and wind power, says an exchange. The committee reports from one farm near Dayton, Ohio, that they found three electric motors in operation, two of them devoted to pumping, anh a 15-horse power motor mounted on a truck and movable about the farm for the purpose of driving machinery.

It found that forty bushels of corn and cob could be ground in a single hour with this large motor, at a cost of 4 cents a bushel, including labour at 15 cents an hour and allowing for interest and wear and tear. The actual outgo was less than 2 cents a bushel. A six-roll husker produced two tons an hour, at a total cost of $2.85 a ton, only 27 cents of which was the actual cost for running the motor.

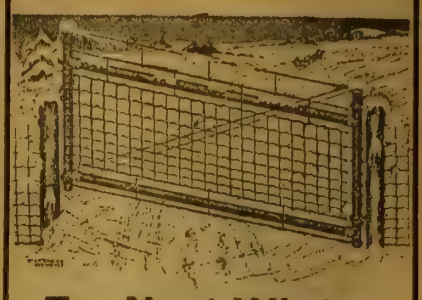
Forty-one and a half bushels of shell corn were ground in an hour, at a cost of a trifle over one cent for the power furnished. Three washers full of soiled clothing were washed in fifty-seven minutes for 4½ cents. A portable vacuum cleaner cleaned 100 square feet of floor space for 2 cents; seven horses were cleaned thoroughly in one hour, costing 3 cents for each horse, including help.

Nearly 100 pounds of butter were churned, washed and worked in about half an hour, at a cost of a trifle over 2 cents. One ton of hay was hoisted for 2½ cents' worth of power. For 10 cents a ton two tons of fodder were cut in a single hour. The committee reports a good deal further than this in the way of items, but this seems fairly to illustrate the change that is coming on in the way of farm work.

The revolution will cover small farms as well as large ones, for a 4 horse power engine can be installed for pumping and farm work and house work for a trifle over $100. The country home is in this way placed a little in advance of the city home in the way of modern applications of power.

The compressed system is more costly in the installation, but it is vastly in advance of any other system if we count in protection from fire and the forcing of water up hill. An irrigation system can be installed with compressed air that will irrigate several acres of land, throw a stream of water over a two-story house, supply water for cattle at some distance from the well, and otherwise reduce the amount of labour on a farm and increase its conveniences remarkably. It will cost about twice that of the power system. It is never dependent upon wind and is always ready for work.—Independent.

This Gate



For Next Winter

CLAY GATES CAN BE RAISED (as shown in illustation) TO LIFT OVER SNOW IN WINTER. ALWAYS EASY TO WORK. Can't sag, break, blow down, burn or rot, made of high carbon tubular steel of large diameter, and heavy wire mesh fabric.

Clay Gates

are endorsed (by purchase and use) by almost all the leading stockmen. Every Clay Gate fully guaranteed.

One or a dozen sent for 60 days' free trial. Send for illustrated price list.

Canadian Gate Co., Ltd.
54 Morris St., Guelph, Ont.

Don't buy a Piano on the Instalment Plan Buy For Cash

Perhaps you may say that this advice is all very well for those fortunate enough to have the means to act upon it. You can buy for cash any piano or organ you wish from any dealer and thus get the advantage of his lowest cash price.

This Is How You Can Do It

When you have made up your mind what and where you are going to buy, just let us know and we will see that you get the instrument at the lowest cash price. If you have not sufficient funds to make up the amount we will supply you with the cash and charge you but 6 per cent. interest, your piano or organ will be our security.
There is not a catch about it anywhere, it's a straight above board business proposition
It will cost you absolutely nothing to get full particulars and you will be under no obligation in doing so either. Every request for particulars and every transaction is altogether free of any kind of publicity.

Mercantile Assurance Association
P. O. Box 317
Halifax, Nova Scotia.

Annapolis Valley Fruit Farm
$3050 Income Last Year

220 acres on the famous Minas Basin; 5 minutes walk to P. O. and boat landing; 8-room painted house, running water; large barn; orchard producing 400 bbls. apples in season; no better orchard land in the Valley; set to apples and a little time will make this equal to farms selling here for $40,000; cuts 30 tons hay besides large acreage used for crops; wood and timber valued at more than $1000; pasture for 40 head; extreme age of owner necessitates immediate sale; price only $3200. part cash, easy terms; for set of pictures, full details and traveling instructions to see this and other Nova Scotia farms, see page 62, our New Mammoth Farm Catalogue No. 35. Box D, Sussex, N. B.

"Jane & Jake" For Sale

I bought a pair of Grey African Geese paying for them (young birds) $12. I sold the birds they raised that fall before the snow flew, for ($50) fifty dollars clearing ($38) thirty-eight dollars. I have a splendid pair for sale "Jane" and "Jake" Jane is a two-year-old, she layed (50) fifty eggs this season. Jake is a yearling and the best bird (male) I raised this season, he's enormous and an elegant bird. These birds will make a lot of money for anyone who wants to take up geese. I still have some extra fine turkeys for sale. Indian Runner ducks, Sicillian Buttercups, sired by a bird imported from Italy.

SARAH E. MOSES SMITH,
Woodward's Cove, Grand Manan.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West. N.S.

POULTRY.

Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

---

Springbrook Ayrshires !

Champions in the show ring dairy tests, and winners of the Silver Tea Service over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

Raspberry Plants

Set them, and other Bush Fruits this fall. We have the leading varieties of Yellow, Red, Brown and Black Raspberries, Blackberries, Currants and Gooseberries.

Special prices for Fall delivery

Orders booked now for Strawberry Plants Fruit trees and other Nursery stock, for Spring Delivery. Let us quote you on Home Grown Plants.

E. L. COLPITTS,
Petitcodiac, N. B.

JOHN RICHARDS,

Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

Big Poultry Show

Prize Lists Ready--Send For One
Address Box 485, Moncton, N.B.

EVERYHING you want in the line of Poultry Feed Remedies or Supplies. Send for catalogue.

Maritime Poultry Supply Co.,
Moncton, N. B.

1870 1912

Mumford Bros.

PRODUCE COMMISSION MERCHANTS

141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

ELMWOOD STOCK FARM.

Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

HILLSIDE STOCK FARM.

Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

PRESCOTT BLANCHARD, Prop.
Truro, N. S.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.S.

FOR SALE

Several yearling Guernsey Bulls, sired by "Golden Opinion" and "Prince of Willow." All prize winners at the Maritime Shows and Ottawa.

ROPER BROS., *Charlottetown, P. E. I.*

Pure Bred Ayrshire Stock For Sale

Come and see them or write for illustrated price list.

Allandale Farm, Hampton, N.B.
E. ALLAN SCHOFIELD, PROP.
Long Distance 'Phone 9—Stables near Station

FOR SALE

Six pure bred Jersey bulls, from one month to two years old, sired by Pogis 40th, of Hood Farm and Fohallk St. John O'Dreamwold.

JOSSELYN & YOUNG.

BRAMPTON JERSEYS !

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

RIVERSIDE HOLSTEINS

We have for sale a splendid lot of young stuff both males and females that we are showing this Fall. We can fit you out with an ideal foundation herd or individuals of great merit at a very reasonable figure.

LEA & CLARKE, - Victoria, P. E. I.

Cobequid Farm Holsteins

We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

BELLEVIEW STOCK FARM

Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

C. A. ARCHIBALD, - Truro, N. S.

SUNNY SIDE STOCK FARM

Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

In Chester White Swine I am booking orders for young pigs.

J. F. ROACH, 'Phone 111 **SUSSEX, N. B.**

BARGAINS! BOOK FREE!

To make room for our young stock we are offering for sale B. P. Rock Hens, (yearlings) which will be most suitable for breeding next season.

CRAIG BROS., ***Amherst, N. S.***

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H EATON,
Canard, N. S.

RASPBERRIES

We can supply plants of the best hardy varieties Red Raspberries for fall setting, including "Herbert" the great yielder which at Ezperimental Farm, Ottawa, produced at the rate of 220 bushels per acre, also King (the best early) Hiram, Cuthbert, Eaton, etc. Guaranteed to live or replaced free.

ORCHARD HILL FARM, Brown's Flats, N. B.

HOMESTEAD FARM
Spring Offering

We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.

LOGAN BROTHERS,
Amherst, R. R. No, 1, N. S.

KERRY CATTLE

Breeders of Kerry Cattle are invited to forward their names and addresses to THE MARITIME FARMER. A subscriber wishes to get in touch with them.

A friend sold 15 turkeys last season for $50.50. My own retailed for 30cts lb. Turkeys are easily raised as chickens, ducks, etc. Get my little book it will tell you how I rear my birds with no more losses than among other young poultry. Much less work than the usual cooking corn bread and special mixtures.

I will send the Turkey Book FREE through October for a two cent stamp. Fine turkey stock for sale. Grey African Geese. Indian Runner Ducks, some nice Sicillian Buttercup Cockerels from the best stock in this country.

Sarah E. Moses Smith,
Woodward's Cove, Grand Manan.

FRIESIAN HOLSTEINS

male and female all ages, from prize winning, choice stock can be seen and purchased at the St. John, Halifax and Charlottetown Exhibitions at bargain prices for delivery after the shows.

Sea View Stock Farm,
Buctouche, N B.

Lawndale Stock Farm

OFFERS FOR SALE

The following Pure bred Shorthorns

A few yearling heifers and bull calves bred in the purple. Also a few aged cows in calf to our herd bull Pontiac 82710. Prices reasonable. Call or write.

Lawndale Stock Farm, I. M. Lovett, M. D., Prop.
YARMOUTH, N. S.

FOR SALE

A well matured Guernsey bull, a handsome fellow and gentle as an old cow. A dandy sire, very active and dependable. His breeding will satisfy the most exacting, he's in fine condition as he has been well cared for. Somebody will get a great bargain as he will be sold for only a small p. c. above what he would bring on the market for beef. The figure at which he is held will put him on the cars at St. John. Full particulars given on enquiry. SARAH E. MOSES SMITH, Woodward Cove, Grand Manan.

The Wortman & Ward Co., of London, Ont., Sell Out to Beatty Bros., Fergus, Ont.

Almost every farmer in Canada has some goods on his farm manufactured by the Wortman & Ward Co. Their line of churns, pumps, washing machines, grain grinders, pea harvesters, etc., are favorably known from one end of the country to the other. In these lines the Wortman & Ward Co., is one of the largest manufacturers in Canada.

The Wortman & Ward firm is one of the largest industries in London. The industry was started in London by Mr. Wortman in 1879, in which year he came to London with a capital of one hundred hands and their factory only $350. To-day they employ over has some 60,000 feet of floor space. The growth of this industry shows very clearly how a business can be built up when the aim is to turn out the very best possible goods and to always deal fairly with the customers. Mr. Wortman was an inventor rather more than a salesman and the extended sale of his goods was owing rather more to the quality he put into them than to any forceful selling system. For many years, the business has been steadily increasing while no advertising whatever has been done and very few representatives kept on the road.

Any farmer who has used a Daisy Churn or a Daisy Grain Grinder or Wortman & Ward Pumps is well aware of the quality of the goods.

Mr. Wortman was a Methodist in religion and a great church worker. For years he conducted a profit assuring plan with his employees which was greatly appreciated by them and added much to the welfare of the business. No doubt this had much to do with the high quality of the products that were turned out. Owing to poor health he decided to dispose of his business, which no doubt will be greatly regretted by his many business associates.

The firm of Beatty Bros., who have purchased the business are well known to every reader of this paper. Beatty Bros. is one of the most progressive manufacturing firms in Canada. They fully appreciate the opportunity that a firm has manufacturing for the wonderfully growing market of this country. Perhaps, no other firm in Canada making farm tools, has grown as rapidly in recent years. The BT Hay Tools, BT Litter Carrier and BT Sanitary Steel Stalls are extensively used in this country. In manufacturing this line of barn equipment they employ one hundred men and have branches at St. John, Montreal, Brandon and Vancouver. It is their intention to continue to manufacture the Wortman & Ward lines in the London factary and it will be their aim to keep up the high standard of quality which Wortman & Ward Co.. has always been noted for.

The head office of the company will be at Fergus, Ont.

The Encouragement of Agriculture.

All of the Provinces have now signed agreements with the Dominion Government under which they receive the subsidy voted last session by Parliament for the encouragement of agriculture. The following table shows how much each Province receives:

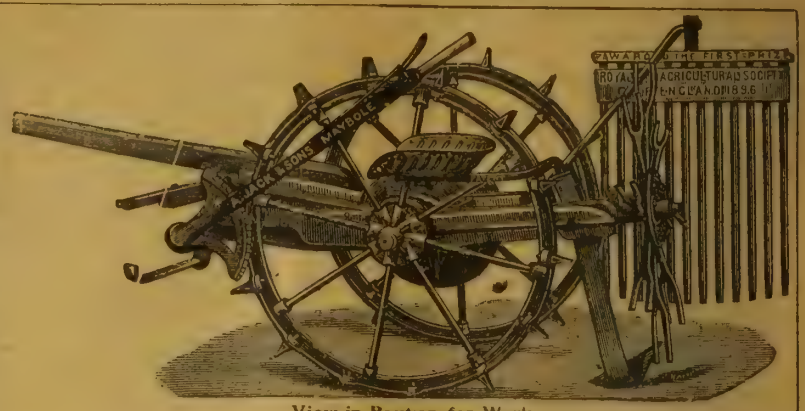
Ontario	$175,733.32
Quebec	139,482.40
Nova Scotia	34,288.45
New Brunswick	24,509.93
Prince Edward Island	6,529.85
British Columbia	27,334.76
Manitoba	31,730.05
Saskatchewan	34,296.29
Alberta	26,094.95

The World's Best Potato Digger

Jack's Royal First Prize New Patent

CALEDONIAN POTATO DIGGER

Fitted With Ball and Roller Bearings



View in Position for Work.

THE NEW PATENT CALEDONIAN POTATO RAISER holds the record as the Most Perfect Potato Raiser in the World. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at Leicester, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christana (leading Foreign and English Machines competing). WRITE FOR CATALOG and PRICE.

ILLSLEY & HARVEY, Canadian Agents, Port Williams, N. S.

BE STRONG and HEALTHY

Are You Suffering From Varicocele, Nervous Debility, Loss of Vital Power, Loss of Ambition, Early Decay? I WILL CURE YOU.

HOW MANY MEN ARE SUFFERING MISERIES FOR THE WANT OF A SIMPLE REMEDY? They do not live, they simply exist. In the faces of thousands can be read the story of a wasted life and blighted hopes, joys and pleasures are unknown to them because their vitality is being sapped. Varicocele, wasting drain, have exhausted Nature's electrical forces and left them wrecks upon the shores of life. Many have sought in drugs and patent remedies to relieve their mental and physical suffering. They are soothed for a day, or maybe a week, falsely braced up, until, the effects of the drug wearing off like the momentary bracing of whiskey, they sink lower in vitality, and, with hope exhausted, lose confidence in themselves and their fellow-man, and decide to abandon all efforts to recover their power; feeling that there is no help for them. Man, do not sacrifice yourself in this way. Do not endure this living death while Nature holds out to you relieve in the form of Electricity--that vital element of which, by a life of dissipation, you have deprived yourself---tearing down faster than Nature could rebuild. In this great restorative—Electricity—there is life and happiness for you. It restores power to the weak and indifferent; it builds up the weakened system, and by its vitalizing, stimulating cure it makes the blood jump through sluggish veins, increasing the circulation to every part, assisting nature to carry off the impure matter which clogs up the wheels of life. If you are weak and sick, don't depend on drugs any longer, but try

Dr. McLaughlin's Electric Belt

It will not fail. It cannot fail, as it infuses into the weakened parts the force of life and strength—the force which is the origin of all vital power—Electricity.

I don't ask any man to buy my appliances on a speculation. I know that it will cure these troubles, and I want my pay only when the cure is complete. I don't ask you to try it one month, nor two months, but long enough to cure you, and when I have cured you you can pay me.

DR. MCLAUGHLIN:

Dear Sir,—In regard to benefits derived from the life of your Electric Belt, would say that it has cured me of nervousness, weak back and that tired feeling. I would have written before now, but was waiting to see if the cure would last. I am quite satisfied over the results of same. Hoping these few lines will be of benefit to you, I wish to remain, R. B. McDONALD, St. Raphaels, Ont.

DR. MCLAUGHLIN,

Dear Sir—Your Belt is all you claim for it. My condition is improving every day. I have no trouble following your directions, and find the Belt is all right in every way. I cannot say more. It is a grand thing for suffering humanity—J. H. SMITH, Brigham, Que.

Call to-day for Free Test of my Belt and Free Book. If you can't call cut out and send in this coupon

BOOK FREE

Write me to-day for my beautifully illustrated book, with cuts showing how my Belt is applied, and lots of good reading for men who want to be "the noblest work of God"—A MAN. Enclose this coupon and I will send this book, sealed free.

Put your name on this coupon and send it in.

DR. M. K. McLAUGHLIN, 237 Yonge Street, Toronto, Can.

Dear Sir:—Please forward me one of your Books. as advertised.

NAME.....

ADDRESS.....

Office Hours: 9 a.m. to 6 p.m. Wednesday and Saturday till 9 p.m.

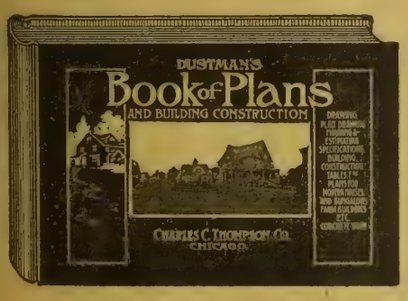
Try an Ad in The Maritime Farmer.

Add water to milk—
You *weaken* the milk.
Add soft wheat to flour—
You *weaken* your flour.
Cheapens it too.
Soft wheat costs less—*worth* less.
Soft wheat flour has less *gluten* less *nutriment.*
Your bread is less nutritious, sustaining, economical.
Soft flour has less *strength,* less *quality gluten.*
Giving less good things for your money and things less good.
Use Manitoba flour—Manitoba *hard* wheat flour.
Having everything the soft stuff *lacks.*
Five Roses is *all* Manitoba.
Without a grain of cheaper wheat.
Strengthen *your* food values.
Use FIVE ROSES.

Five Roses Flour

Not Bleached — Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED MONTREAL



Dustman's Book of Plans *and* Building Construction

By U. M. DUSTMAN, (*Licensed Architect*)

10,000 Sold in 30 Days — **Price $2.00 Prepaid**

Here's a different book from those upon the market. It contains information not generally known outside the building trades; just such information which the building public want. The author has written a book in which he has embodied the cream of over thirty years successful experience. He is widely known as a practical and expert architect and is an authority on the construction of medium priced homes.

Everyone interested directly or indirectly in building should have this book. 250 pages; oblong size, 9x13 inches; bound in blue cloth; white hand stamping—150 plans for modern houses, bungalows, barns, farm buildings, store fronts, store buildings, garages, etc., etc.

CONTENTS : General Construction Plans—Arrangement of Rooms—Things to be Considered in Laying out a building—Heating Facilities—How to Estimate Cost—Figuring Amount of Material Required—Time Saving Tables—Mechanical Drawing and How it is Applied in Construction of a Building—Plans with Estimated Cost of 150 Houses, Bungalows, Barns, in Frame, Concrete or Brick Construction—Country Houses—General Barns, Cattle and Horse Stables—Dairy Barns—Poultry Houses and Silos—Hints as to Best Style of Structure—Details of Interior Construction and Finish—Window and Door Framing—Stairways—Store Fronts—Roof Construction—General Directions For Mixing and Placing Concrete—Proportions—Sand and Gravel—Itamized List of Material Costs—Writing of Specifications.

This book will be sent, together with a year's subscription to THE MARITIME FARMER to any person upon receipt of $2.00. That is if you are lready a subscriber and will send us two dollars we will send you the book and give you credit for one year's subscription. If you are not already a subscriber and want the book, you may obtain it and THE MARITIME FARMER for $2.00 These books cannot be purchased anywhere for less than a2.00 each and they are a bargain at the price.

THE MARITIME FARMER, SUSSEX, N. B.

Make YOUR Buildings Fire-Proof With Steel—PEDLAR'S Way

YOU'D like to minimize the fire risk on **your** house and barn, wouldn't you? I don't believe there's a man who reads this paper who would deliberately neglect to provide every possible protection against fire? Yet why do you continue to put up frame buildings? If you think a "fire-trap" costs less you are much mistaken. Get the facts about Pedlarizing and figure it out for yourself.

Reduces fire risk fully 80 per cent.

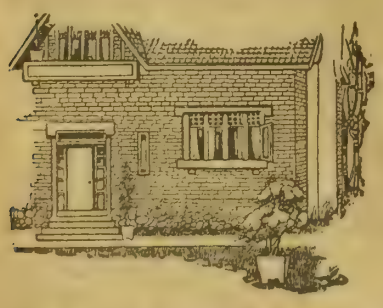
THIS means practically fire-proof. Many of the so-called "fire-proof" buildings in big cities are not so well protected against fire as your home and farm buildings would be if built Pedlar's way. Pedlarizing practically eliminates the risk of your buildings catching fire. So protects each part of the building that if fire does start it can be prevented from spreading. There is nothing about a Pedlarized building to burn, except the contents. Any fire insurance agent will tell you how much lower the insurance rate is on a building like this—enough to save a good bit of its cost.

Actually Cheaper by 20 per cent.

"PEDLARIZING" means sheathing any building, inside and out, with Fireproof Sheet Steel. Roofed with Oshawa Steel Shingles, which I guarantee for 25 years. Outer walls surfaced with Pedlar Steel Siding, to imitate brick, cut stone, dressed stone, etc. Inside walls and ceilings finished with Pedlar Art Steel—made in over 2000 beautiful designs. Such construction is actually cheaper by 20 per cent. than an ordinary frame building. My booklet makes it plain to you. Write for a copy—FREE.

Oshawa Steel Shingles Make a Good Roof For 100 Years

I give you a written Guarantee that absolutely protects you against roof troubles for a quarter-century. Just as your fire insurance policy protects you against loss, so the Pedlar Guarantee protects you for 25 years against loss through any fault of Oshawa Shingles. Nearly Fifty Million square feet of roofs in Canada protected today in this way. They cover farm buildings, homes, churches, schools, public buildings all over this broad Dominion. Cost very little, too.



Beautiful, Durable Pedlar Steel Siding

At the cost of a frame building it makes your house as staunch and handsome looking as if built of stone or brick. Pedlarized buildings, remember, are less liable to fire damage than the usual type of brick building. There are dozens of patterns. Enable you to build a strong, beautiful, safe, wind-tight, weather-proof, **durable** building with **greatest economy.** Get my book of pictures and facts.

PEDLARIZING Has Many Other Advantages--All Important

WALLS and ceiling are one unbroken seamless sheet of handsomely designed steel. No crevices or cracks to harbor dust or dirt or disease germs. Can be easily washed with soap and water just like a pane of glass. If there's been sickness in a Pedlarized room the whole interior can be scrubbed with antiseptics and thoroughly disinfected.

Pedlarizing Means a Sanitary Building

OUTSIDE can be finished to look like stone, fancy cement blocks or brick. For the inside walls and ceiling you can choose from over 2000 designs, every one the creation of an artist in mural decoration. Every taste can be satisfied, any decorative scheme harmoniously carried out. Patterns are deeply and clearly embossed in heavy sheet steel. Can be put in place easily and quickly. Never crack with settling of building—never need papering or fixing.

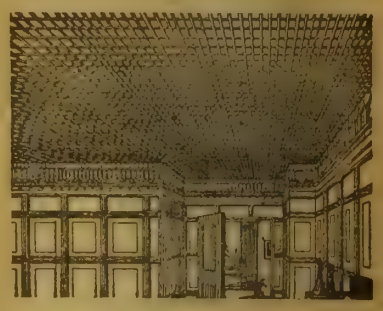
Pedlarizing Means an Attractive Building

INNER walls and ceilings wholly free from dampness—always. Will not "sweat" because there is a dead-air space between them and the Pedlar Siding of the outer walls. For the same reason dampness cannot penetrate from the outside. Frame houses and wood-shingled roofs do "sweat" and open up cracks that let in the wind and rain. A Pedlarized house is perfectly dry in all seasons.

Pedlarizing Means a Damp-proof Building

THE unbroken, seamless covering of steel keeps out the cold, and makes buildings wind-tight—easier to keep warm in winter. Think what a Pedlarized barn would mean to your stock. And in summer's blazing sun you'll find a Pedlarized house or barn the coolest—heat can't get in. Thus your buildings are kept dry and comfortable in all seasons, through all kinds of weather.

Pedlarizing Means Warmer in Winter, Cooler in Summer



Pedlar Art Steel Imperishable Ceilings

Adorn and protect thousands of Canadian homes, schools, fine churches, stores and public buildings. Because they are so much handsomer, more economical and sanitary than plaster or wood. Best fire protection, too. A plaster ceiling starts cracking almost as soon as it sets. Pedlar Art Steel Ceilings cannot crack. Seams are invisible. Hundreds of patterns provide every conceivable style of decoration.

Pedlarizing Means Lightning-Proof

Lightning costs farmers on this Continent four million dollars a year. In one year 623 people were killed and 889 injured by lightning—all on farms. Oshawa Steel Shingles would save all this immense loss. The sheer sheet steel surface of the roof scatters the electric blast and passes it harmlessly off—better than any number of lightning rods. For this reason alone you ought to roof your next building with Oshawa Shingles.

Don't Settle the Question of Materials Until You Know Every Detail About Pedlarizing.

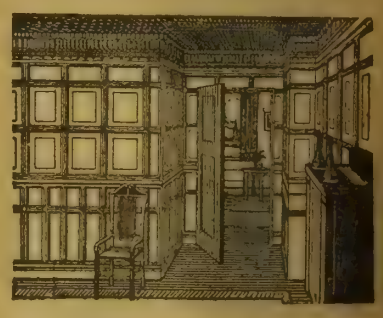
In the space of this advertisement I can only suggest some of the many advantages of Pedlarizing. You should send for my big free book, showing the newest of our 2,000 beautiful designs. Also tells how economical Pedlarizing really is.

Write for it to-day. G. A. Pedlar

Pedlarizing means Less Expense in Every Way

It costs a great deal less to Pedlarize a room, or a whole house, than you probably think it costs. Get the facts—then figure. My large, finely illustrated book shows numerous fine churches, schools, public buildings, private homes in city and country that are Pedlarized, also some of the 2000 Pedlar designs. Our nearest warehouse will gladly mail you a copy FREE.

Send Your Name and Address at Once. Ask for Our Free Booklet No.17 Write to our Nearest Address. (See below.)



Your Rooms Can Be Just As Attractive

Pedlar Art Steel Sidewalls are made in hundreds of patterns to harmonize with Pedlar Art Steel Ceilings—lend themselves to any scheme of decoration. Easily put on—beautiful to look at, easy to keep clean. Can be washed with soap and water like a pane of glass. No cracks to harbor dust or vermin. Out-last any other wall-covering. Absolutely fire-proof. Cost much less than you may imagine.

The PEDLAR PEOPLE of Oshawa

Established 1861

HALIFAX	ST. JOHN	QUEBEC	MONTREAL	OTTAWA	TORONTO	LONDON	CHATHAM
16 Prince St.	42-46 Prince William St.	127 Rue de Pont	321-3 Craig St. W.	423 Sussex St.	111-113 Bay St.	86 King St.	200 King St. W.
PORT ARTHUR	WINNIPEG	REGINA	CALGARY	EDMONTON	VANCOUVER	VICTORIA
45 Cumberland St.	76 Lombard St.	1901 Railway St. S.	Room 7, Crown Block	633 Fifth Ave. North of Jasper	319 Pender St.	434 Kingston St.

ADDRESS OUR NEAREST WAREHOUSE. WE WANT AGENTS IN SOME SECTIONS. WRITE FOR DETAILS. MENTION THIS PAPER.

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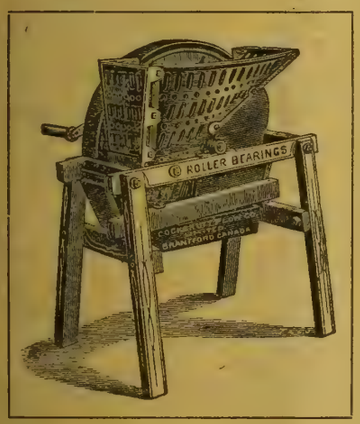
PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

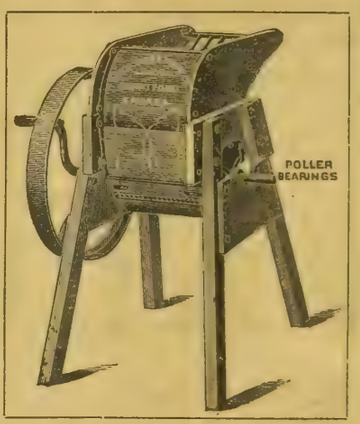
Vol. 18. SUSSEX, N. B., NOVMEBER 5, 1912 No. 3

Winter Feeding Made Easy



CATTLE were never so high in average price as this year. It will pay you more than ever to get a good pulper from us now. You will get the benefit in saved labor and heavier beef immediately. For years afterwards no matter what the price of beef may be, you will have the benefit of one of these machines ; having paid for it in a season when its cost will be least felt and easiest paid.

The left hand machine has a single hopper, and reversible knives. By it, you can slice or pulp as desired. You may also buy a similar machine from us with a double hopper,, which makes easy to slice one lot of roots and pulp the next lot a minute afterwards.



The cylinder pulper at the right has roller bearings. This means long wear and easy work—big capacity. Our cylinder pulper will not bruise roots or roll them around without pulping, as the hopper is specially constructed. Inspect this machine.

Remember, this is the time to get a root cutter or pulper. You can't afford to do without one. You can buy one easily.

Write us or see our Agent in regard to any farm implements you need. A post card will bring you full information regarding these pulpers. Write us to-day

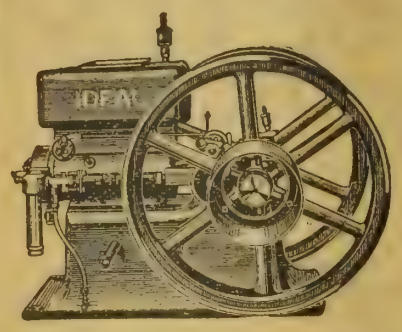
Head Office & Works:
SMITH'S FALLS,
Ontario.

THE FROST & WOOD CO. Ltd.
SAINT JOHN, -- NEW BRUNSWICK.

Branches at Montreal, Que., Truro, N. S., Charlottetown, P. E. I.

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



Stationary, Mounted and Traction

We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
Concrete Mixers and Water Boxes

Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.

A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

OUR VALUES

are summed up briefly under the following captions:

Style and Quality

Our goods are made to suit you no matter what your occupation may be or what they are needed for.

We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited

HALIFAX, N. S.

Make Your Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
IF
GIVEN
A
FAIR
TRIAL

EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

We do not sell these burners but each subscriber may get two beside one we furnish free by sending 35 cents for each additional one wanted.

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JEWELRY

18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....68 cents

18k Rolled Pendants, worth $3.00, our price..... ....99 cents

Others worth $2.50 we sell for 89c.

GUN ME AL

A $3.50 watch for..... ....$1.36

Boys Watch..... .....69 cents nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
Box D.
Sussex, New Brunswick.

ENGINES BOAT —AND— FARM

Also an engine that can be used in boats in summer and on land in winter, very handy to many people such as fishermen who farm a little and need wood sawing for fuel.

Pumping, wood sawing, towing, spraying and all general uses. Send for information it costs you nothing but a stamp.

GUARANTEE MOTOR CO. 367 Bay St., North Hamilton Ont.

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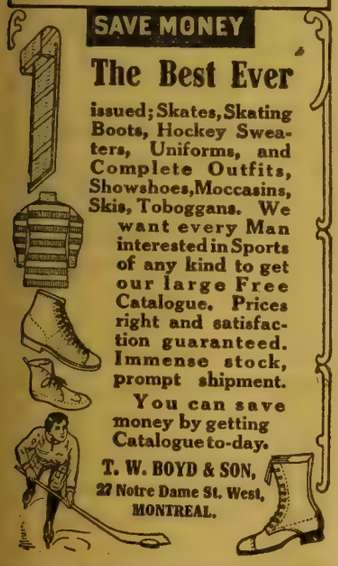

The Best Ever

issued; Skates, Skating Boots, Hockey Sweaters, Uniforms, and Complete Outfits, Showshoes, Moccasins, Skis, Toboggans. We want every Man interested in Sports of any kind to get our large Free Catalogue. Prices right and satisfaction guaranteed. Immense stock, prompt shipment.

You can save money by getting Catalogue to-day.

T. W. BOYD & SON,
27 Notre Dame St. West,
MONTREAL.

¶An Advertisement in the Maritime Farmer will sell your surplus stock--Try it.

THE EASIEST WAY IN THE WORLD--TO CLEAN YOUR BARN!

OUR free book **PROVES** it. The coupon brings our book. It tells how to do away with the wheelbarrow in removing the manure from your barn. It tells how to save all the hard work and half the time. It tells how to save **BIG MONEY**. And it proves that this easy way to clean barns promotes the health of your cows by preventing tuberculosis and other diseases. Don't you want our book? It is free. Simply cut off the coupon and mail now. You'll be glad to get the facts about

MAIL THIS COUPON for All Facts
BEATTY BROS., Ltd.
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Please send me the books I have checked.
( ) Manure and Feed Carriers (including ( ) Stalls and Stanchions (including bull pens, calf pens, etc.)
( ) Feed Trucks.)
I have..... cows and..... horses (how many)
Going to Build or Remodel? If so, when?
P rovince R. F. D.
Town
N ame

The BT Manure Carriers

You will be interested in the many features that make the BT Carriers so much superior to all others. Read about the BT Track, the BT Hangers, the BT Friction Brake, and the many other BT advantages—each of them worth all that is asked for other carriers.

Now! Mail Coupon

The BT Manure Carrier means so much to you that you cannot afford to ignore the facts. Get your BT Carrier up NOW while the work is slack. Have it ready for the cold snap when your cows must be kept in the barn. Let it save you disagreeable, tedious work all winter long. Our five-year guarantee protects you, and your Litter Carrier will pay for itself with Twelve Months' Use.

Send coupon for Carrier Book—about the BT Manure Carriers, Feed Carriers, Milk Can Conveyors, and Feed Trucks. If interested in Stalls, Stanchions, Bull Pens, Cow Pens, and Calf Pens, ask for Stall Book. Either or both are free. Mail Coupon. Address:

BEATTY BROS., Ltd.
318 HILL ST., FERGUS, Ont.
Horse Stable Fittings, Waterbowls. Etc.

SYRUP MAKERS--MAKE BETTER SYRUP

What's the use of working hard, wasting time and fuel every spring and using out of date boiling contrivances that make poor syrup. Invest in a "Champion" Evaporator. Take a little comfort and make a better syrup that will bring you the best returns. Made in 22 different sizes suitable for large and small size sugar bushes. Write to-day for our new illustrated catalogue free.

THE GRIMM M'F'G. CO., Limited. 58 WELLINGTON ST., Montreal, - Que.

Butter Parchment

Write us about our co-operative scheme.

We can save you just half of the money you pay for Pure Parchment.

The Maritime Pub. Co., Ltd.
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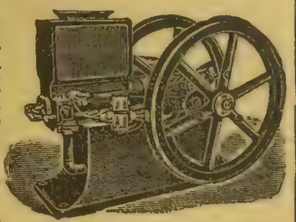
Monarchs Can Do The Hard Work



Instead of drudging over back-breaking chores, have a little "Monarch" engine do the work. Made as well as an automobile engine, equally fine material. Hundreds of farmers who hesitated to get Monarchs now praise them. A boy or a woman can work them. Easy to start. Only a cent an hour can pay for Monarch fuel.

Write on a post card for our two color folder and price list on sizes from 1 1-2 to 35 horse power, for farm use.

CANADIAN ENGINES Limited, DUNNVILLE, Ont.

FROST & WOOD CO., Limited, Smith's Falls, Ont., Selling Agents from Peterboro East to Maritime Provinces. : : : : : :

GIRLS WANTED

To work in Paper Box Factory and Printing Office. Good board and lodging provided. Write for terms and particulars to

The D. F. Brown Paper Box Co., Ltd.
ST. JOHN, N. B.

"It is a pleasure to tell you that Chamberlain's Cough Remedy is the best cough medicine I have ever used," writes Mrs. Hugh Campbell, of Lavonia, Ga. "I have used it with all my children and the results have been highly satisfactory." For sale by all dealers.

DE LAVAL
CREAM SEPARATORS

Cheapest As Well As Best

Every sensible person wants the **best** of everything, but in many things the best is beyond their means and they must necessarily be content with something else.

In the case of the Cream Separator however, the **best** is fortnnately the cheapest as and it is of the greatest importance that every buyer of a separator should know this.

Moreover, the **best** is of more importance in the case of the Cream Separator than in anything else, since it means a saving or a waste **twice a day every day in the year** for many years.

It is true that DE LAVAL Separators cost a little more in first price than some inferior separators, but that counts for nothing against the fact that they **save their cost every year over any other separator,** while they last an average twenty years as compared with an average two years in the case of other separators.

And if first cost is a serious consideration a DE LAVAL machine may be bought on such liberal terms that it will actually **save and pay for itself.**

These are all important facts which every buyer of a Cream Separator should understand and which every local DE LAVAL agent is glad to explain and demonstrate to the satisfaction of the intending buyer.

If you don't know the nearest DE LAVAL agent please simply address the nearest of our main offices as below.

173 William Street, MONTREAL, CAN.

DE LAVAL DAIRY SUPPLY CO., Limited.

14 Princess Street, WINNIPEG, CAN.

BARGAINS IN HOMESTEAD HOLSTEINS

Over 80 Head Pure Bred Registered Holsteins For Sale

The time to buy stock is when the owner wants to sell

OWING to shortage of stable room we have decided to sell part of our stock at a greatly reduced rate and for the next 30 days we will set at from 20 to 50 p.c. discount the following stock :—

25 young cows, fresh or ready to freshen.
15 young heifers.
15 calves.
10 yearling bulls, serviceable age, and several bull calves.

We are not going out of business but we must sell some stock in order to get the main herd comfortably housed for winter and in order to do this we will make no reserves but will place a price on every individual in the herd.

Artis Jake

Champion Holstein bull at Halifax, 1911. Bred and exhibited by Logan Bros., Homestead Farm, Amherst Point, N. S.

Animals bred on this farm and thier progeny have won the highest awards in Holstein classes at all the leading shows from Halifax to Vancouver, and yet we are satisfied that so far as show ring and producing qualities are concerned we have in our herd to-day more good individuals than ever before.

If you want to improve your herd, DO IT NOW. All prospective buyers will be met at Amherst Station. Enquiries by letter cheerfully answered. Long distance 'phone at the farm.

LOGAN BROS., Homestead Farm, - Amherst, N. S. RURAL ROUTE 1 'Phone 602-3

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 18. SUSSEX, NEW BRUNSWICK, NOVEMBER 5, 1912. Number 3.

Continue the War on the San Jose Scale

Was the Verdict Handed to the N. S. Government by the Valley Fruit Growers.

THAT the Fruit Growers of Nova Scotia realize their danger from the invasion of the San Jose Scale was shown very emphatically by the size and representative character of the meeting held in Kentville on October twenty fourth.

This meeting was called by Principal Cumming after a conference with the Executive of the Fruit Growers' Association that the Government could have an opportunity of judging how far the Fruit Growers were willing to go in their desire to prevent the importation of infected nursery stock.

Representing the Government were, O. T. Daniels, Attorney General, Wm. Armstrong, Commissioner of Works and Mines, and Prof. M. Cumming, Secretary of Agriculture. Dr. Hewitt, Dominion Etymologist, Dr. Matheson, Provincial Etymologist and Mr. A. G. Turney Horticulturist for New Brunswick were also in attendance. The United Fruit Companies had delegates from each of their local companies representing some fifteen hundred fruit growers; while the old Fruit Growers' Association was there in force. In short any stranger dropping in would have no doubt but that the fruit industry meant something in Nova Scotia. Principal Cumming was appointed Chairman and Manning Ells Secretary. Previous to the meeting the delegates of the United Fruit Companies had met and agreed on the following resolution which was presented to the meeting by M. B. Davis, Secretary of the United Fruit Companies and seconed by A. E. McMahon, a member of their Executive. "Resolved that the Government of Nova Scotia be asked to take such steps by way of legislation or otherwise, as will be effectual in prohibiting the importation or bringing into the Province of Nova Scotia, of any apple trees for transplanting purposes, or nursery stock of any kind whatever from any Province of the Dominion of Canada, or any place outside the Dominion, infested with "San Jose Scale." Mr. Peck, of Wolfville, thought the resolution too sweeping. The demands of the Province for nursery stock were very great and for some years to come Nova Scotia nurserymen could not begin to supply the demand even under the most favorable conditions.

Spraying With a Modern Equipment—M. K, Ells' Orchard, Port Williams, N. S.

Mr. Fillmore said he was interested in the nursery business in New Brunswick, near the Nova Scotia line at Amherst. They had no scale in New Brunswick at the present time, but might be infected in the future along the Maine Border. If this should happen he would suffer a hardship under the terms of the resolution. He asked that the word District be substituted instead of Province. At this stage the Secretary offered the following amendment seconded by S. C. Parker, President N. S. F. G. Association.

Resolved that in the opinion of this meeting the Government and Legislature of Nova Scotia be requested to take such immediate steps by way of legislation or regulation as will be most effectual in preventing the importation into this Province of any apple trees for transplanting purposes, of nursery stock of any kind whatever that is infected with the San Jose Scale.

Both mover and seconder enlarged on their views of the situation as expressed in the amendment. The question was,—Did we wish the prohibition of all nursery stock or only infected nursery stock. Total prohibition as in the case of the potato canker and the foot and mouth disease in Great Britain was only followed as a last resort when no other treatment would meet the case. To give our nurserymen, no matter how public spirited they might be, a practical monopoly would bring its sure results of extortionate prices and greatly reduced planting. The amendment called for immediate action and left the deatils in the hands of the government as to what practical measures should be put in force. The resolution asked for total prohibition of all stock from infected countries; and the Attorney General when called upon for his opinion was not sure that this lay within the power of the Government. New legislation would be required and this would have to be passed upon by the Dominion authorities. All this meant delay and the situation would not wait.

Mr. P. Innes, of Coldbrook, then placed his views before the meeting and read some correspondence from the Ontario Department of Agriculture on the control of the pest in infected districts. He did not think the scale a very great danger and instnaced the growth of the horticultural interests in Ontario for the last fifteen years while they have had the scale with them. He called it —a blessing in disguise, but did not convince many of his listeners that they wanted their blessings disguised that way. "Why has Ontario planted two million trees in the last ten years?" asked Mr. Innes. "Because their old ones are all killed by scale," said a voice from the crowd. Mr. McMahon supported the resolution as representing the views of the United Fruit Companies, the largest and most important single body among the fruit growers. In any kind of regulation or inspection, short of absolute prohibition there was some risk that more live scales would be brought into the Province. They had before what they had been led to believe a system of fumigation supposed to kill all living pests. They had rested secure in this belief and as a result from the carelessness of some one in authority, we were now confronted by the greatest danger in our horticultural history. Where such mistakes could be made the companies did not feel that they could afford to take any more risk or try any more experiments. Prohibition of stock from all infected countries was what they asked for and would not be satisfied with anything less. He also advanced the encouragement to Home Industry Argument forgetting for the moment that a protected seller always means an unprotected buyer, Dr. Hewitt, Dominion Etymologist, then addressed the meeting. He reviewed the history of the San Jose Scale, which was first discovered in Canada in 1894 in B. C., and very shortly afterwards in Ontario. In 1898 the Dominion Government passed a law prohibiting the importation of nursery stock from infected countries, such as was asked for in the resolution. This law was not satisfactory and in 1901 it was repealed, and fumigating stations established at ports of entry. For the eleven years since 1901 till the present time there was not a single instance of live scale being found on stock passing through these fumigating stations. Their work had been perfectly satisfactory. He said he spoke from the standpoint of a Nova Scotian as to what he considered for the best interests of Nova Scotia. Would the Province be justified in prohibiting the importation of all nursery stock? He did not think so. This extreme was never taken unless no other means were available. The Dominion Government had found by eleven years experiment as he had shown, that this matter could be handled with just as certain results in another manner. He understood perfectly how the scale had gotten into the province. It was due to carelessness in fumigation. He read a despatch from the Ottawa Department of Agriculture, stating that a yearly inspection of all nurseries with a granting of a clean bill of health, only upon the advice of the Provincial Entomologist, will be enforced as soon as the necessary regulations can pass the council, all infected stock found will be destroyed and fumigation continued.

San José Scale.

Dr. Hewitt recommended that our Provincial Government be requested to pass regulations that stock should only be imported from nurseries that had been inspected and bore the official seal of government inspection. Also the establishment of proper fumigation and inspection stations here that we could have additional assurance that the stock was clean. The second fumigation would not injure the trees in their dormant state. A very lively discussion followed Dr. Hewitt's remarks. The United Companies still standing by their resolution until it was clearly shown that it would take about a year for the government to put their demands into effect. They then withdrew the resolution with the understanding that it should be considered at the annual meeting of the Fruit Growers' Association in January, 1913. The amendment was then read by Principal Cumming and carried unanimously.

Principal Cumming, as representative of the Government assured the meeting that they would give the recommendations of the Fruit Growers' their fullest consideration. The war would be carried on most vigorously on the scale already in the Province and now that they had this assurance of the support of the Fruit Growers, they would take every possible means to deal successfully with the question of importation.

A vote of thanks was extended to Dr. Hewitt for his advice and excellent address and for his interest as expressed by attending the meeting. This was one of the largest and most interesting meetings ever held by the Fruit Growers.

The industry is rightfully regarded as the premier one of the Valley and among the greatest assets of our Propince. All classes are interested in its future and all classes assemble when its problems are up for discussions.—M K. E.

Keep Live Stock and Maintain Soil Fertility.

A Plea for the Better Feeding of Stock and Soil.

By W. M. Lea, P. E. I.

The past season being most favorable for the pastures and hay crops, cattle will go into winter quarters in good condition. It behooves every stockman to take advantage of the present condition of their stock and mave serious efforts to hold this condition and keep them steadily gaining throughout the winter. When an animal is in good condition and gaining it takes much less to keep it on the gain than it does to make it pick up again once it gets on the down grade.

It is hard to understand how any one can think that there is any gain in any way in allowing young stock to go back in condition during the winter months, when so little extra care will keep them gaining. It is a sad feature of poor or careless stock management to see cattle being allowed to get into such an emanciated condition that it will take them months to recover after they are turned out to pasture. It will cost almost their full value to bring them into good condition again.

There are three classes of feeders:—

1 Those who feed a full ration to all classes of stock, whether they have to supplement the home grown feed by purchase or not.

2. Those who feed a maintenance ration or just enough to enable the various animals to hold their own without gaining in condition.

3. Those who winter their stock on whatever they happen to have at hand and who are satisfied if all survive the winter even if some may be on the lifts.

Any man's success as a stockman or as the manager of any line of business will largely depend on his good judgment and energy, particularly on the former. It is of prime importance that a man exercise good judgment in his selection of the kind of live stock most suitable to his particular circumstamces; good judgment re the number he should keep during winter, and this must be governed by the quantity of feed he has at hand. All these things must receive due consideration but whatever number of stock he attempts to winter, he should start with a determination to keep them all growing and his milking cows giving a full flow of milk. Fat stock and young stock should be putting on flesh at a most economical rate.

Be assured that when the ration is once cut down the animal ceases to grow or gain in any way so that we are feeding at a loss when the reverse might be the case and a handsome profit reaffized bv being a little more liberal with the feed.

Granting that the less feed a farmer has to buy the better it will be for his pocket book, but circumstances arise at times when he will find it to his advantage to replenish his stores by purchasing and when such circumstances arise he ought not hesitate

In this province, and probably to a lesser extent in the other Maritime Provinces as well, it is considered a discredit to a farmer to have to purchase feed. Old prejudices die hard. Nothing is so persistant as a popular delusion among farmers. They are supposed to have produce for sale at all times. When a farmer is known to buy feed the supposition always is that "he cannot be growing much." I have heard men tell with seeming pride that they never had to buy a pound of hay. it matters not to these how few the number of their live stock may be or in what an uncreditable condition they come through the winter so lomg as they do not have to buy extra feed. Farmers of this type never seem to worry whether they lose or gain by sticking to their hard and fast rule. They do not hape to buy that's all.

Now, it is quite possible to get over enthusiastic over the present high prices for butter, beef, fowl, etc., and undertake to feed heavier than will prove profitable, or, in other words to bite off more than we can chew.

And here we learn to strike the happy medium, circumstances alter cases. The man who has a large holding of cheap land, whose pasture costs him little, may depend more on summer conditions rather than on winter conditions to grow his stock. I cannot, however, understand why any animal should be allowed to lose weight.

Young stock coming off the grass in good condition, should, for a time at least, be put on a somewhat better ration than they may do with a little later,when they become accustomed to the change. To put them at once on three feeds of straw, as is often done, is a most foolish economy. Turnips can be easily grown and at least one-half bushel should be daily given during the first month, even if they must be cut down afterwards. Violent changes are always disastrous. Stock would be rarely sick if good judgment were used in making feed changes.

If the class of stock is of some good grade class, as at least it should always be, it will always pay in the end to provide sufficient to keep them gaining. It should always be the rule to keep everything that is or should be growing on the gain during the entire year. If at the beginning of winter we have not enough feed on hand to accomplish this, we must do either of two things, look out for some right feed or cut down the numbers of the stock.

Its remarkable to note the premium most farmers put on the dollar that can be realized right off this fall or during the next few months. How generously they will grain the hogs—animals that are shortly to be sold. How stingily they will feed the incalf heifer that is to stay with them for

eight or ten years, and whose first pregnant period will largely influence her profitableness for years to come. While I am not objecting to the keeping of hogs, and they are always supposed to fit well with dairying, I think that on P. E. Island at least, the hog industry is a positive injury to dairying. At least that is how it seems to work out, when pork is high, and it usually is high for a few weeks when the litters arrive in the spring. Most men will start in with more than they should attempt to carry, and when they once start them they must be finished to get sale for them, regardless of what other animals are robbed of their rations.

I spoke to a man recently about graining several heifers, bred to calve in November and December, that were out on short pasture. He assured me he did not have the oats to spare, as what he did grow would be needed to carry him over winter. When I intimated that he seemed to have plenty to spare his bunch of hogs, he replied that he just had to fatten them to sell them. The hogs would no doubt bring him some profit and he could carry them and also grow and develop the heifers as well, by buying a little feed, but as it goes now farmers seldom buy feed, and never in the fall when it is reasonably cheap. The hogs get the first turn, then the milch cows may get a little, that is when they are milking, but the vast majority of mixed farmers, who are always generous hog feeders, will usually sacrifice their cattle to finish off the hogs.

Creamery butter is now selling for 29 cents, with prospects for an advance. Oats sell for 42 cents; loose hay sold out of the field in this vicinity for $10.00 or less per ton. Oil meal can be purchased at $40.00 the ton; cotton seed, $37.00. Turnips and corn can be grown in abundance and wages are lower than in any other part of Canada, yet cows forward in milk are offered in numbers, and our hungry soil and the scarcity of even those who complain most about manure cannot see any great advantage in going into winter dairying We have sections of country where the land has been exhausted by continuous croppiog with oats, and where now fair crops grow only in such favorable seasons for this crop, as was 1912. Where the farmers are now busily hauling their oat crop to the shipping points nothing can persuade them to engage in winter dairying. It seems their cows cannot pay a profit on their feed; that is, the cows must milk first and they will feed them after they prove themselves.

The Department of Agriculture is doing good work in establishing and helping to maintain Farmers' Institutes, but the trouble is that few of the farmers, who need assistance most will become or continue members of these organizations. Through these Institutes the use of good pure bred sires of the different classes of stock can be cheaply secured by every member and many are taking advantage of this; but far too many take little or no interest in grading up their flocks or herds.

Surely everybody understands the necessity of maintaining the fertility of our soil, and the wonderful possibilities that are open to the man who continually increases the number and quality of his stock by returning everything again to the soil. If it is possible to secure as much for our grain by feeding it to any class of stock as by selling it in the raw state and at the same time receive a quantity of valuable manure, is it not good business to do so? I think every farmer will agree that it is, and when they don't practice it they cannot believe that it pays. This is the problem for our agricultural teachers to convince the majority who are now largely shippers, that they must change their methods. Look at the press reports and watch the number of cargoes clearing from the different shipping ports to see what is yet going on. P. E. Island is yet a shipping country. It is amazing what this little Island can sell off and yet grow more to sell. P. E. Island is said to possess a hungry soil, and it has good reason to be hungry. If it were not for the immense quantity of naturally occurring fertilizers such as seaweed, mossel, mud, etc., the country could not stand it as well as it does. Good farming is practised in some sections and stock raising is the main source of revenue; but in the vast majority of farms the cattle now going into winter quarters, will be carried over at a loss to their owners, simply for the want of a little extra feed, a loss that will be felt during the coming season, and for many season to follow.—W. M. Lea.

Forwarding New Brunswick's Agricultural Policy.

Following the resignation of Mr. W. W. Hubbard, Secretary of Agriculture for New Brunswick, who has taken over the Superintendency of the Dominion Experiment Station at Fredericton, Mr. J. B. Daggett, of Carleton County, has been appointed as his successor. We look for good things from brother Daggett, who is a born diplomat and the possessor of more than average ability in executive powers. He has that foresight in public assembly that will discern disrupting factions before they have a chance to work any injury to a good cause and by exercising a little judicious diplomacy "oil is thrown on the troubled waters" and thus stormy sessions have frequently been transformed by him to follow the paths of peace and harmony.

Knowing Mr. Daggett as we do, we feel confident that he will do all in his power to make matters go as smoothly as possible in agricultural ranks. Although Mr. Daggett trained for a theological calling, he has been of the kind who feel that it is not infra dig to look after the temporal as well as the spiritual welfare of his people. He has been interested in the Hartland Poultry Yards for quite a number of years. Their winnings at our various provincial and inter-provincial shows is well known to all our readers. Stock raising and other agricultural operations were not neglected on the Hartland farm. Mr. Daggett is a regular attendant at the Maritime Winter Fair and always takes a deep interest in the agricultural discussions at the various conventions there held. In his present position we feel that he will give the best that is in him for the advancement of the cause he represents.

In the course of a short time another official, Superintendent of Agricultural Societies, will be appointed. His work will be along the same lines as the work that is now being done in Nova Scotia by Mr. F. L. Fuller. This is another step in the right direction. Our readers know the added vigor that Mr. Fuller's work has put into the Nova Scotia Agricultural Societies.

Premier Flemming has recently announced that it is the intention of his government to establish two agricultural colleges in the province—one at Sussex and the other at Woodstock. We had hoped that he would work for the establishment of a Maritime Agricultural College—in unity there is strength. However, we do not know to what standard of excellency the proposed colleges will attain. We persume they will simply mean the addition of one or two agricultural teachers to the staffs of the excellent schools already boasted by these towns. In this case these schools will act as feeders to the other agricultural colleges, and it may be that at some future date both New Brunswick and Prince Edward Island will join with Nova Scotia in the maintenance of a thoroughly equipped Maritime Agricultural College, and a staff of men capable of doing a lot of original research work for the various sections of the Maritime Provioces.

Fruit Growing in Canada.

A year ago the Deuartment of Agriculture at Ottawa, through the Branch of the Dairy and Cold Storage Commissioner, undertook an investigation of the fruit growing conditions throughout Canada. The quiry was intrusted to Mr. Wm. H. Bunting, an extensive fruit grower of St. Catherines, Ont., who secured as much information as possible on the following points:

1. The possibilities of an extension of the fruit growing industry of Canada in the different localities visited.

2. The tendencies in the matters of the planting and growing of different kinds of fruit, and with regard to apples, the varieties which are being most extensively planted in the different districts.

3, The difficulties which are likely to be encountered in the further development of the fruit growing industry.

4...Methods of production and orchard management which have been most successful in the different districts and the probabilities of over production.

5. The conditions under which British Columbia, Ontario, and Maritime Province fruit is marketed in the prairie provinces as well as the character and the effect of American competition.

The enquiry was concluded in due time and the report has been printed for general distribution. It contains a large amount of detailed information gathered in every province making it an invaluable guide to persons who desire to take up fruit growing as an industry.

In his general conclusions Mr. Bunting points out that while the growing of fruit offers ample reward to the man of energy, patience and perseverance, there is perhaps no phase of agricultural endeavor which requires to be more closely studied and in which a wider range of information is more desirable and necessary. The future of the industry he states, was never brighter that it is today, the prospects never more attractive nor the field of extensive effort in all fruit growing provinces more inviting.

The report which contains eighty-four printed pages and many illustrations is available to all who apply for it to the Publications Branch of the Department of Agriculture, Ottawa, Ont.

Salt for Domestic Animals.

Some farmers do not realize the importance of providing plenty of salt for all the different animals kept on the farm. Experiments have been conducted at some of the stations, by depriving a certain number of cows of salt for a short time, and they showed a marked falling off in milk, and when the same cows were given a regular supply of salt, the milk was soon increased to normal. If salt is kept where each animal can have daily access to it they will only eat what they need to keep them in good health; but if deprived for any length of time, some will eat so much at once as to be injurious. This is very apt to be the case where salt is supplied at intervals. It is a fact that some animals eat and seem to require double the amount of salt that others do. I have one horse that eats over one quart of salt every week, which is double the amount the other two eat. It is a very good plan to make a box in one corner of the grain manger and keep this filled with salt so the horse can eat just what he needs every day. It is the same with cows, there should be some way provided so they can have daily access to salt in the stable. Where it is the practice of giving the cows salt perhaps once a week, and throwing it out somewhere on the ground, they will not do near as well, and then, too where salt is given to cows in this way it is apt to be forgotten and cause suffering as well as loss. It will do very well to salt sheep in this way, when running in pasture, but it is not a good way to manage with cows and horses.

Stomach Worms in Sheep.

The following is a receipe for stomach worms in sheep:—Arsenic, 1 oz.; carbonate of soda, 2 ozs.; boil in about a quart of water until dissolved. Pour off and keep the clear liquid; bury any sediment which may remain and make up the liquid to 3 gallons with water. The dose of this drench for a grown sheep is 2 ozs.; for a six-month lamb, 1 oz.; and for a nine months, 1½ ozs. This gives a dose of two grains of arsenic to a grown sheep, with a decrease for young

Sheep should be brought into the yards the night before drenching, as sheep according to their age.

it will be found to be more efficacious if given on an empty stomach. Care is necessary in the operation, for unskilful drenching is more common than may be supposed. The sheep should be either standing naturally an all four legs, with the head slightly raised, or sitting on the haunches. The head should not be forced too far back, nor the drench given too hurriedly, as choking may result.

After the drenching, keep the sheep in the yards for two or three hours, and allow no water in the meantime. Another administration is necessary in about a fortnight, and a third is sometimes advisable.

A salt-lick should also be provided (in fact, one should be supplied for all sheep on the coastal or tableland areas.) For worm-infested sheep the following lick is prescribed.— Sulphate of iron, 1 part; bone meal or calcium phosphate, 5 parts; Liverpool salt, 30 parts. The lick should be supplied in suitable troughs where it will be protected from rain, as if exposed to the weather much is lost and wasted.—Pastoralists Review.

Holstein Cattle Arriving in New Zeland

The Makura which sailed on September 23. brought the third consignment of Canadian Holsteins for New Zealand. This lot consisted of 10 heifers and 1 bull. They all arrived in good condition, and were transferred to quarantine island. Those which arrived on previous shipments endured the quarantine test and have all passed into their new homes with the exception of 1 bull. This animal contracted a cold and will be detained a few days longer.

The last shipment came from the herds of Thomas R. Pearson, Port Hammond, British Columbia; A. C. Hardy, Brockville, Ont.; and Logan Bros., Amherst, N. S. This latter circumstance is worthy of mention, that cattle can be shipped from Nova Scotia to New Zealand at a profit.

Mr. Logan personally accompanied this shipment, and his sales were determined by the capacity of the accommodation on the Makura. Eighteen animals were sold, but only eleven could be accommodated. The freight rate from Vancouver has been raised to £20 per head from £15 as formerly.—W. A. Beddoe, Canadian Trade Commissioner, New Zealand.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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R. D. Robinson Publishing Co., Limited
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NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

NOVEMBER 5, 1912.

DATES OF ISSUE.

November 5-19
December 10-24

FIRST CALL TO THE MARITIME WINTER FAIR

The Twelfth Maritime Winter Fair will be held in Amherst, N. S. on Dec. 2nd, 3rd, 4th and 5th. Intending exhibitors must make their entries on or before November 14th. In presenting the twelfth premium list to the public the management say:

"From the beginning, each Winter Fair was better than the previous one.

"The Eleventh one was no exception. A new dairy stable which had been provided for the accommodation of thirty cows was filled to overflowing, and although the prizes had been extended, many cows which more than qualified for first prize, had to be contented with "Highly Commended."

"This year, however, the Federal Government has increased our grant, and the prizes in most classes have been increased and extended.

"Public spirited men still generously aid us in making our show popular, and the citizens of Amherst are ever ready to give visitors a welcome.

"Two new hotels have recently been opened and there will be abundance of accommodation for visitors.

"We are arranging to have some of the most prominent men in Canada deliver addresses during the Fair.

"Transportation Companies are again offering low rates.

"Come and see our 1912 Fair. After seeing one Fair, you will become a regular visitor."

WORK BETTER THAN WORDS

There is an old adage that those who live in glass houses must not throw stones. This means that it is safest to leave the mote in our neighbor's eye severely alone until the beam is cast out of our own, then we can see clearly to remove the mote from the eye of our neighbor.

It is true that if we waited for some one without sin against modern agriculture to cast the first stone, reform would come slowly, indeed, for there are few sinless in this respect. But we should show our faith by our works. Before we denounce sloven farming we should remove the weeds from the fence corners of our own farms; we should beautify our own homes before we start the crusade in the neighborhood; we should take the initiative in work before we do it in words.

The example of a progressive farmer has a powerful influence in the community. A stranger can soon find out who are the most surcessful men in the community, for he is sent to these for information. The community will recognize successful effort, even though it may be reluctant to follow the successful man. Human nature is much the same everywhere. Men may envy their neighbors because their neighbors excel them in special lines, yet when it is found that the experience and advice of the successful are profitable, these will be sought.

The leader will generally be the man that does things. He will be the man who has left the beaten path to blaze one of his own; he will surmount the difficulties that the average man is afraid to encounter; he will be the man who has succeeded where others have failed.

There are many men claiming to be successful whom the world will not recognize in this class. The man who accomplishes results by his efforts does not as a rule need to proclaim the fact to receive the plaudits of his neighbors. The laborer is worthy of his hire. Work, not words is what makes leaders; results, not theory, is what people seek; achievements, not boasts, make character.

DRAFT HORSES ALWAYS SELL BEST

About the horse market the comment is constantly made that draft horses are the best sellers. This statement has already become commonplace. Anyone conversant with horse market activities would be surprised to hear any other assertion and yet the fact remains that farmers are not producing top-notch draft horses in any considerable number. Judging by horse market receipts and a search of the countryside, farmers have a comparatively small appreciation for the advantages of breeding the largest horses.

The fear of displacement by motor-trucks has some influence on farmers, but really motor power is not displacing the class of largest horses to any great extent. Dealers assert that motor-trucks have cut no appreciable inroads into their orders for first-class draft horses. Those who require the best teams pay almost any price in order to satisfy their requirements.

As a consequence those farmers who are attempting to produce the right kind have not only the best possible present market, but very luminous prospects. An urgent demand has arisen this fall for the very best kind of draft mares. Every one of this sort would find a prompt buyer if offered for sale. Usually when one is located, inquiry reveals the fact that the owner is determined to keep her.

THE BOY AFTER SCHOOL

It is a fine thing for a boy to have some regular work after school, though it ought not to take up all his time by any means.

This work is generally in the line of regular "chores," and is looked upon with ill-favor by even an ambitious boy. Vary it, if you wish that boy to get an idea that he likes farm work.

Give him a written formula for preparing whitewash, and let him whitewash the chicken-house, the cellar, the stables, or such part of them as he can reach. He will do it as well as any one, and will grow an inch or two from sheer importance and delight.

Let him spray the hen-houses with a kerosene solution occasionally. He will generally consider spraying the cows in fly-time much more fun than milking. If he does it satisfactorily, why not let him do it?

He will occasionally enjoy oiling the harness instead of brushing the horses. Change off with him once in a while.

It is an excellent plan to send him to transact business sometimes. He may make mistakes, but he will be learning each time. And each time he learns he will get ambitious to do greater work. And so he will come to be useful.

Let him experiment in setting out vines and trees about the place. It is a valuable experience, which may result after a while in improving place with fruit and fine shade.

Give him a corner of good ground for experimenting, if he enjoys that sort of thing, and help him a little when needed.

See that the boy has sufficient honest work after school, but vary it enough to make it interesting, and there will be fewer boys "despising" the home farm work and leaving it for some on? else.

HONEST MARKETING METHODS

They tell a story in one of the Southwestern states about a bunch of strawberry growers who, while loading a car one hot day, decided it would be a great joke on the railroad company if they helped themselves to the ice which had been placed in the cars to refrigerate the fruit. When the car reached its destination, the berries had become white with mold. Of course, the buyer refused to accept such a car, and the joke recoiled upon the men who grew the fruit.

Such practices indicate a lack of social consciousness. No doubt, if the story be true, the men who loaded the car did not think they were doing much harm by "swiping a little corporation ice." Yet, in the language of the law, they were committing theft. Their deed very justly recoiled upon their own heads; they reaped the reward of dishonesty.

There is another kind of stealing—one just as bad as stealing ice. That is to slip inferior fruit into a package and attempt to sell the whole for first-class stuff.

What do you think of the clothing man who sells you an "all wool" suit containing 40 per cent. or more of cotton? What do you think of the seed dealer who palms field-run seed off for carefully selected varieties? What do you think the buyer thinks of the man who faces a box of apples, a basket of peaches or a crate of strawberries with good fruit and puts culls into the middle, or the dairyman who waters his milk?

Prosperity that is permanent depends upon honesty of purpose. Let us have sincerity in packing our packages. Avoid tne insincere man, wherever he may be, in whatever occupation he may be engaged.

Insincerity has its own reward. Inferior packs are always found out. Once stung, the buyer becomes suspicious, and will discriminate against the whole section from which one grower has sent a fake pack. But that is not the big reason for honest packing. The big reason is: Pack conscientiously because it is right to do so.

THE FIT SURVIVE

It is strange that anyone should claim to know all about farming, which is one of the broadest and deepest subjects among men. When we contemplate what might be accomplished in plant growth and animal breeding if men knew, we are apt to be overwhelmed with the ignorance of men upon scientific agriculture. And yet occasionally one may be found who thinks that he has learned all that can be learned about farming.

"Where ignorance is bliss it is folly to be wise," because those who do not know and think they know avoid the light of knowledge. But the ranks of those who distrust the "book farmer" are growing thinner every year. The influence of the agricultural press, the experiment station, and the agricultural college are thinning the ranks of the "unbelievers." Those who are not willing to learn are moving to town to swell the ranks of the unemployed and to place greater responsibilities upon the producers of this nation's food. It is a case of the "survival of the fittest" where the unfit will be eliminated and the progressive only will survive.

"Forward to the city" and "back to the farm" is an economic balance that will and must maintain our industrial life and supply of food, clothing and shelter for our rapidly increasing population. Only those who learn how to farm may be expected to have a home in the open country and maintain the country's wealth in agriculture and foster our democratic ideas of government.

CAN YOU BEAT THIS RECORD?

While visiting at Homestead Farm recently we saw a grade Clydesdale mare out of whom over $1,000 worth of foals had been sold before she was 10 years old. Is not this a strong point in favor of the breeding of the right kind of draft horses in the Maritime Provinces? Can any one of our readers beat this record?

There are yet people who hope to prosper by keeping town people and country people "at outs,-" but these are usually men who are drawing salaries for their work, and their motives are known. They can do little harm where their motives are known.

A Suggestion for Improving Dairy Herds.

"It is alleged" says Dr. A. S.Alexander, of Wisconsin, "that more than 90per cent. of the bulls in use in the dairy districts are grades and scrubs. This lamentable state of affairs indicates plainly that the results of forty or more years of writing, teaching, preaching and persuading against the use of such males are unsatisfactory and that the practical plan of actual improvement should now be introduced. Only by the general use of pure bred dairy breed bulls can dairy cows be graded up and improved in quantity and quality of milk production. The general use of such bulls and employment of better methods of feeding and management would in a comparatively short time increase the present yearly average butter production of the average cow from 175 to 350 pounds or more. Two top crosses of dairy breed blood have produced a grade cow that yielded 630 pounds pf butter in one year. Some scrub cows produce only 90 pounds butter a year. The 175 pound butter cow hardly pays for her board and care. The 90 pound butter cow is kept at an actual loss. Only profitable cows should be kept.

"Pure bred bulls would be used were they everywhere available. They are not available now. They should everywhere be made available. This should be accomplished by the use of creamery company capital. It would be a legitimate and profitable investment of capital.

"The parties vitally interested in this matter are the producer of milk and the buyer of milk. If the producer had better cows, sired by pure bred dairy bulls, he would keep more and better milk at a greater profit. This would mean more and better supplies and better profits for the owners of creameries, cheese factories, condensing factories, skimming stations and milk distributing stations.

"The creamery and factory owners should buy pure bred bulls and maintain them where they can readily be used by their patrons. The service fees, calculated at cost, could be deducted from the patrons' creamery checks. The danger of the disease being spread by the bulls would be slight and easily prevented by sanitary precautions. All male calves produced should be vealed. All heifers should again be mated with pure bred sires. Continuous grading up should be done and no cross breeding practiced.

"Such introduction of pure bred bulls would quickly eliminate grade bulls,
and scrub bulls, set the right example, encourage owners of dairy herds to own and use pure bred bulls and in time lead to the ownership of pure bred dairy cows by the creamery companies. Wisconsin needs and should put into practical use every pure bred dairy bull produced in her domain. Hundreds of such bulls are now sold out of the state each year. The plan proposed would lead to the home use of all of the bulls we produce.

"Let us stop merely advising the cow owner to use a pure bred bull, place a pure bred bull where he can use it and then get him to use it. If this is done improvement will be sure, rapid and profitable."

Railway Ties.

In 1910 eastern cedar composed 40 per cent. of the total number of cross ties purchased in the Dominion; in 1911 it fell to 5.4 per cent. and to fifth place in importance of species used. Its place has been taken by jack pine of which wood 40 per cent. of the trees used in 1911 were made. Tamarack, with 19 per cent; Douglas fir with 14 per cent, are the three next in order.

The Forestry Branch of the Department of the interior, which is authority for the above, states in its bulletin on the subject that 13,653,770 ties, or 4,469,808 more than in 1910, were purchased in 1911. Railway development in the West is largely responsible for the increase.

The average price per tie was 39 cents. The United States furnished the most expensive kinds,—Southern pine at $1.10 and white oak at 81 cents apiece. These latter were used largely in switches.

In 1911 the sawn tie stood ahead of the hewn tie both in quantity used and price, 70 per cent of the total being from the mill. The cost was 41 cents apiece, or 4 cents more than the hewn tie. 6

An interesting estimate of the amount of timber which could be saved by preservative treatment is given. Creosoting makes the initial expense per tie about 93 cents as compared with 58 cents for the untreated tie. taken from the fast diminishing tim-However as the length of life is extended by ten years, the economy is two cents per tie per year. This would mean $1,400,000 per annum, to say nothing of the vast quantity (estimated to be 350,000,000 feet board measure annually, which is being ber supplies.—Forestry Branch, Department of the Interior.

Co-Operative Creamery for Antigonish County.

Editor Maritime Farmer:—

Another new co-operative creamery company has been organized in Nova Scotia. This is the result of some dairy meetings and active work by a few enthusiastic people during the past summer.

The new creamery will be located at the northern end of Loch Katrine, a most beautiful lake, about two miles long and from one-quarter to one-half mile wide, which is located in the heart of a rich agricultural district, that with further development and hearty co-operation among the people will make one of the most prosperous communities to be found anywhere. The natural conditions are all favorable and the people are now entering into the new scheme with a vim and optimism that spells success.

It is not the intention to make this creamery merely a place for manufacturing butter, but a co-operative institution in the community whereby the farmers will, in a co-operative way, handle practically all the products of the farm, in selling potatoes, vegetables, lambs, etc., and in buying seeds, fertilizers, wire fencing and other requirements.

Co-operation along these lines will probably be commenced in the early spring. It is the intention of the company to take over the business of a number of small cheese factories that are now operating in the district.

The company will be incorporated under the name of the South River Creamery Company, Limited, with its head office at Loch Katrine, N. S. and will be under the direction of a strong board of directors and with the support of the people is bound to be a success and a strong incentive to better farming and increased interest and optimism in that part of Nova Scotia.—W. A. McK.

A Patriotic Effort.

Mr. John A. McNeil, well known in building circles, but who has spent several years away, living in the midst of a great farming district in the American West, is back in Cape Breton, and has a project for the improvement of farming conditions in Cape Breton. Mr. McNeil is very enthusiastic over the agricultural possibilities of his native country, and he is giving practical proof of his belief in it. He has purchased seven hundred acres of land in Victoria County, near Baddeck, and has brought with him a number of men, mostly from Quebec and New England, to work it. The farm will be divided into lots of twenty or thirty acres, one man working each.

"We can get a large number of farmers here from Vermont and Massachusetts," said Mr. McNeil. "All that needs to be done is to advertise the Island. A large number of these people are native sons, who left here years ago, and they would be glad to come back with their families. There is splendid farming land, and abundance of it, and all that is needed is some hearty booming to place the advantages of the country before the eyes of these people.-'

Mr. McNeil compares the East and West, and is emphatically of the opinion that the East has more to offer the farmer. "The farmers of the East," he says, "live in luxury compared with those out West, who tie themselves down to one or two products, while the easterners go in for variety. The East, in fact, has many advantages, The farms are generally well-wooded, which saves the expense of buying coal, a big item in the West. Then they are very near a good market, and connected with it by rail or boat."

Mr. McNeil is undertaking a work which is patriotic in the true sense. He will endeavor to show what can be done with Cape Breton farms and to bring back the stalwart sons of Cape Breton whom the United States has been taking away from us for years. We have no need of immigrants to come and work our vacant farms, if even a small part of our own comes back to us. It is sincerely to be hoped that Mr. McNeil may be wholly successful in the laudable enterprise he has undertaken.—Maritime Merchant.

Varieties of Fruit for Victoria, N. B.

Editor Maritime Farmer:—

Will you kindly tell me through the columns of your valuable paper what is the best early variety and the best late variety of strawberries to plant in northern N. B.? What is the best variety of blackberries? Can pears be grown in this country and if so what variety? What kind of plums would do well and do you think we could grow the Baldwin apples?—L. S. E.

The Senator Dunlap is a good early strawberry and the Glen Mary is a good late variety. Both these varieties are perfect. For blackberries I would recommend Agawan or Snyder. I do not think it would be advisable to try pears in your district. For plums I would recommend only the Moore's Arctic. I do not think that the American Baldwin apple would grow in that section as it is too tender, but Canada Baldwin would probably be hardy and yield well. A. G. T.

United Fruit Companies Charter Their First Steamer---Loading Her in 30 Hours.

Such a rush has been going on in the company's warehouses during the past fortnight that in order to relieve the congestion, outside steamers have to be chartered. This is contrary to what the management anticinated. It was thought on an off year, with the regular weekly service to London, the direct line to Liverpool and the fortnightly calling of the Allan line for Glasgow, that the steamship companies would be able to handle the situation. However, such is not the case for the united fruit companies are packing at the rate of over 3,000 bbls. of apples per day.

On Thursday last the S. S. "Salvatore Di Giorgio-' was dispatched to London with a full cargo of apples being loaded entirely by the united fruit companies of N. S. Although the companies had five days to load this steamer, arrangements had been made with the D. A. R. to run specials night and day which enabled them to load the boat in thirty hours.

A review of the apple shipments from Nova Scotia reveal tremendous strides. Within the past week 60,000 bbls. of apples have been shipped out which exceeds the whole season's output of a few years ago. This is only the commencement of what is to come. With the increasing young orchards coming into bearing, who, at present, would dare to predict the possibilities of the fertile fruit lands of the little strip of land, six to eight miles wide and only about sixty miles long, which is even at the present time famous the world over as the Annapolis Valley? It is thought that ere long the united fruit companies of Nova Scotia will be more deeply interested in the earnings of the steamers carrying the apples which even now is of considerable importance. The freight alone on the last little batch of apples sent from Halifax to South Africa amounted to nearly $13,000.00.

There is no reason why the fruit growers in Nova Scotia should not under the present system of co-operation, participate in the profitable transporting of their own production. —Ex.

Gastrio-Enteritis.

Editor The Maritime Farmer:—

I have a Plymouth Rock hen, just a year old, whose comb is quite dark. The hen has a good appetite and seems to be alright. I am afraid the dark comb might be caused by a disease and it might affect the other hens. The hen was alright until quite recently. Can you tell the cause and do you know the cure?—Fanny Tilly, Nfld.

You have no cause for alarm as your hen is not suffering from a contagious disease. The hen is simply out of condition and suffering from a derangement of the digestive tract, technically known as Gastro-enteritis, this affects all the digestive organs, including the liver. The cause of the trouble generally is a change of food, probably too many new green oats, etc. Put her in dry, comfortable quarters, dust her with insect powder or flour sulphur, feed sparingly of light food for a day or so, and give with drinking water muriatic acid, at the rate of one teaspoonful to one quart of water. Muriatic acid is the best known remedy for all disorders of the digestibe tract, and when followed up will cure "black head" in turkeys and fowls.—S. J.

Carload of P. E. I. Live Geese for the Boston Market.

Freight trains over the Intercolonial Railway from Point du Chene are carrying some pretty noisy freight these days. Live geese are being shipped from Prince Edward Island to the Boston market in great quantities. The birds are sent by steamer from Summerside in crates, and are loaded on freight cars at Point du Chene, each car being converted into a moving tenement capable of transporting 500 or 600 of the bipeds.

Pt. du Chene is a quiet enough place ordinarily but just now the silence is broken by a stupendous honking and hissing, and the din of a train load of live geese may be better imagined than described. And the noise continues all along the route.

The geese are being shipped to Bostoa consigned to a syndicate that is handling poultry on an extensive scale. The birds are not killed at once, but kept for a wnile and fattened until they are sufficiently succulent for the palates of American epicures. Raising geese is a profitable occupation with the prices now prevailing.

HORTICULTURE.

Growing Nursery Stock in a Cold Climate.

The question of nursery stock is one of much importance to the fruit grower. If he does not get the right kind of stock, no matter how closely he follows everything recommended, he will not have good success with his orchard.

It is sometimes unfortunately the case when a man orders trees, that the order is not filled by good stock and he is not able to get redress. There are several advantages, therefore, in ordering nursery stock for home nurseries. One advantage is that you can go and see the trees you are going to plant. If the trees are not satisfactory when you get them, you can return them and demand redress. This is a much more difficult process, when the man is a thousand miles away. If your trees prove to be diseased or are affected by insects it is also easier to get redress. These are some of the advantages of getting stock from a local nursery. On the other hand there are disadvantages.

The range of the native trees north to south has been determined by probably thousands of years of acclimitization. Our experiments at Ottawa for over twenty years show that native ornamental or forest trees from the south might fruit at Ottawa, but some years would be tender and kill back and not be vigorous and hardy. It has probably taken thousands of years to acclimatize those tender trees to their present northern limit. They might be hardy enough to produce seed, but the wood of individual trees keeps killing back. When we come to such apples as King and Baldwin, Rhode Island Greening, and some of the tender varieties, tender for certain parts of the province of New Brunswick, we find the same thing happening. These trees originated in a much milder climate than the province of New Brunswick. Their range has been determined largely by the relative degree of hardiness that is inherent in them, and it has been found by experience that if one introduces these trees and tries to grow them in northern nurseries, tries to grow Rhode Island Greening or King or Baldwin or any of these apples that require a long season's growth and are what we call tender, they prove a failure, they kill back, the bark splits. We cannot grow these trees in northern nurseries profitably. A tree that is tender will not be made hardier by growing it in cold districts.

COMPARATIVE HARDINESS.

You may ask: Will the average apple originated, say, in the province of New Brunswick be necessarily hardier than the apple which is originated, say, in the State of New York or Rhode Island? No, it might not be hardier if originated there. If I sow the seed of the Wealthy apple in the province of New Brunswick, the seedling of that apple is not necessarily hardy. Some may be hardy and some may be tender, and it will require a great number of years before one will find out which seedlings are going to be hardy in New Brunswick. When one has a seedling, say, the Merrit, which originated in the province of New Brunswick, an apple tree that has been able to withstand the cold climate year after year, you cannot say that variety is hardy because it is able to withstand the cold climate. Seedlings from a hardy tree, however, are much more likely to be hardy than seedlings from a tender tree. We have found that in our experience.

Which, you may ask, is the better, Northern or United States grown stock, local grown New Brunswick stock or stock grown, say, in the province of Ontario? Which is the better stock for us to use? Are there great advantages in growing home-grown stock, or are there not such great advantages?

CLIMATIC DIFFERENCES

In the warmer parts of Canada and the United States they have a much longer growing season than you have here. The result is that they can plant nursery stock on much richer soil than you can and have the trees ripen thoroughly. If you plant nursery stock in Northern New Brunssoil, your trees will not be properly ripened and will be almost certain to winter kill.

There is danger in getting nursery stock, even from the southern district, in getting it properly ripened because trees are dug which are not thoroughly ripened. For instance it has been the practice—I won't say it is the practice now—to dig trees in large nurseries while the leaves are still green and strip the leaves off so as to give the tree the appearance of being thoroughly ripened. You can easily see that if such trees are planted in another district they are liable to be too tender for the first winter. So that you see from my standpoint there is not sufficient evidence in regard to the quality of the trees from the southern nurseries and the northern nurseries to warrant the statement which has been made that northern stock is the best stock. For instance, I believe you can get hardy stock ripened in southern nurseries and secure just as good results from them as from stock from the home nursery.

DISADVANTAGES.

Some of the disadvantages of growing nursery stock at home and in colder districts include the following: There is a temptation at home to grow nursery stock in rather rich soil in order to get a strong growth and a strong tree. If you plant your trees on a clay soil or a heavy soil there will come certain years when the fall is favorable to late growth when you will lose a large proportion of fine, hardy varieties, such as McIntosh Red and Fameuse. So if one wants to have home-grown stock one must grow it on rich soil which is not too rich. If your soil is well drained and warm your stock should be thoroughly ripened before the winter sets in.

Another disadvantage of growing trees at home is that one loses one year very often in the growth of trees if one wants to get good stock, because no matter whether you grow your trees on light soil or heavy soil we have found in some winters in a cold climate the trees become what is known as "black-hearted." This is due to the fact that the trees have made too late a growth, notwithstanding the greatest care. It may also be that trees have ripened their wood all right and a very severe winter follows while the trees are quite young, and the result is the pith and wood of the trees are damaged, but the cambium being alive the tree goes on growing next year, and unless one treats the tree the way I have described one is liable to have black-hearted trees. While black-heart may not be a very serious injury to a tree in its early history, just as soon as they begin to lose the branches disease will begin to work on the trees, and eventually the tree will decay and break down. After a very severe winter, we have found that black-heart occurs in trees set out in the orchard three or four years. As a rule, I think I am safe in saying it occurs in the nursery. We want to avoid this black heart in trees.—W. T. Macoun, Dominion Horticulturist, Ottawa, before the N. B. Fruit Growers Association in 1910.

He Bought Her a 1900 Washer

ONE OF OUR READERS TELLS HOW HER HUSBAND LEARNED

What Washday Means to a Woman

DEAR EDITOR:--Most men have no realization of what "wash-day" means to a woman. My husband is one of the best men that ever lived, but he laughed when I asked him one day to get me a 1900 Gravity Washer. I told him it would wash a tubful of clothes in six minutes. "Why, wife," said he, "a washing machine is a luxury. And besides, there's no better exercise than rubbing clothes on a washboard. It's good for the back. I think we had better wait 'til we get the farm paid for before fooling away money on such new-fangled things as washing machines."

John's "Busy Day"

That settled it. I gave up the idea and kept right on washing in the same old way. I confess that I felt hurt, but I knew John had no notion how hard it was to do the washing for a family of five—three of them little tots. I am not very strong, and the washing, with all my other work, finally got the better of me. I had quite a sick spell, and after things had gone at sixes and sevens for nearly two weeks, I suggested to John that he had better do the washing. We couldn't hire a girl for love or money, and the situation was desperate.

So one morning he started it. My, what a commotion there was in the kitchen! From my bedroom I occasionally caught glimpses of poor John struggling with that mountain of dirty clothes.

If ever a man had all the "exercise" he wanted, my husband was that man! Couldn't help feeling sorry for him, and yet it made me laugh, for I remembered how he made fun of me when I hinted so strongly for a 1900 Gravity Washer. When he finally got the clothes done and on the line, he was just about "all in."

That evening John came to my room, and said kind of sheepishly—"What's the name of the firm that makes those washers you were telling me about?" I looked up their advertisement and found the following address:

G. X. MORRIS Manager
The 1900 Washer Co.,
357 Yonge St., Toronto, Can.

That's all he said, but he lost no time in sending for their Free Washer Book. The book came in due time and with it an offer to send the 1900 Gravity Washer on thirty days' free trial. My husband jumped at the chance to try the Washer without having to spend a cent. "We'll have four weeks' use of the Washer anyway, even if we don't decide to keep it," he said! So he told the Company to send on the Washer.

It was sent promptly, all charges paid, and the 1900 Washer Company offered to let us pay for it in little easy payments. The next week I felt well enough to use it. It is the nicest Washer I ever saw, and it almost runs itself. Takes only six minutes to wash a tubful, and the garments come out spotlessly clean.

We were all delighted with the Washer, and wrote to the Company that we would keep it and accept their easy payment terms of 50 cents a week. We paid for it without ever missing the money and wouldn't part with the Washer for five times its cost if we couldn't get another just like it.

If women knew what a wonderful help the 1900 Gravity Washer is, not one would be without it. It saves work and worry and doctor's bills. Takes away all the dread of wash-day. I feel like a different woman since I have quit the use of the washboard. And if any woman's husband objects to buying one of these labor-saving machines, take a hint from my experience. Let the man do just one big washing by hand-rubbing on the old-fashioned washboard, and he will be only too glad to get you a 1900 Gravity Washer.

Anybody can get one on free trial, by first writing for the Washer Book.

Excuse me for writing such a long letter, but I hope, Mr. Editor, you will print it for the benefit of the women readers of your valuable paper.

Sincerely yours, MRS. J. H. SMITH.

Practical Apple Growing.

There are many factors to be taken into account in the consideration of the best varieties, or rather the best paying varieties of apples, that one need scarcely look for the same answer from any two growers.

Some of these factors that the planter must take into his estimates are:—

1. Rapidity and strength of growth as well as hardiness and vigor;
2. Early bearing habits;
3. Heavy bearing or shy bearing varieties;
4. Amount of feed necessary for good annual yields. Some varieties have to be fed much more heavily than others to get satisfactory crops;
5. Ease in producing fruit. Some trees from the nature of their growth are much easier to prune, spray, cultivate and pick than others;
6. Keeping and shipping qualities of the fruit;
7. Resistance to disease, rough handling, etc.;
8. Market demand, hence average prices;
9. A good reputation, obtained by a good average over many years.

The perfect apple, which by the way, has not yet been found, would excel in all these points. So when we speak of the best varieties we choose those which combine as many of these excellencies as possible, remembering, of course, that all these are of equal importance.

To illustrate my meaning:—The Ribston is a continual bearer and bears early in life quite heavily. The fruit carries well, will stand rough handling but the apple does not grow free from disease and it is not a high-priced apple. It is, however, considered to be one of the best paying varieties here in Nova Scotia.

The Gravenstein, also one of the best varieties does not carry well, is subject to fungus diseases, but on the other hand it bears well, and is very desirable in the market. The Cox's Orange is one of the best flavored apples grown and until recently, the highest priced apple in the English market. Its draw-backs are that the tree is a shy bearer, requires to be well fertilized and has a delicate growth.

WHEN A TREE PAYS.

Among the old varieties, in my opinion, and I find it is held by many other orchardists, we must place the King, which has to be well fed, and the old Baldwin as the best paying varieties, after they come into bearing. This reluctance on their part to get to work constitutes their great drawback. By grafting the former onto the stock of a good bearer one will often get the tree into abundant bearing early. These two apples have been bringing top prices for some time.

The age at which a tree will come into profitable bearing depends also largely on the care it has received. Since transplanting, Northern Spies, by being well cared for, and pruned very little during their growing period, have come into bearing profitably at eight years, although fifteen years is the time generally given them. I would say that the ages that five or six of the best varieties take to come into profitable fruiting are as follows: Baldwin, 10 years; Spy, 12 years; Ribston, 6 years; King, 12 years; Gravenstein, 5 to 7 years; Wagener, Cox's Orange, etc. 5 years.

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can be placed in the cellar or in any suitable room in the house.

The use of the "Tweed" Chemical—a liquid disinfectant and deordorizer—keeps the closet absolutely odorless. For ventilation the "Tweed" is connected by a pipe to a chimney hole or stove pipe.

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What Says C. H. Purdy, of Bear River, Warden of Digby County, N. S.?

"I was a complete cripple with Rheumatism saw EMPIRE LINIMENT advertised and tried it, after every known Liniment and Rheumatic cure. Here I am to-day, sound and well, after using only a few bottles. I recommend it to all sufferers. Don't be without it.

C. H. PURDY.

Taking into consideration all the desirable points. I have not much hesitation in claiming for the Baldwin the highest place. The tree is easily pruned, sprayed and cared for. It has a reasonably sound and vigorous growth, is a good bearer, has a good reputation on the market and is a fine carrier.

WHAT IS A TREE WORTH?

In my own experience the Baldwin has given the best ten year results. The question of what a tree will do, must depend largely on the age bearing surface of the tree. I have Baldwins that averaged in the last decade, six barrels to the tree, and others that would only average two, and still be full. A 25 year old tree should give an average yearly crop of four barrels, and this is a good record. Of the four barrels per tree, three at least should pack which would give $6.75 per tree per year, counting them by my average, which is $2.25 per packed barrel. I consider this, though, to be above the average, but we are speaking now of the best paying varieties.

The King on its own stock is a shy bearer but when it is grafted on the Talman Sweet which is a prolific species, it becomes a very good bearer. I have two trees so grafted which average me three barrels to the tree.

From practical experience I find this one of the hardest questions to answer, in the whole range of problems of commercial orcharding. During the last year, I asked twenty different men, men who should know most about it, and I got a list of some fifty varieties. Almost every orchardist has some pet varieties and we all differ. Last spring I planted almost 1,000 trees and these were chiefly Stark and Baldwin for standards and Wagener and Cox's Orange for fillers. These early bearing ones are planted in order to make the land produce something soon.

In planting out a wholly new orchard I would select a range of varieties covering the whole year from September to May, so as to have picking, packing, etc., extend over as long a period as possible and so avoid a congestion of labor in any one period. In this part of Canada I would plant the following varieties: for September, Gravenstein, Duchess and Wealthy; for October, Ribston, King and Blenheim Orange; for November to March, the Baldwin, Wagener, Cox's Orange, Stark and McIntosh Red. I would not plant out more than 8 varieties, for a commercial orchard, for the principal reason that a few sorts will sell better, be less trouble to pack, can be sold in larger quantities at one time, and will attract buyers more readily than small lots of many varieties.—R. J. Messenger, Bridgetown, N. S.

Reward of Extra Care.

In selling fruits and vegetables the grower should gather the best only, put it up in attractive packages, have his name and address plainly written on the package, and seek to build up a trade thereby. The consumer should be more than satisfied; he should be anxious to get more, even if a better price be asked.

It is possible to establish a trade in such products and even eliminate the dealer. Our own experience has shown that it pays to put on an extra product and to take extra pains to make it attractive. No one is deceived in poor packing but yourself, because you expect more than you get by such packing. The consumer is exacting and discriminating, and there is no good business reason for expecting that anything will be gained in the long run by sending out poor stuff, even fair stuff, in faulty packages.

Try an extra product, put up in excellent shape, and then watch the results. If it does not pay you will not lose anything. But it will pay.

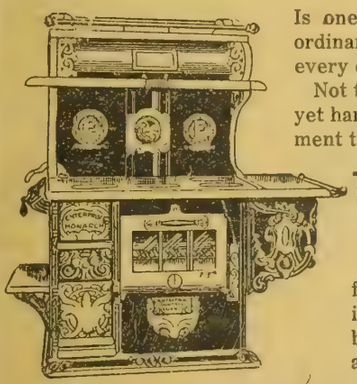
Your Money Back IF

The "if" is big because few want it. But this frank, fair offer shows your dealers faith that the rare richness of this tea's flavor will delight you:—

All you have to do if you do not like the flavor—yes more than like it—is to return the broken package and receive your money back.

35c., 40c., and 50c., per lb.

A Reasonable Range



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Not too ornate and hard to keep clean, yet handsome in appearance and an ornament to any kitchen.

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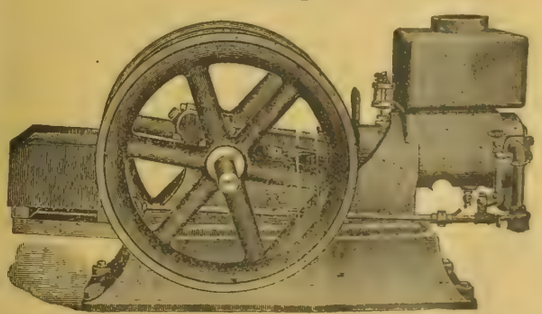

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DAIRYING.

More Profit From the Dairy Cow.

There has been in years past and still is, although the number is decreasing from year to year as the dairymen come to learn more about the business, a large number of cows that do not pay their keep. They do not pay for the feed they eat, to say nothing of the labor required to feed and milk them twice a day.

Most dairy farmers are in the business for the dollars there are in it. They are not keeping cows for sentimental reasons and running a charitable institution for the aid of cows not capable of taking care of themselves. They do not pretend to keep cows for this reason, yet this is precisely what many are doing—running a charitable institution unwittingly. If the cow is not paying a profit at pail, she may be made to pay a profit as food for human consumption and this is what should be done with her. If she is fit only for beef, convert her into beef and do not try to fool yourself into thinking that she is a dairy cow.

Which class she belongs to cannot be told at a casual glance. She must be tried by scales and butter test in order to be at all sure. Some very intelligent dairymen have been wonderfully surprised at the difference between their own estimate with the eye and the showing of an actual and thorough test. There are two ways to increase the profit from the cow. One is to improve the cow and the method of caring for her, and the other is to decrease the cost of keeping her. A combination of these two methods usually give most satisfactory results.

Not all cows are in themselves responsible for poor records. The president of the Vermont Cow Testing Association remarked at the annual meeting that it was as much a man test as it was a cow test. My own actual experience showed that a herd of cows kept on the same farm for several years increased their yearly average of butter-fat at the creamery from 175 pounds a year to 316 pounds a year by a change of owners.

A cow to produce butter-fat must have more than just enough feed to keep up her physical economy, else there will be no surplus with which she can manufacture milk, for a cow is a factory, and manufactures from the food given her the butter-fat that you desire through the intricate processes of her physical organization. If the material furnished her is poor or not sufficient for the purpose, or her surroundings are such that she has to use a large part of it to sustain life and bodily heat, she will not deliver to her owner a very large quantity of her finished product, but in such a case she herself is not lacking. She cannot make bricks without straw.

The testing associations show the man where his trouble is and the cow soon proves her worth. Think you Belle De Kol would have beaten the world on the feed given thousands of good cows throughout the country? Look at the record of her feed, at her size, and observe that she was a cow of wonderful capacity and that she was furnished with all the perfectly adaptable material that she could handle with which to manufacture her product. Here then is one method by which more profit may be made from the dairy cow. A man may study this out for himself with the aid of ration tables, experiments with his individual animals and good judgment, but he will arrive at results quicker if he has the aid of experienced assistance.

The cow that does not convert her food into the desired product should be exchanged for one that does. The scales and the Babcock test will determine this, and here again a man may study things out for himself or have trained assistance. The pioneers in all this work, worked out their problems alone, but the farmer today may take a shorter route and arrive more quickly by taking advantage of the services of those who have studied the matter before him. The average farmer's time is worth more to him than the small amount of money that it costs to belong to a cow testing association.

Where there is no association to which he can belong the outfit with which to do the work himself is not expensive, or he may get pretty accurate results by having his milk tested at the local creamery at stated intervals. Once a month does very well and he can weigh and estimate his feeds himself, weed out the poorest cows and buy or breed better ones. Better half the number of good cows, well fed and cared for, than the whole herd with poor cows, poor food and poor care. Better no cows at all for the poor herd pootly cared for will run its owner behind. The obvious way to produce more profit here is to improve the cows.

Still another way is to lessen the cost of the food consumed, not by reducing the quantity or the quality, but by producing it cheaply. Hitherto cows have consumed a good deal of timothy hay and grass. This costs as much or more to produce as any feed possible and contains the least material for buttermaking. Raise clover hay, peas and oats, any of the legumes that do best on your soil. They furnish more protein and leave the soil better that they found it. Build a silo and make ensilage of well eared corn. Such silage as this, with clover or pea hay, will furnish the needed material with the addition of a portion of cottonseed meal and barn and will be less expensive. Keep up the milk flow with green feed and improve the pastures by sowing to clover seed after going over them with a harrow. Every dollar decrease in the cost of food means an added dollar in the profit of the cow. The business of dairying should be studied from every point as thoroughly as any other manufacturer studies the profit and loss columns of his work. When this is done, dairying will prove a more profitable occupation that it has been in the past.—Kimball's Dairy Farm.

A Practical Minister.

Ministers as a rule devote their time wholly to affairs spiritual, having little time and possibly little inclination to give to the physical welfare of their constituents. We have learned of one minister, however, who is different than most of them. From a clipping taken from an Illinois paper it is evident that one pastor, at least, takes as much pleasure in interesting himself in the daily labors of his farmer friends as he does in administering to their spiritual welfare. Under the heading "Are You Keeping Cows or Are They Keeping You," the item reads:

"Neither the fullness of your milk pail nor the size of your cream check can answer this question. A rough guess must always come short of satisfaction. There are ways of knowing absolutely which cow helps to feed you and which one makes you feed her. The scales tell how much milk Bossy gives per year, and the Babcock test tells how much butter fat it contains.

"If you would like milk tested I will furnish you bottles, preservatives and directions, and test the milk for you at ten cents per cow. First come, first served."

To Prevent Chapped Skin

—use warm water and Baby's Own Soap.

The warm water opens the pores of the skin and the minute particles of pure refined vegetable oils which form the creamy, fragrant lather of Baby's Own Soap are absorbed into the skin, keeping it soft, healthy, and preventing cracks and chaps.

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The Man and the Cow.

It was a bit of good sound thinking that Dean E. A. Burnett of the Nebraska Agricultural College used in his address before the Nebraska Dairymen's Association. In the course of his remarks, he said:

"Two things are necessary in order that the dairy business may prosper and those two things spelled out are the cow and the man.

"Fortunately you cannot just go out and pick up either by the carload. You have to breed both of them because a man is not necessarily a dairy animals because she gives milks cows and a cow is not necessarily a dairy animals becadse she gipes milk. In order to have a successful dairy business you must have a man who is educated to the business, who knows the business and is willing to learn the business, and you must have the cow that can deliver the goods. It takes years of training to make the best of dairy men and it takes years of breeding and selection to develop the best cow.

"When you find a man who has behind him these years of training, there is no trouble about his making money in the business and there is no trouble about his finding a place to work under profitable conditions if he wants to sell his services to some other man. When you find a cow that is capable of producing a large yield of milk or of butter, then she is worth more money to the dairyman than the average man believes."

Farther along in his address the dean spoke of the immense value it would be to the dairy farmer to have grass the year round and said:

"You know when you turn your cows out in the spring on grass that they go up in their milk production.

"What is it that makes that increase in the production? It is the succulent, easily digested feed. If we can have grass all the year round, why not have it and we can have it by means of the silo."

Neutralizing Acid in Overripe Cream.

It is customary in some creameries known as "Centralizers," to neutralize the excessive acid which is found in cream delivered but once or twice a week during hot weather, then pasteurize and ripen with a pure culture or "starter". In order to obtain some data on the effects of various neutralizers, five experiments were conducted at the O. A. C. Dairy School, in August and September, testing the effects of Baking Soda, Washing Soda, Lime Water and Milk-lime, when added to sour cream before pasteurizing.

COMMENTS ON RESULTS.

1. The addition of the "neutralizer" had the effect of lowering the percentage of acidity in the cream to a marked degree. Pasteurization of the cream had a further effect of reducing the acidity, probably due to a more perfect chemical action as a result af the process of heating, although pasteurization alone reduces the acidity of cream to a slight extent. This latter effect is probably caused by a freeing of some of the natural lime salts of milk by the action of heat. The acidity did not seem to develop afterwards on the neutralized cream to the same extent as in the normal lots pasteurized and ripened with a similar percentage of culture.

2. In all cases, except the one where washing soda was used, the cream churned in less time after partial neutralization of the acid before pasteurizing. To some extent this may have been due to less weight of cream in the churn for these lots. There was also a tendency for less loss of fat in the buttermilk from these lots, as compared with the normal lots.

3. There was also a difference in the percentage of moisture and salt in the finished butter from the various lots.

4. The "overrun" was less in the lots where the cream was neutralized, as compared with the "overrun" from similar lots not neutralized. In the four tests which are compatable, the average "overrun" in the normal lots was 16.9 per cent., while the others averaged 13.2 per cent. The tendency was for a lower yield of butter in the lots where the cream was neutralized before pasteurizing.

5. There was little or no difference in the average scores for flavor, or in the total scores of the four lots.

6. The results by neutralizing with lime water before and after pasteurization of the cream were not decisive. More experiments on all these points are needed before drawing conclusions.—Prof. H. H. Dean, O. A. C., Guelph.

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If you make your living out of the butter you sell, then anything that will make the butter better will make more money for you.

WINDSOR DAIRY SALT

has proved its quality and superiority in thousands of dairies and in hundreds of contests.

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FORMER ARMY CHAPLAIN PRAISES OCEAN LIMITED

South African Veteran Declares it is the Best on the Continent.

Moncton, N. B. Oct. 23.

Rev. W. G. Lane, one of the Chaplains to the first Canadian contingent to South Africa, and now pastor of the Wesley Memorial church in this city, has just returned after an extended trip to the western States, and has this to say in comparison of American and Canadian railroads.

"The "Ocean Limited" was by far the best equipped and most comfortable train we came across in our travels and we travelled on the crack trains of some of the biggest of the American railways. We came across nothing that could beat, or even equal, either in equipment or comfortable riding qualities the famous express of the Intercolonial. People who return from the States and talk of the superiority of the American roads over that of the Canadian Government either do not know what they are talking about or else are deliberately seeking to belittle the railroads of Canada."

The Gases of Emmental Cheese.

Why holes in cheese? What makes them? and what do they contain? Exhaustive research alone can solve this tangle, but it is believed that the investigation reported in Bureau of Animal Industry Bulletin No. 151, bearing the title at the head of this article has provided both a clearer definition of the problem and a sound basis of fact.

The so-called "eyes" in Swiss cheese are, as is well known, its most prominent characteristic, and its commercial value is largely dependent upon the proper size and spacing of these eyes, says a press bulletin from the Department of Agriculture. While the hole is not the whole of it, much depreciation in value of this popular variety of cheese, in both domestic and foreign kinds, is known to exist because of defects in eye formation. Hence to the biological chemist their formation is a facinating subject, and to the cheesemaker a matter of great importance. In certain districts the dealers rely almost entirely upon these features, and, shortly after the eyes have reached their proper development, relieve the maker of further care. Therefore the American makers of Swiss cheese are unable to attend to their cheeses in that mellowed old age upon which so much of the fine flavor of a true Emmental cheese depends. Although this quick marketing may be deprecated it nevertheless raises the relative importance and adds significance to whatever knowledge can be gained concerning the process of eye formation.

The experimental work described in this bulletin which can be secured by those interested from the Secretary of Agriculture, concerns the chemical contents of these eyes, the gases of which are immediately concerned in the process of their formation, and offers the following conclusions:

The gases of normal "eyes" in Emmental cheese are exclusively carbon dioxide and nitrogen, and of these only the carbon dioxide is of significance.

The nitrogen accompanying the carbon dioxide in normal eyes is that of air originally occluded in the curd at the time of manufacture.

There sometimes occurs during the initial fermentatian an evolutian of gas characterized by the presence of hydrogen. This is believed to be due to the gaseous fermentation of sugar.

The hydrogen from such an initial fermentation may sometimes linger to contaminate the gas of normal eyes.

The two fermentations are distinct and are characterized by their gaseous products. The one is detrimental, the other that demand of a good Emmental cheese.

High oxygen-absorbing power combined with low permeability of the cheese to air render the interior thoroughly anaerobic, and consequently favorable to the growth of anaerobic bacteria.

A comparison between the amount of carbon dioxide evolved and the total volatile fatty acids shows that the activity of the propionic bacteria of Von Freudenreich and Jensen is not sufficient to account for all the carbon dioxide found.

It was found that cheese was capable of retaining a very large mount of carbon dioxide.

The possibility is suggested that there are two phases in the formation of normal eyes, a saturation of the body with carbon dioxide, and an inflation of eyes; and the bearing of this hypothesis on the production of gas by a specific cause is discussed.

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Just ask yourself this question Mr. Farmer, "Is my barn roof lightning proof—is it fireproof?

It's not a cheerful sight to see your barn—full to overflowing with the season's crop—wiped out by lightning or a spark from the threshing engine.

All because of faulty roofing.

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Roofs covered with **"Eastlakes"** a quarter of a century ago are in perfect condition to-day. This is the best guarantee for you.

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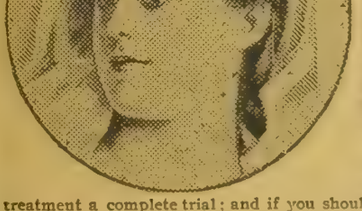

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I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to [illegible] the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address**, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost**, my book—"**WOMAN'S OWN MEDICAL ADVISER**" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with this wonderful remedy. It cures **all, old or young.** To **Mothers** of **Daughters**, I will explain a simple home treatment which speedily and effectually cures Leucorrhoea, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will tell any sufferer that this **Home Treatment** really **cures** all woman's diseases and makes them well, strong, plump and robust. **Just send me your address**, and the free ten days' treatment is yours, also the book. Write to-day, as you may not see this offer again. Address:

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LIVE STOCK.

Line Breeding as Applied to Sheep.

(A paper read before the South African Association for the Advancement of Science, Port Elizabeth, by Mr. C. Mallinson, principal sheep and wool expert of the South African Department of Agriculture.)

It is well that we should at the outset carefully define what we mean by the term "line-breeding" as opposed to "in-breeding"; the former is breeding from the same blood or within the same family, by selection (but not from such close affinities as parent and offspring and brother and sister,) whilst the latter is the ill-considered mating of the closest relations within the one family. Even these definitions are not quite satisfactory, for the point where line-breeding ceases and in-breeding begins is difficult to determine; in fact, the way in which that point can be determined is uncertain, the only factor available in such an inquiry being the result obtained.

Notwithstanding this difficulty, it is beginning to be recognized that the grading-up of flocks can be successfully accomplished only by line-breeding, and the large number of breeders who have refused to adopt this method have, in general, overestimated the dangers of such a system, and failed to grasp the immense benefit to be derived from its adoption. Rams are constantly being introduced into the flock in the belief that the introduction of new blood will add to its strength and vigour; yet there is evidence that some of the most valuable flocks in Australia belong to men who have never been prominent buyers of rams. One might go further, and say that there are flocks in Australia —and flocks of the highest class—which have received no introduction of new blood for the last sixty years. Even among the more modern flocks violent outcrosses are avoided by those sheepmen whose studs have passed through the initial stages and reached any degree of uniformity.

In-breeding in itself should not, it may be argued, effect the constitutions of the animals if it be not carried too far, and there should be no reason why one fault should be given prominence over another. But the difficulty is to determine how far in-breeding may be carried on without going too far. What in-breeding actually does is to enlarge all the characteristics of the animals bred, and to give prominence to the merits and faults of the particular family used whether those merits or faults are those of constitution or anything else but its results are so uncertain that this system is to be avoided; for selection is impossible, owing to the small number of units in the family available for selection, that is to say, circumstances prevent the culling of individuals with undesirable qualities stamped upon them, and thus such breeding cannot do anything but deteriorate the flock.

Line-breeding, on the other hand, is so remote and complex, owing to the great number of units in a flock, that selection can be made so as to counteract the growth of particular faults and to encourage desirable qualities. Independently of the selection difficulty, however, it may be stated that breeding between two descendants of a near common ancestor is intensified in-breeding; it is in-breeding carried to its furthest limit; whereas in-breeding between descendants of a remote common ancestor is modified in-breeding, or, as it is called to-day, line-breeding. It is remote, and therefore the characterizing effects of the system are less prominent.

Selection is the essential, for it is by this means that the advantage is to be reaped. No first-class flock ever existed that was not of a type, and the type cannot be fixed by any other method than selection. Yet mere selection in a flock into which fresh blood from strange families is introduced from year to year cannot be expected to fix any type. Of course, it must be borne in mind that while external faults are visible to the eye, and may thus be directly guarded against by selection, there are other characteristics such as a weakly constitution or a tendency to unthriftiness which are not so obvious, though these, too, will be eradicated by judicious annual classing.

It is not my intention in any way to disparage the usefulness of an introduction of new blood in certain cases. There are cases in which such an introduction might be necessary to correct undesirable characteristics or failings, or to give prominence to some desirable quality, but—and this is an important thing to remember—the improvement must be made by using a ram of the same breed and the same family as the flock it is desired to improve. At the same time the proper method for the established breeder is to reject fearlessly all undesirable sheep. In the same way as drastic treatment is necessary when pruning a tree, so thorough classing is good for the flock. Let no unworthy animal be spared. The mere moral effect of having a few poor animals in the flock is bad, for it constantly lowers the standard of the breeder's excellence. Weed out the flock every year on this account, but even more because a bad tree will inevitably yield evil fruit. Above all things the farmer should learn to shun the delicate, unthrifty and weak in constitution. No animal, however fine in appearance, if of feeble constitution, can be expected to breed well, least of all can prepotency be looked for in a sheep of delicate health.

The theory that "the methods my father and grandfather followed are good enough for me," is one of the worst ever formulated. It generally indicates that the inherited method is a foolish and careless one. Traditions of this sort are usually kept by those whose fences are rotten, whose weeds are uncut, whose sheep are half-starved and diseased. If it were otherwise the son and grandson would have been educated up to a progressive spirit, for he who is first is by his very priority of effort inspired to maintain his pre-eminence. What is necessary for us all is to learn what the scientist has to teach, and then apply it in a practical common-sense way, and therefore the sooner all the sheep farmers in this country study scientific methods of breeding, and apply them to their flocks the sooner will South Africa occupy her proper place amongst the pastoral countries of the world.—Pastoralists Review.

Sows Eating Pigs.

I have a very fine Yorkshire sow three years old. She always has two litters of seven pigs each, every year. She is a good, careful, old mother with her young. At time of farrowing the sow is nervous and easily disturbed, and should have perfect quiet. I always watch the sow carefully, so that she is never alone with her young at that time. She is a very ravenous creature, and I would not risk the chance for fear she would destroy her young. Last March I stayed with her from eleven o'clock at night till seven the next morning, and it was a very cold night; but I had eleven fine little pigs to reward me for my trouble.

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Makes Cows Give More Rich Milk.

International Stock Food conquered England, just as it conquered Canada and the United States, by proving to the Dairy Experts that it is the greatest milk producer and health restorer in the world.

The test was made on three cows from the dairy herd of S. W. Hackney, Esq., Leeds, England, Chairman of the Yorkshire Federation of Dairy Farmers.

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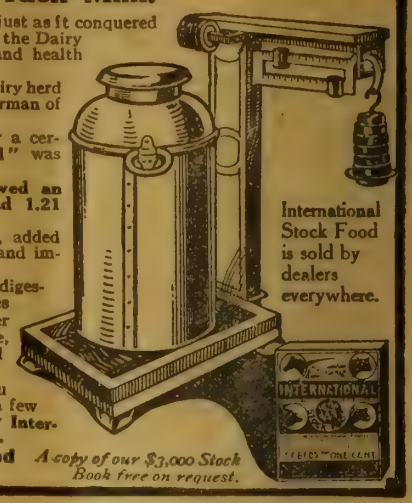
INTERNATIONAL STOCK FOOD showed an Increase in Milk of 14.2 pints daily, and 1.21 pounds of butter daily.

This proves that International Stock Food, added to the regular feed will increase the quantity and improve the quality of milk from every cow.

It shows that International Stock Food aids digestion and keep cows in better condition. It proves that International Stock Food is a money-maker for the farmer—that every farmer who owns one, or a hundred, cows should feed International Stock Food every day.

Make the test yourself—weigh the milk you are getting now—then feed International for a few weeks, and weigh again. Then you'll see how International Stock Food will make money for you.



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Wooden stalls rot out and make dirty stables. Iron and steel equipment is not expensive and it saves its cost many times over in labor.

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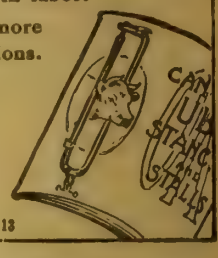

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2. Children under 12 years of age will not be permitted to enter.
3. No employee of ours or relation of employee will be allowed to compete.
4. The prizes in this contest will be awarded to correct answers according to handwriting and general neatness. Be neat and you may win a good prize.
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THE PUZZLE

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The jumbled letters given above represent the names of Four Great Canadian Rivers. To help you solve them we have underlined the first letter in each name. The first is St. Lawrence.
Now guess the rest and send us in your solution of all four names in your very neatest and best handwriting.

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This Wife and Mother

Wishes to tell you FREE How She Stopped Her Husband's Drinking

By all Means Write to Her and Learn how She did it.

For over 20 years James Anderson of 193 Spadina Ave., P.B. Toronto, Canada, was a very hard drinker. His case seemed a hopeless one, but ten years ago his wife in their own little home, gave him a simple remedy which much to her delight stopped his drinking entirely.

To make sure that the remedy was responsible for this happy result she also tried it on her brother and several of her neighbors. It was successful in every case. None of them has touched a drop of intoxicating liquor since.

She now wishes everyone who has drunkenness in their homes to try this simple remedy for she feels sure that it will do as much for others as it has for her. It can be given secretly if desired, and without cost she will gladly and willingly tell you what it is. All you have to do is write her a letter asking her how she cured her husband of drinking and she will reply by return mail in a sealed envelope. As she has nothing to sell do not send her money. Simply send a letter with all confidence to Mrs. Margaret Anderson at the address given above, taking care to write your name and full address plainly. *(We earnestly advise every one of our readers who wishes to cure a dear one of drunkenness to write to this lady today. Her offer is a sincere one.)*

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HOW TO CONQUER RHEUMATISM AT YOUR OWN HOME

If you or any of your friends suffer from rheumatism, kidney disorders or excess of uric acid, causing lameness, backache, muscular pains; stiff, painful, swollen joints, pain in the limbs and feet; dimness of sight, itching skin or frequent neuralgic pains, I invite you to send for a generous **Free Trial Treatment** of my well-known, reliable **Chronicure**, with references and full particulars by mail. (This is no C. O. D. scheme.) No matter how many may have failed in your case, let me prove to you, free of cost, that rheumatism can be conquered. **Chronicure** succeeds where all else fails. **Chronicure cleanses the blood** and **removes the cause.** Also for a weakened, run-down condition of the system, you will find **Chronicure** a most satisfactory **general tonic** that makes you feel that life is worth living. Please tell your friends of this liberal offer, and **send today** for large free package, to **MRS. M. SUMMERS, Box E. 309—Windsor, Ont.**

I always remove the little ones as fast as they come and place them in a box lined with old sacks and covered with the same (not air tight, but to keep the cold air from striking the little pigs, for if the cold, frosty air strikes them they will, die of pneumonia in an hour's time. This sow I have usually gets up when six little pigs have come, and will come to the trough. I always have ready a warm drink of scalded bran, with a little stock food in it. This satisfies her and she lays down again till she finishes. Then when she is through and gets up, I have two pails more of warm bran or middlings ready for her, and I give her all she will eat; then she is ready to lay down and is sure to rest for at least two hours or more. I place the little ones around her carefully and watch till they have all started to suck, then I leave them. In about two hours I come back and I find the little ones have tired themselves out nursing and are now sleeping in a bunch. The mother is now ready to get up for some more feed, which might consist of potatoes with middlings or mashed oats. I always give a level tablespoon of stock food twice a day in the drink food.

This sow has produced some very nice pigs. Some of her 1911 spring litter, when dressed last December, tipped the scales at three gundred. I like the Yorkshire pig. They are hardy and rugged, good feeders, and always healthy. The Chester White is more docile, but inclined to be delicate. I like the Yorkshire and Chester cross.

Now, in my opinion, it is not a habit, the sow eating her young, but due to the way she is managed. I don't think any sow will eat her young if she can get enough of any other kind of food to eat. The sow is naturally ravenous and hungry when she gets up, and must eat something, therefore, leave enough of food where she can get it. Have a look at her frequently for the first 24 hours and keep her very quiet for the first three days. I think this will insure good success. If you consider this worth publishing, it might be of some benefit to some beginner. In some instances the beginner has to make so many tries to find out which is qest to do, that he becomes discouraged.—W. F. Johnson, in Canadian Farm.

Advice on Crippled Pigs.

I would like to know if you could tell me what is the matter with my pigs. I have ten of them; they are about four months old. I am feeding them with oat chop, a little peameal and turnips, and I make it warm for them. They are in a fairly dry, warm place; they eat all right, but about a week ago one of them started to be bad on its legs, and now it can hardly walk. Is it rheumatism, and is it contagious? I shall be pleased if you could let me know what to do for them.

Ans.—This form of crippling in pigs is due to a deranged condition of the digestive system. It is usually caused by feeding too much heavy, rich food and lack of exercise. Lying on a cold floor will sometimes produce the trouble, in which case there is probably rheumatic complications. Your food seems to be all right except the peameal. Cut out the peameal. If possible turn the pigs out where they can run abodt for exercise, and if they can root in the ground all the better. If ground is frozen throw some of the dirt which may be found among the mangolds into the pen. Give the sick pig 2 ounces of Epsom salts, and follow up with 2 grains of nux vomica, three times a day. This trouble is often most difficult to treat successfully. The disease is not contagious, but often pigs exposed to the same conditions develop the trouble.

WHEREVER the old wheelbarrow cleaning system is used you find a mussy stable.

It's too much to expect that a man will brush and sweep the passage ways every time he cleans the stable. He hasn't the time for one thing—and it's discouraging work for another.

But nowadays we think more about clean stables.

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It's up to you, Mr. Farmer, to make your stable easy to clean — then it will always be clean.

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MAPLE EVAPORATORS

TO THE LIVE FARMER OUR PERFECT MAPLE EVAPORATORS AND A SUGAR BUSH CAN BE MADE TO PRODUCE A REVENUE WHEN IT IS MOST NEEDED.

With our Maple Evaporator, sap is easily and economically converted into the finest quality maple syrup.

The body of the perfect evaporator is made of heavy sheet steel, thoroughly riveted and braced with steel angle and fitted with cast iron door and faame.

The working of the evaporator is very simple—put the sap in at one end and it comes out syrup at the other.

Send for illustrated leaflet.

Steel Trough & Machine Co., Ltd., 9 James St., Tweed, Ont.

An advertisement in the Maritime Farmer will sell your surplus stock---Try it !

THE HORSE.

The Dual-Purpose Farm Horse.

There can be no question but that a great improvement has been made in the character of animals used upon the farms in this country during the present generation, and yet it is considered by many of the most intelligent students of agricultural problems that the tendency to use nothing but heavy draft animals on the farm is likely to result injusiously in many instances.

In considering the kind of horses most desirable for general farm work, it will probably be agreed that for heavy work, such as plowing, hauling logs and marketing farm produce, no other animals can compare with the draft breeds weighing from 1,400 to 1,800 pounds, and if this class of work were all that a farm team was required to perform there would remain no room for discussion. But in determining the character of team most desirable for the average farmer, the important fact is generally overlooked that when, as is generally the case, the farmer keeps but one team, those horses are not only required to do the heavy farm work, but are used as driving horses when the farmer wishes to attend church at a distant village or some member of the family desires to do shopping or has other errands of a social or business nature to attend to. As a rule, almost without exception, the draft horses that are so desirable when heavy loads have to be moved are slow and in every way unsatisfactory for road driving where pace, style and breedy appearance constitute desirable characteristics.

Of course when, as is sometimes the case, a farmer keeps a team for heavy work and one or more horses for road driving, it matters not how heavy, slow and plain the work team may be, so long as it is capable of performing the service required. It seems to be an accepted truism that, in order to keep the boys on the farm, farm life must be made as attractive as possible, and obviously one of the most potent factors in accomplishing this result in the case of the average farmer's son is a handsome, stylish and fast-stepping horse or pair that he will take pride in driving when he goes to call upon his best girl or to the village on errands. If, therefore, the farmer is to keep but two horses for all purposes, what character af horse is best suited to perform the various duties incident to modern-day life upon the farm, and how should he go about the production of such a type of horse as his necessities require? There can be no doubt that the most important consideration in determining the first inquiry is that whatever breed of horse he may select he must have weight and muscular development sufficient for all heavy hauling purposes. This element alone can be secured by obtaining the produce and generally the half-bred produce of either the Percheron, Clydesdale, Belgian or Shire. But as satisfactory as all of these breeds are in the spheres for which they are adapted, none of them meets the requirements of such an all-around horse as I have indicated. If sufficient weight and muscular development can be obtained, and also the style of fast-stepping qualities re' quisite for an all-purpose horse, by delving into some other breeds not designated as heavy draft breeds, it would seem to be part of wisdom to select such a strain in solving the problem with which the farmer is confronted.

It will doubtless be generally admitted that a pair of horses weighing from 2,600 to 2,800 pounds, if built upon substantial lines, is sufficiently for most farm work. The farmer is not necessarily obliged to go to the heavy draft breeds in prosecuting his search for animals of this weight. The French and German coach horses as well as the Cleveland Bays meet this requirement, and frequently Hackneys and trotting-bred animals weigh this much and more. The mistaken theory once obtained among horsemen that beauty and high finish in a horse was a handicap to his racing and hauling ability, but this notion was exploded long ago.

A general-purpose farm horse then can be said to be an animal measuring at least 16 hands and weighing from 1,300 to 1,600 pounds; with well developed muscles, an arched neck, sloping shoulders, short back, a flat and heavy boned leg, perfect feet, small ears, large and intelligent eyes and a breedy appearance, and that possesses the ability to walk fast and road along at the rate of 8 or 10 miles per hour. Such an animal might be produced by breeding a large, well-developed trotting-bred mare to one of the best heavy stallions, but the chances for producing the desired animal will be much better to cross such a mare with a French or German Coach horse or a Cleveland Bay stallion, all of which breeds have been produced for many generations for the sole object of obtaining size, beauty, strength, substance and pace.—Manhattan, in Breeders' Gazette.

Size and Quality of Bone.

A study of draft horses reveals the great difficulty in securing extreme quality and great size and bone in the same horse. Draft horse buyers are insistent upon big bone, but the term applies most properly to great width of the canon as viewed from the side. The demand for large bone, as it is called, arises primarily from the fact that legs in which the tendons are set far back from the canon-bones are thought to be strongest. If the bone itself is also large the horse has more weight, and heavy muscle usually goes with a heavy frame.

Some of the best draft horse judges, however, pay prartically no attention to the size of the bone itself; that is, they do not discriminate against a horse whose canons are narrow as viewed from the front. They like big knees and well shaped hocks of ample size, but they assert that since the bones themselves almost never break one may safely disregard the circumference. Quality is really more important than size of bone.

Fine hair, soft skin and clean cordy canons indicate a strong vitality in the cells making up the tissues of the whole body, and are associated with thgt stamina which gives maximum utility through long years of use. On the other hand; coarse soft bone is not associated with the active durable type of horse, and is never found in horses which have endured a long lifetime of hard service. It is not the smooth hard bone but the rough soft bone that most often develops unsoundness, so in the search for size of bone quality must never be neglected.—Breeders' Gazette.

Vicious mare and foal.—I have recently bought a mare in foal, and since then I have been informed that on the last occasion she would not let her foal suck. She kicked and bit at it, and she could not foster it on her anyhow, and it had to be brought up by hand. May I venture to ask how I could treat her if she is in the same way this time? I may say that she bites viciously if touched now.

If, as it is by no means unlikely that she will, the mare refuses to take to her foal, or permit it to suck when it is born, you will have to do as her previous owners did, take it away and bring it up by hand, unless you are fortunate enough, which rarely happens, to find a foster-mother for it in a mare of kindlier disposition, who has lost her foal within a few days of its birth. Occasionally, one meets with mares such as you scribe, that obstinately refuse to have anything to do with their offspring, particularly in the matter of permitting it to suck. Some are so disinclined to accept the duties of maternity, that they will attack the foal viciously if it approaches. There is no remedy. You may protect the foal from injury while you remain present, and so secure the mare that she may be compelled to let it suck, but when you are gone she will probably do it serious injury, or at least refuse to let it approach the teat. The only suggestion we can offer, and in view of the behavior of the animal it is a forlorn hope, is that during the time that remains before the mare is due to foal you train her to submit to have her teats handled freely. By kindness and firmness, accompanied by suitable restraint and the putting on of a muzzle, she may, after persistent endeavour, submit to this being done, and if you succeed it may make some difference in her attitude towards the foal when it is born.

Horsemen Attention!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Pow drs will save and preserve the life of your horses. Their use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

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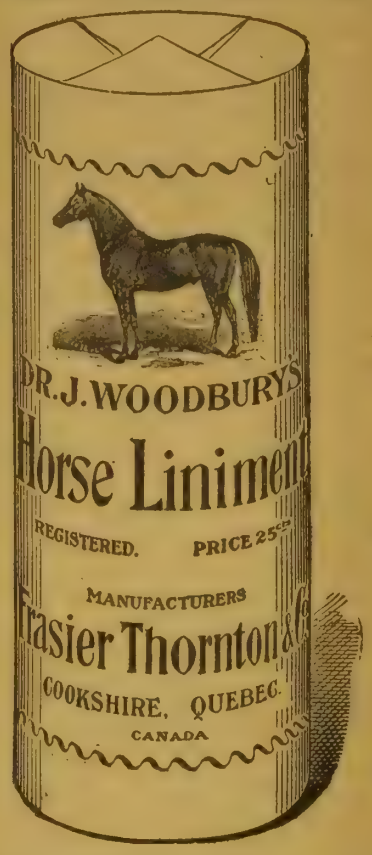

Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

Demand

DR. J. Woodbury's Horse Liniment

AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

ABSORBINE

will reduce inflamed, swollen Joints, Bruises, Soft Bunches. Cure Boils, Poll Evil, Quitor, Fistula or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. $2 per bottle, delivered. Book 7 E free.

ABSORBINE, JR., liniment for mankind. Reduces Painful, Swollen Veins, Goitre, Wens, Strains, Bruises, stops Pain and Inflammation. Price $1.00 per bottle at dealers or delivered. Will tell you more if you write. Manufactured only by W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca-

POULTRY.

The Treatment of Autumn Laying Pullets.

At the present time the question of the correct treatment of autumn laying pullets is uppermost in the minds of most poultry keepers. Practically the claims of most of those pullets that are laying may be quickly dismissed; it is those pullets hatched for autumn laying, and which are not laying, that cause concern to their owners. The old story of "too fat" or "too thin" will again crop up, as well as the perplexing problem as to whether they are having sufficient or otherwise, of the right quality of food for egg production. Before deciding on any course, we must examine the birds; night is the best time to do this, for at that time they are easily lifted from the perch, without the trouble of chasing them, which latter, in my opinion, is never beneficial to the pullet about to produce, or producing eggs. On handling the birds, do you find them nice and plump in the hand? Is the breast well developed, the legs thick and firm, and can the gizzard be felt rather plainly through the walls of the abdomen? This region, wrongly termed by some "cushion," and more correctly the "egg bag," although in reality neither, is the part covered by fluff beyond the end of the breast bone (the breast bone commences at the crop). This "bag" as it feels, should be large, soft and yielding, and as we said before, the gizzard should be distinctly felt through its walls. If this is so, and yet the pullets are not laying, some little change in diet may be all that is needed to give them a start. I may here say that this is a dangerous condition for the pullets to be in, because if they do not soon lay they will soon gather fat round the internals, and a fat hen is not the best of layers. A flock of birds in this condition should first of all have a good stiff dose of Epsom salts, a good half teaspoonful dissolved in hot water, and for the sake of convenience—if the flock be a large one—placed in their soft food. It would be quite as effective in their drinking water, but they might not take it in that strength. Repeat the dose in a couple of days' time.

With regard to diet, these pullets require rather more flesh-forming matter, an extra allowance of meat or bone at this functure is most beneficial. As to amount, as they are not laying, do not stick to the stipulated one ounce each, a little more will not hurt if they will take it, but when eggs are forthcoming reduce to the regulation amount. In the way of soft food a little extra biscuit meal, or some cooked meal, will help them along; so would a few doses of tonic, but this should not be given on the days the Epsom salts are used. Look carefully through your foodstuffs and see if such things as pea meal, malt, meat meal, biscuit meal, fish meal, or any of the specially prepared meals are amongst them; if not, one of these egg and flesh formers should be included in the daily dietary, more particularly so when meat or cut bone is not given at midday.

PULLETS TOO THIN FOR LAYING.

We must now consider the pullets that were thought too thin, these were very angulae, their bones pointed and hard, thighs rather stringy, and small abdomen. Surh birds will not lay just yet, even months may elapse before they do lay, unless they are taken in hand at once. These pullets require more food and better food. Give soft food every other day at noon, a similar mash to what they have in the morning. Or the wheat may be boiled occasionally. See that full, allow as much grain as they they always retire with a good crop will pick up at night, and give such birds a good tonic. To such birds as these the "ovary tonics" advertised are very helpful, but stick to the directions, it is folly to exceed them. One handful of hemp seed to every four of other grain will also help them to pick up in condition, and it goes without saying that they should have a free supply of meat or cut bone.

Treated in this way, they will gain rapidly in condition, and lay perhaps two months before they would have done in the ordinary course of events; indeed, they should provide eggs for the Christmas breakfast table.

The most hopeless pullets are those that are too fat. Here we must reduce them, always a slow process, and then build them up again. In this case withhold soft food and give oats, or, better still, white Canadian peas instead. I am quite prepared to hear you say they will not take them; so place them in a trough first of all, and if they refuse, take it away until next meal time, it is the only way, and in their pampered, overfed condition, missing a meal or two will do more good than harm. Here Epsom salts should be given daily in their drinking water, one full teaspoonful dissolved in hot water, and made up to half-pint with cold to be taken during the day, as they think fit. Continue this and the scanty grain feeding until they are in fair form again. Probably about one ounce each of oats for supper will be plenty, and rather less for breakfast, whether they be oats or peas it should be the latter when possible. There would be no harm in allowing these overfat birds to have a little cooked or raw, but very lean meat—but not cut bone.

GENERAL MANAGEMENT.

We cannot expect the pullets to lay if they are constantly moved about to suit some fancy of their owner; no, the pullets, like the small holder, desire some fixity of tenure, place them once and for all in the runs they are to occupy during the winter, and do not move them again. Cockerel or no cockerel is another question personally I think a cockerel should be turned down with them whenever possible, not that they will not lay if one be not present in the run, but many people find that the pullets settle better and commence laying sooner if a cockerel is allowed in the pen.

See that they all have ample room on the perch, and that none squat about on the floor or in the nest boxes, allow fresh air without draught and keep the birds as busy as possible during the daylight hours if they have not a large grass run on which to disport themselves. In the case of confined runs much can be done to promote exercise by burying their grain fairly deep in the litter of their scratching shed and by suspending their green food at such a height that it can only be reached by a short jump. To summarise, the pullets must be comfortable and be suitably fed, fairly warm and sheltered, and in good condition, all simple things, but sometimes difficult of attainment. Do not allow the grass to grow under your feet, feed up those that need it; reduce the rations where necessary; alter the quality if required, and allow the pullets to remain in one pen; mate up and allow the cockerel to remain in the pen; do not be always changing males, remember the grit, both shell and flint, and this untiring, well-directed energy will not go long unrewarded by a full egg basket.—By W. Hooley, in The Poultry World.

The Poultry Industry of Canada.

During the past session of the Dominion Parliament, Mr. A. G. Gilbert, Poultry Manager at the Central Experimental Farm, gave evidence before the Select Standing Committee on Agriculture and Colonization on the development of the poultry industry. This evidence, which includes an address followed by questions put to Mr. Gilbert and answered by him, has been printed in pamphlet form for public distribution the subject is dealt with under the following heads: The value of the poultry industry, how the industry is tending, the attitude of the farmer towards it, and the form of development best calculated to help the farmer.

It is clearly shown that the demand for eggs in Canada has increased much more rapidly than the supply during recent years. In 1902 we exported to Great Britain, eggs to the value of $1,733,242; nine years later, the exports had fallen to less than a value of twenty-five thousand dollars, while the imports in 1911 reached a value approaching half a million dollars.

It is pointed out that farmers are not taking full advantage of the high prices offered for strictly new laid eggs at all seasons if the year. The good profits from these are besecured choefly by specialists who are often at the disadvantage of having to pay retail prices for feed. Much useful information is contained in this pamphlet which may be procured from the Publications Branch, Department of Agriculture, Ottawa.

Telling What Hens are Laying.

The great question for the average poultry keeper is how to weed out his non-layers. A little advice, gleaned from the Kansas State Agricultural College, may be useful along this line:—

The first thing to notice concerning the shape is as to whether or not the hen is rangy or blocky. A blocky hen indicates a meat-producer, while the more rangy one indicates the production of eggs. Since the development of the egg, to a large extent, takes place in the region of the body below the broad part of the back, that part of the body should be broader than the fore part. This gives to the body a V shaped appearance as viewed from the top, and small part of the V lying towards the front. When a hen is in heavy laying condition her abodmen is lower than the breastline. This gives the body the appearance of being V shaped as viewed from the side along the top and bottom lines, with the small part of the V towards the front. Tnis enlargement of the body in the abdominal region makes the back appear somewhat narrower, giving the body a V shaped aupearance from the back downward on the sides as viewed from the rear. Thus, a body V shaped in three directions indicates large productive powers.

A large hen usually lays the larger eggs. This rule may not hold true if she happens to be a heavy producer for them the tendency is to produce smaller eggs. With such fowls as the Leghorns, whose tendency is to lay smaller eggs, the selection should be for large size of body rather than small.

A good layer is longer in body, neck and legs than a meat-producing hen. She stands up well, and has a well-spread tail. Observation has shown that a pinch tail Leghorn is not generally as good a layer as is a fantailed one.

The character of the head firnishings is an indication of the hen's laying condition. When a hen is in full laying her comb is full and bright red. Some Plymouth Rocks when laying heavily will have lopped combs and, therefore, become disqualified as show birds.

When hens are moulting they lose all their color in face and comb, and their combs become very small, but as soon as laying commences combs enlarge and the color returns. Many instances have been noted with Leghorns and Minorcas which indicate that the birds with the largest and reddest combs are in heavy-laying condition. Exceptions to this rule sometimes occur, but they are rare.

A laying hen is nearly always a singing hen. She works and hunts for food all day, is the first off the roost and the last to go to roost. She is nervous and very active, keeping herself up to the greatest possible pitch.

The pelvic bone test is a test which some have claimed as final and conclusive. Immediately below the tail at the end of side pieces of the back are two somewhat bony protuberances. These are called the pelvic or "lay" bones, and are just above the vent through which the eggs must pass. When an egg is laid, these bones must be forced apart to allow its free passage. When these bones are soft and pliable and spread sufficient to allow three fingers to be placed between them, it is an indicare hard and bony, and close tion that the hen is laying. If they gether, the hen would not be considered as laying at that time. Experience has shown that this method will usually tell whether or not a hen is laying at the time the examination was made.

Teach Chicks to Roost.

Half-grown chicks are too often not taught to roost. They crowd each other in the brood coops, get crooked breasts and many are smothered. I begin to teach them as soon as the hen leaves them. I fix low, broad perches and at first put them on the roosts perhaps several times in one evening if they step off and don't seem to know enough to get back. After a few times they get on the perches themselves. My chicks always gain much faster when they begin roosting. I keep the roosts soaked with kerosene oil to guard against mites.

Warranted to Give Satisfaction.
Gombault's
Caustic Balsam

Has Imitators But No Competitors.
Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.
As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
The Lawrence-Williams Co., Toronto, Ont.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

THE SLATTERN WOMAN.

I sing me a song of the sloven,
Of the woman who has no pride,
Who does not care
If her raiment bear
A stain or a spot or a snag or a tear
Nor blush to be caught in the morning glare
With run-down heel and with towsled hair—
With plenty of time but with none to spare
For little attention to keep her fair
In the eyes of the man who found her rare
And wholesome ere
Her charm and her freshness died.

She twists her locks in a frowsy knot
Her dressing gown bears a great grease clot,
The rip in the back of her sacque she's forgot;
There's a stain on her skirt and an ugly hole
In the heel of her stocking and one in the sole
Of both her slippers, that plainly show
The need of rejection at each worn toe.

There are empty shelves in her lone bookcase;
She makes no effort to keep in pace,
As her husband steadily climbs to place,
Nor stirs herself to a single grace;
With never a fear 'gainst the time he'll find,
How slothful and narrow and dull's her mind;
No thought she gives to the subtle arts,
That stoke the fires within men's hearts.

She stands stock-still while his world speeds on,
Till at last she is simply a pricking thorn
In his side. All the rose that she was is gone;
By her hands alone are his visions torn—
The softening veils that affection wrought
To keep her the sweetheart and wife that he sought—
Herself she must thank that his dream is wrecked,
For men lose love when they lose respect.

I sing me a song of the slattern,
Of the woman who sits alone,
Who had her day and who threw away
Her chances when beauty and wit could play,
Who lazed and who lounged and who did not stir,
A finger to add to the charm of her,
Who would not of lotions and unguents and myrrh—
The story's not new and anew 'twill occur;
As she erred, so will many another fool err.—Herbert Kaufman in Woman's World.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

"What's amiss, dame!" said Mr. Peggotty.

"Nothing," returned Mrs. Gummidge. "You've come from the Willing Mind, Dan'l?"

"Why yes, I've took a short spell at the Willing Mind to-night," said Mr. Peggotty.

"I'm sorry I should drive you there," said Mrs. Gummidge.

"Drive! I don't want no driving," returned Mr. Peggotty with an honest laugh. "I only go too ready."

"Very ready," said Mrs. Gummidge, shaking her head, and wiping her eyes. "Yes, yes, very ready. I am sorry it should be along of me that you're so ready."

"Along o' you! It an't along o' you!" said Mr. Peggotty. "Don't ye believe a bit on it."

"Yes, yes, it is," cried Mrs. Gummidge. "I know what I am. I know that I am a lone lorn creetur, and not only that everythink goes contrary with me, but that I go contrary with everybody, Yes, yes, I feel more than other people do, and I show it more. It's my misfortun."

I really couldn't help thinking, as I sat taking in all this, that the misfortune extended to some others members of that family besides Mrs. Gummidge. But Mr. Peggotty made no such resort, only answering with another entreaty to Mrs. Gummidge to cheer up.

" I an't what I could wish myself to be," said Mrs. Gummidge. "I am far from it. I know what I am. My troubles has made me contrairy. I feel my troubles and they make me contrairy. I wish I didn't feel 'em, but I do. I wish I could be hardened to 'em, but I an't. I make the house uncomfortable. I don't wonder at it. I've made your sister so all day, and Master Davy."

Here I suddenly melted and roared out, "No, you haven't, Mrs. Gummidge," in great mental distress.

"It's far from right that I should do it," said Mrs. Gummidge. "It an't a fit return. I had better go into the house and die. I am a lone lorn creetur, and had much better not make myself contrairy here. If thinks must go contrairy with me, and I must go contrairy myself, let me go contrairy in my parish. Dan'l I'd better go into the house, and die and be a riddance!"

Mrs. Gummidge retired with these words, and betook herself to bed. When she was gone, Mr. Peggotty, who had not exhibited a trace of any feeling but the profoundest sympathy looked round upon us, and nodding his head with a lively expression of that sentiment still animating his face, said in a whisper:

-.She's been thinking of the old 'un!"

I did not quite understand what old one Mrs. Gummidge was supposed to have fixed ner mind upon, until Peggotty, on seeing me to bed, explained that it was the late Mr. Gummidge; and that her brother always took that for a received truth on such occasions, and that it always had a moving effect upon him. Some time after he was in his hammock that night, I heard him myself repeat to Ham, "Poor thing! She's been thinking of the old 'un!" And whenever Mrs. Gummidge was overcome in a similar manner during the remainder of our stay (which happened some few times), he always said the same thing in extenuation of the circumstances, and always with the tenderest commiseration.

So the fortnight slipped away, varied by nothing but the variation of the tide, which altered Mr. Peggotty's times of going out and coming in, and altered Ham's engagements also. When the latter was unemployed, he sometimes walked with us to show us the boats and ships, and once or twice he took us for a row. I don't know why one slight set of impressions should be more particularly associated with a place than another, though I believe this obtains with most people, in reference especially to the associations of their childhood. I never hear the name, or read the name, of Yarmouth, but I am reminded of a certain Sunday morning on the beach, the bells ringing for church, little Em'ly leaning on my shoulder, Ham lazily dropping stones into the water, and the sun, away at sea, just breaking through the heavy mist, and showing us the ships, like their own shadows.

At last the day came for going home. I bore up against the separation from Mr. Peggotty and Mrs. Gummidge, but my agony of mind at leaving little Em'ly was piercing. We went arm-in-arm to the public house where the carrier put up, and I promised, on the road, to write to her. I redeemed that promise afterwards, in characters larger than those in which apartments are usual,y announced in manuscript, as being to let. We were greatly overcome at parting; and if ever, in my life, I have had a void made in my heart, I had one made that day.

Now, all the time that I had been on my visit, I had been ungrateful to my home again, and had thought little or nothing about it. But I had no sooner turned towards it, than my reproachful young conscience seemed to point that way with a steady finger; and I felt, all the more for the sinking of my spirits, that it was my nest, and that my mother was my comforter and friend.

This gained upon me as we went along; so that the nearer we drew and the more familiar the objects became as we passed, the more excited I was to get there, and to run into her arms. But Peggotty, instead of sharing in these transports, tried to check them (though very kindly), and looked confused and out of sorts.

Blunderstone Rookery would come, however,- in spite of her, when the carrier's horse pleased—and did. How well I recollect it, on a cold, grey afternoon, with a dull sky, threatening rain.

The door opened, and I looked, half laughing and half crying in my pleasant agitation, for my mother. It was not she, but a stranger servant.

"Why, Peggotty!" I said, ruefully, "isn't she come home?"

"Yes, yes, Master Davy," said Peggotty. "She's come home. Wait a bit Master Davy, and I'll—I'll tell you something."

Between her agitation, and her natural awkwardness in getting out of the cart, Peggotty was making an extraordinary festoon of herself, but I felt too blank and strange to tell her so. When she had got down, she took me by the hand; led me, wondering, into the kitchen, and shut the door.

"Peggotty!" I said, quite frightened. "What's the matter?"

"Nothing's the matter, bless you, Master Davy dear!" she answered, assuming an air of spritliness.

" Something's the matter, I'm sure. Where's mamma?"

"Where's mamma, Master Davy?" repeated Peggotty.

"Yes. Why hasn't she come out to the gate, and what have we come in here for? Oh, Peggotty!" My eyes were full, and I felt as if I were going to tumble down.

"Bless the precious boy!" cried Peggotty, taking hold of me. "What is it? Speak, my pet!"

"Not dead, too? Oh, she's not dead, Peggotty?"

Peggotty cried out No! with an astonishing volume of voice, and then sat down, and began to pant, and said I had given her a turn.

I gave her a hug to take away the turn, or to give her another turn in the right direction, and then stood before her, looking at her in anxious inquiry.

"You see, dear, I should have told you before now," said Peggotty, "but I hadn't an opportunity. I ought to have made it, perhaps, but I couldn,t azackly"—that was always the substitute for exactly, in Peggotty's militia of words—"bring my mind to it."

"Go on, Peggotty," said I, more frightened than before.

"Master Davy," said Peggotty," untying her bonnet with a shaking hand, and speaking in a breathless sort of way. "What do you think? You have got a Pa!"

I trembled and turned white. Something—I don't know what, or how—connected with the grave in the churchyard, and the raising of the dead, seemed to strike me like an unwholesome wind.

"A new one," said Peggotty.

"A new one?" I repeated.

Peggotty gave a gasp, as if she were swallowing something that was very hard, and, putting out her hand, said:

"Come and see him."

I don't want to see him."

—"And your mamma," said Peggotty.

I ceased to draw back, and we went straight to the best parlor, where she left me. On one side of the fire, sat my mother; on theother Mr. Murdstone. My mother dropped her work, and rose hurridly, but timidly I thought.

"Now, my dear," said Mr. Murdstone. "Recollect! control yourself, always control yourself! Davy boy, how do you do?"

I gave him my hand. After a moment of suspense, I went and kissed my mother: she kissed me, patted me gently on the shoulder, and sat down again to her work. I could not look at her, I could not look at him, I knew quite well that he was looking at us both; and I turned to the window and looked out there at some shrubs that were drooping their heads in the cold.

As soon as I could creep away, I crept up stairs. My old dear bedroom was changed, and I was to lie a long way off. I rambled downstairs to find anything that was like itself, so altered it all seemed; and roamed into the yard. I very soon started back from there, for the empty dog-kennel was filled up with a great dog—deep-mouthed and black-haired like Him—and he was very angry at the sight of me, and sprang out to get at me.

CHAPTER IV

I Fall Into Disgrace.

If the room to which my bed was removed were a sentient thing that could give evidence, I might appeal to it to this day—who sleeps there now, I wonder!—to bear witness for me what a heavy heart I carried to it. Iwent up there, hearing the dog in the yard bark all the way after me while I climbed the stairs; and, looking as blank and strange upon the room as the room looked upon me, sat down with my small hands crossed, and thought.

I thought of the oddest things. Of the shape of the room, of the cracks in the ceiling, of the paper on the wall, of the flaws in the window-glass making riples and dimples on the prospect, of the washing-stand being ricketty on its three legs, and having a discontented something about it, which reminded me of Mrs. Gummidge under the influence of the old one. I was crying al the time, but, except that I was conscious of being

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cold and dejected, I am sure I never thought why I cried. At last in my desolation I began to consider that I was dreadfully in love with little Em'ly, and had been torn away from her to come here where no one seemed to want me, or to care about me, half as much as she did. This made such a very miserable piece of business of it, that I rolled myself up in a corner of the counterpane, and cried myself to sleep.

I was awakened by somebody saying "Here he is!" and uncovering my hot head. My mother and Peggotty had come to look for me, and it was one of them who had done it.

"Davy," said my mother. "What's the matter?"

I thought it was very strange that she should ask me, and answered, "Nothing." I turned over on my face, I recollect, to hide my trembling lip, which answered her with greater truth.

"Davy," said my mother. "Davy, my child!"

I dare say no words she could have uttered would have affected me so much, then, as her calling me her child. I hid my tears in the bedclothes, and pressed her from me with my hand, when she would have raised me up.

"This is your doing, Peggotty, you cruel thing!" said my mother. "I have no doubt at all about it. How can you reconcile it to your conscience, I wonder, to prejudice my own boy against me, or against anybody who is dear to me? What do you mean by it, Peggotty?"

Poor Peggotty lifted up her hands and eyes, and only answered, in a sort of paraphrase of the grace I usually repeated after dinner, "Lord forgive you, Mrs. Copperfield, and for what you have said this minute, may you never be truly sorry!"

"It's enough to distract me," cried my mother. "In my honeymoon, too, when my most inveterate enemy might relent, one would think, and not envy me a little piece of mind and happiness. Davy, you naughty boy! Peggotty, you savage creature! Oh, dear me!" cried my mother, turning from one of us to the other, in her pettish, wilful manner. "What a troublesome world this is, when one has the right to expect it to be as agreeable as possible!"

I felt the touch of a hand that I knew was neither hers nor Peggotty's and slipped to my feet at the bedside. It was Mr. Murdstone's hand, and he kept it on my arm as he said:

"What's this? Clara, my love, have you forgotten?—Firmness, my dear!"

"I am very sorry, Edward," said my mother. "I meant to be very good, but I am so uncomfortable."

"Indeed!"- he answered. "That's a bad hearing, so soon, Clara."

"I say it's very hard I should be made so now," returned my mother, pouting; "and it is—very hard—isn't it?"

He drew her to him, whispered in her ear, and kissed her. I knew as well, when I saw my mother's head lean down upon his shoulder, and her arm touch his neck—I knew as well that he could mould her pliant nature into any form he chose, as I know, now, that he did it.

"Go you below, my love," said Mr. Murdstone. "David and I will come down, together. My friend," turning a darkening face on Peggotty, when he had watched my mother out, and dismissed her with a nod and a smile "do you know your mistress's name?

"She has been my mistress a long time, sir," answered Peggotty. "I ought to know it."

"That's true," he answered. "Tut I thought I heard you, as I came up stairs, address her by a name that is not hers. She has taken mine, you know. Will you remember that?"

Peggotty, with some uneasy glances at me, curtseyed herself out of the room without replying; seeing, I suppose, that she was expected to go, and had no excuse for remaining. When we two were left alone, he shut the door, and sitting on a chair, and holding me standing before him, looked steadily into my eyes. I felt my own attracted, no less steadily, to his. As I recall our being opposed thus, face to face, I seem again to hear my heart beat fast and high.

(Continued in next issue)

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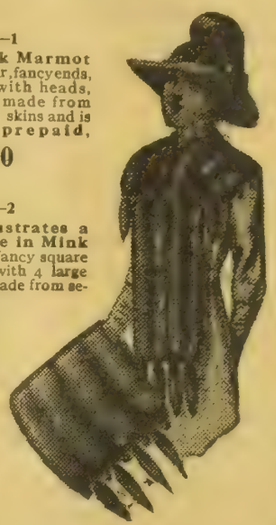

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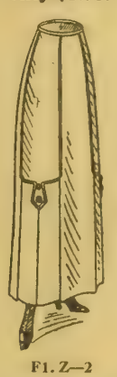

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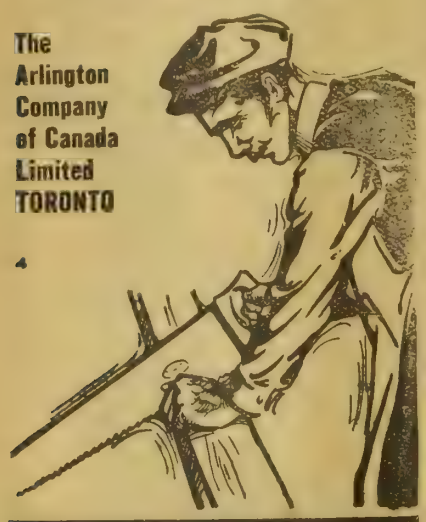

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Flour and Breadmaking.

(Continued from last issue)

STRONG vs WEAK FLOUR FOR BAKING POWDER BISCUITS.

It is the opinion of some bakers that the strong spring wheat flours are better for making baking powder biscuits than the softer and weaker flour from the winter wheats. The opposite view is just as strongly held by others. To secure definite data on this point some experimental work was done in the Macdonald Institute with six different kinds of flour, including both strong and soft flours and also blended flour. We quote from the report given in the Ontario Agricultural Report for 1908:

"The flours used were obtained from the manufacturers for other purposes, but were regular brands, which might have been bought in the open market, and were chosen as likely to yield decisive information. They were:

"A. Strong—A high patent flour, made wholly of Manitoba wheat.

"B. Strong—A high patent flour, made wholly of Manitoba wheat.

"C. Soft—A nearly straight grade flour, made wholly of Ontario wheat.

"D. Blend—A combination of 20 per cent. B strong and 80 per cent. C soft.

"E. Soft—An 85 per cent. soft wheat flour; made wholly from Ontario wheat.

"F. Soft—A 35 per cent. soft wheat flour, made wholly from Ontario wheat.

"The Macdonald Institute recipe for milk biscuits was taken as the starting point, and a series of experiments carried out to determine various points before making the final test. In every baking each ingredient was carefully weighed, the biscuits compared with others, and results recorded to guide the procedure of the next experiment. When rolling out the dough before cutting the biscuits flat sticks of equal thickness were laid on either side for the rolling-pin to travel on, so that the biscuits of all bakings were as nearly alike in thickness before baking as was possible with dough of such slackness. Only the biscuits cut from the first rolling were baked, so that no biscuits were made from dough that had been worked over."

Experimental bakings were made to determine what proportion of fat, baking powder, and what oven temperature would yield the best results. Experimental bakings were made to determine the proportion of milk needed for each flour, in order to have each dough of the same slackness, the effect of doughs of different slackness, etc. Finally, making use of the experience gained with each flour, a concluding baking was made.

"The ingredients for each batch (except the milk) were weighed and mixing was done. The mixing and baking were done as rapidly as possible. Nine biscuits of each flour kept carefully separate before any were baked; when sufficiently cooled the best six of each were numbered and placed in a covered wooden box to prevent drying out before they were judged. The following table gives the weight of each ingredient used in making the bisruits and the weights recovered after baking.

Baking No.	Flour	Weight in grams of Flour	Butter	Bak. Pow.	Milk	Dough	Biscuits Raw	Biscuits Baked	Oven Temp. Fah.	P. cent loss in baking
24.	A. Strong	300	24	16	252	592	308	257	450°	16
25.	B. "	300	24	16	248	588	307	257	450°	16
26.	C. Soft	300	24	16	212	552	323	260	450°	19
27.	D. Blend	300	24	16	221	561	306	259	430°	15
28.	E. 85% Soft	300	24	16	222	562	305	257	450°	14
29.	F. 35% "	300	24	16	218	558	295	247	450°	16

"When baked, these biscuits were much alike in general appearance. In the A. O. C. Chemical Building, about twelve hours after the biscuits were finished. All the numbered biscuits were carried over, the meeting informed of the uniformity of manipulation, quantities of flour, fat, and baking powder, but not told the names of the flour or quantities of milk used, and the meeting asked to judge which were best. A committee of three was appointed, which reported Nos. 28 and 29 as best, but declined to rank one above the other. The committee stated that there was so little difference between the other lots that judgement between them was very difficult.

"Conclusion—Soft wheat flours yield the tenderest biscuits when conditions are uniform.

"Remarks.—When strong and weak flours are made slack enough for biscuits, and both are of the same slackness, the difference in "handling quality is very noticeable. The strong flour dough has a stickiness like glue, while the soft flour has a owing to the care taken in proportioning ingredients, maintaining oven temperature, and in manipulation; but the experimenter judged the first two about equal; C soft, rather better; 85 per cent. decidedly best, with 35 per cent. a close second.

"The Dominion Millers' district meeting was held in Guelph, December 12, 1907. One session was held

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ier to handle.

"Summary.—1. Other things being equal, soft wheat flours make more tender milk biscuits than strong wheat flour.

"2. Given a strong wheat flour dough and a soft wheat flour dough of equal slackness and suitable for milk biscuits, the soft wheat flour dough is the easiest to handle.

"3. At the present prices of the different flours the strong wheat flour biscuits cost more than soft wheat flour biscuits.

"4. It is possible that a larger proportion of fat used with the strong wheat flour would yield biscuits of tenderness equal to those of soft wheat flour, but the cost of fat makes that method of improvement a disadvantage."

(Continued in next issue)

Boots and Shoes.

A few usefal hints regarding boots and shoes should be pasted in the scrap book for reference. Wet boots and shoes are miserably uncomfortable things to wear, and those people who are compelled to travel much in wet weather will do well to have a stout pair well soaked in dubbin. Rub it well in, esoecially into the welts, as it is just there that the wet finds its way to the feet. When they become wet fill them with some pieces of absorbent material—tissue or any kind of soft paper will do. It will also keep them in shape. Never "tree" boots or shoes while they are wet. Rub a little Kerosene well into hardened boots; it wil, soon soften them and prevent the formation of many a painful corn. Damp boots will shine up in quick time if a couple of drops of paraffin be added to the polish; this will also stop cracking. Squeaky boots will lose their song if the soles be soaked in linseed oil for a couple of hours.—G. R. C.

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The Audubon society is organizing many thousands of school children and other young people into classes for bird study, and aids in many other ways educational work along the lines of bird study.

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Neuralgia.

The most stubborn cases of neuralgia are apt to yield to hot water treatment. Wherever the pain is located, there a hot water bag should be applied. The suffering part should be covered with a blanket and the patient put to bed and covered with more blankets and induced to drink at least three cups of water as hot as the palate can stand. This treatment may seem severe, but it is sure to bring relief. Of course, the patient should be careful not to take cold when cooling off after this treatment.

Plenty of Water.

Plenty of water, both inside and out, is the very best cosmetic. A cold sponge bath taken every morning to tone the skin and harden it and a hot or warm bath twice a week to remove waste matter will soon show good effects, and the result will be more decided if at least two quarts of water are drunk during the day. This may be either cool or hot as preferred, and it is better to take it between meals instead of with them, for too much fluid dilutes the saliva of the mouth and the gastric juices of the stomach.

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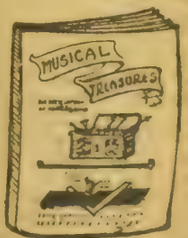

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Children's Idea of Life.

How little we older sojourners in this world realize the strangeness of it to our little comrades, who are just starting on their journey of life! We have grown so accustomed to its wonders and its ways, to its changes and its order, that we forget they were ever new to us and that there was a time when we, too, did not know what to expect.

When so many marvels met us on our way, why might there not be others also? Why not fairies and brownies, giants and ogres, talking wolves and bears that keep house comfortably with beds and chairs? (I remember one little girl, who on seeing the bears at the Central Park, cried out eagerly, "O, there's the middle-sized bear, but where's their chairs?") All these things seemed no more improbable than many others which we saw or heard of. Why shouldn't a pumpkin be made into a chariot as easily as into a pie? It resembles one no more than the other, to begin with.

And since, in some mysterious manner, a beautiful plant, bearing, after a time, lovely flowers, would appear where we had put into the ground a little hard, black seed, that gave no promise of life or beauty, why might there not be seeds that would produce plants bearing toys or cakes or candies? Or, if seeds would grow, why not other things that looked no less promising? One of my kindergarten children planted a marble, and waited long for it to come up, and I imagine that many of us can recall some such experience of our own.

How strange it seemed, too, that while water was to be found everywhere all ready for use we had to go to the cow for milk! Why were there not springs and rivers of milk, as well as of water? I remember thinking that this must have been the case of Canaan,—that "land flowing with milk and honey." It was all unaccountable, and anything might turn up.

It all seems far away now—we have grown used to the world, and know what to expect—to a certain extent, at any rate—but we cannot get a child's point of view at all, nor understand how to help him, unless we can realize, either from our own experience, or from observation of children, these early impressions.

For instance, we know that we can't fly, and we have ceased to expect to, but doesn't almost every child try to fly? When my nephew was two and a half years old he had been watching the birds one day, and presently he said to me, "I'm going to fly up in a tree." He stood under the tree and jumped up and down for some time, and finally remarked in surprise, "I can't fly!"

I said, "You have no wings." Whereupon he turned his head, trying to look at his back, and asked, "Where are my wings?"

At another time, on seeing the half-moon, he inquired, "Where is the other half of the moon and why don't they mend it on?" We, who are so accustomed to the waxing and waning of the moon, do we ever think how extraordinary it must appear to children, and to savages, who do not understand the reason for these changes in appearance? Is it any wonder that so many stories and myths have grown up, in explanation of this mystery?

The same child asked at Christmas time, about a year later, "How does our Heavenly Father make all the toys?" Being a country child, he was accustomed to see natural objects—as trees, rocks and streams—and had been told that God made them, and though he knew that and his clothes were made by people, he probably supposed that all the things which appeared "ready made" in his world were made directly by God.

On the other hand, a city child who sees little of nature will often refer natural processes to human agency. I saw this illustrated a short time ago, while talking with some things, such as puddings, bread some tiny city children. They were talking about the snow, and when I asked them what became of the snow in summer they insisted that "it was all shoveled up and dumped in the river." When we brought in some snow, and they saw it turn into water, their surprise was great!

Indeed, the melting of ice or snow is generally a great surprise to little children. How often a snowball is brought into the house "to keep," and vainly sought for later. I remember a little girl, in a friend's kindergarten, whose lunch could not be found. Jessie was in tears, and the teacher searched everywhere, and finally asked, "What did you bring, dear?" "A piece of ice," answered Jessie.

Sometimes this ignorance of the world has disastrous effects and not seldom what we call "mischief" is really want of knowledge. I remember that one of my brothers tried to use the door mat as a boat (happily only in the basin of a little fountain) and was astonished to find himself taking a bath, instead of a sail.

I feel strongly that in dealing with children we should keep in mind their ignorance of the world—of the laws of nature and the customs of grown-up people, and should overlook, or treat leniently, a good many things that are trying and perplexing to us. If we should suddenly find ourselves in an absolutely new and strange country, where we did not know the laws and customs and understood the language very imperfectly, I think we should be apt to commit a good many blunders, and be laughed at or scolded for them. And yet the strangest foreign country could hardly be as stramge to us as the whole world is to little children.

How can we best help them to live and learn? It is evident that they must learn what to expect—must learn that this world is really a word of order—that effect follows cause, and that things do not happen arbitrarily. They will learn much of this through their own experimenting, if we allow them freedom enough, and do not interfere unnecessarily, only guarding and guiding them in their researches, and trying to answer their questions clearly and patiently. And in all that we do, let us be very careful not to dull their interest, or make the world seem cold and hard to them.

The world is full of wonders and of beauty and a word of law and order is not cold and dull, but deeply interesting—far more interesting really than the fancy and caprice of a fairy tale. And though the crude ideas of God's "making" the world and all things in it, as a man might mold images out of clay, must gradually be changed to a knowledge of the slow processes whereby all things have come into being, yet he need not lose from his thougnt the idea of the Heavenly Father, who has ever been in his universe and is still working in it, making it a universe of law and order where we can live and work with him.

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Washing Enamel Paint.

The beauty of the white paint and enamel that are so deservedly popular is dependent upon spotlessness. Now there are various things that will remove spots therefrom, but the following method will, according to Ladies' World, leave the paint almost better than when new. It works like a charm upon painted or enameled metal beds, too, and doubtless upon numerous other things.

Have ready two white cheese-cloth cloths. Put them into hot water and then wring out until they are no longer wet, but merely well dampened. Now upon one of them rub one of the excellent white soaps that are upon the market. The result will be a heavy cream, but not a lather. this upon the soiled places until the latter disappears, which will be immediately unless the case be a very bad one; then wipe off with the other cloth. The result will be entirely satisfactory. The secret of success lies in the cream that is not a lather, in the mildness of the soap used, and in the dampness instead of the wetness of the white cloths.

Cream of Vegetables.

Cut one turnip, a carrot and a potato into thin slices; add to them a few celery tops, a bay leaf, a cupful of tomato if you have it, and two quarts of water in which meat has been boiled. Simmer gently for one hour; press through a very fine sieve, return the mixture to the fire and add one tablespoonful of suet rubbed with two tablespoonfuls of flour. Stir until it reaches the boiling point, add a grated onion, a teaspoonful of salt, and a saltspoonful of pepper. Serve with croutons.

Economical Wrinkles.

Here are a few homely discoveries some original, and some the result of modifying the hints of others, which may be new to some readers.

Cold left-over oatmeal may be added to meal and to flour gems, also it may take the place of flour in cornbread and brown bread, and it much improves all these dishes. Soak it up in the mixing and get all the lumps out of it with the hand. Dried doughnuts may be boiled in a little hot water to soften them, and added also to brown bread or stale cake, bread or crackers. I have put a saucerful of left-over pudding into it, also a spoonful or two of left-over squash or pumpkin. Of course, these are not all used at once, but any combination of these odds and ends which occur may be so utilized.

A saucer of apple sauce, dried peach sauce, or stewed prunes makes a pleasing addition to cake. Cut the peaches into small pieces and stone the prunes.

Use the cupful of left-over cocoa as the basis of a corn starch pudding, by adding a little more cocoa, milk and the usual ingredients.

The surplus fat sometimes found in a fowl may be ground up in the meat chopper and take the place af pork or butter in the dressing. Or it may be "tried out" and used as shortening for special cake, the spices concealing the flavor of the chicken oil.

Cut hot cake with a Cristy knife, and it will not fall.

Use a small brush to grease tins. It saves grease and time and the is more evenly distributed.

Cottage pudding is more attractive when baked in muffin tins. Set the pan on a cloth wrung out of cold water immediately after removing from the oven and in a few minutes the cakes will come out unbroken.

It takes less cream to serve whipped cream on a dessert than to use the plain cream at the table.

Sift squash, pumpkin and dried apples for pies through the potato ricer it is a great saver of time.

When butter is high and there is no dripping at hand, cold potatoes may be warmed up in lard, if an onion cut in small pieces be first fried in the fat and the potatoes added. The onion conceals the "lardy" taste.

If sausages are baked in a pan in the open, and are pricked in several places with a fork, they will be much more digestible and the extra fat which comes from them gives a delightful flavor to warmed up potatoes.

When frying pork, place the slices in a pan in a hot oven and they will not ouly fry to a dainty crispness, but much more fat will fry out and the top of the stove escapes the spatters of g.

When there is hardly enough macaroni for a dish, it can be pieced out very acceptably with rice.

A delicious pudding is composed of alternate layers of stale cake and stewed dried fruit, such as peaches, apricots or raisins. After the dish is filled with the layers pour over the contents sufficient thin, uncooked custard to almost cover, and bake.

A small 10c-store convenience is a wall-paper scraper, which is excellent for scraping the flour-boar scraping cake tins, digging into corners, and a variety of other things.

Country housewives who dry apples should save the skins and cores of the apples, stew them, and use the juice for jelly. If you do not wish to make it all up into jelly at the time, can the juice up hot, like any fruit, and make the jelly at your leisure. Thus you save the juice and avoid the labor of preparing other fruit for jelly-making.—Exchange. 6

The Farmer's House.

The farmer's house is a very great factor in the life of the farmer, and even more in the life of his family. The neglect of the farm house has doubtless more than once driven the children from the farm to see more attractives homes in the cities.

Pride counts with young children, especially with those of spirit and ambition. Today more than ever before in the history of the world, the children have high ideals, for they have become accustomed to reading books. In these books they find the ideal homes and beautiful houses. If the farm house in which they live is unpainted and dropping to pieces, it will fall so far below their ideals that they will be very uncomfortable when their friends come to see them and will look forward to the time when they can go out from the old house forever.

This is a very undesirable frame of mind in which to have the children of the farm home. It deprives them of that inspiration they should have. It is far better ito reverse things and make the farm house and the farm home so attractive that the children will be proud of them, whoever comes to see them.

The farmer can well afford to pay a little less attention to some other part of the farm and give the house the attention it should have. Make it a thing of beauty and a joy forever. On the farm such work as painting is generally done by the men that inhabit the house. Thus, putting on a new coat of paint is less expensive than it is in the cities, where labor has to be paid for at a high price.

A farm house should be thoroughly painted every two or three years to protect it from the weather and make it look fresh and bright. Every year certain parts should receive coats of paint—such parts as the porch floors, steps and window sills. These gre more exposed to the rain, sun and wind that most other portions, and if not frequently repainted, go to pieces rapidly.

The sides of the house that are most exposed to the sun will crack and begin to deteriorate more quickly than the other sides and thus should be kept watch of to prevent the woodwork getting into a condition where it will be difficult to cover up the deterioration.

The arrangement and equipment of the farm house are things that should be studied in the light of modern art and modern ideas of comfort. It is surprising how much a little money will do in improving conditions in the house. Today there are farm houses as well equpped as are the houses of the well-to-do people in the cities.

Running water in the kitchen and the bath room, a sewer system, furnace heat, a telephone, and even electric lights are possible in a great number of localities. These all cost money, but money must be expended in the country as well as in the cities if the people there are to have attractive homes.

Washing White Serge.

Shave one large cake of white soap into a pail of hot water and allow it to stand over night. The following morning fill a tub about one-quarter full of warm (not hot) water, and pour the contents of the pail into it and mix thoroughly. Now lay your skirt, making sure that the water covers every part of it. Allow it to remain three hours, and then have ready three pails of lukewarm water. Take the skirt up by the waist binding, allow it to drip a moment, and then plunge it into the pail of clear water. Souse up and down several times, always holding by the binding. Put through three or four waters just this same way, never wringing it. Then, when in the last water, carry the pail out-of-doors to your clothes line and hang the skirt up by the binding. The water will soon run out of it, and if it shrinks any it will shrink evenly. Watch carefully, and when almost dry take it in and press it, and you will be surprised at the success of your undertaking.

What We're Worth.

The analysis of the human body that has recently been published in an Indian paper must give us satisfaction. It reads :

An average man of 150 pounds contains the constituents found in 1,200 eggs. There is enough gas in him to fill a gasometer of 3,649 cubic feet. He contains enough iron to make four tenpenny nails. His fat would make seventy-five candles and a good-sized cake of soap. His phosphate contents would make 8,064 boxes of matches. There is enough hydrogen in him in combination to fill a balloon. The remaining constituents would yield, if utilized, six teaspoonfuls of salt, a bowl of sugar, and ten gallons of water.

Few of us, probably, imagined that our intrinsic value was so great.

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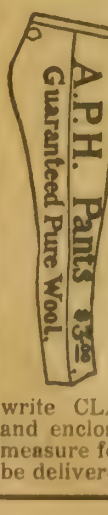

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Storage of Squash.

The precautions to be observed in storing vegetables in order to have the least loss are not well understood by vegetable growers generally. It is necessary to know that the losses are apt to be either from loss of moisture or from decay before we are able to decide whether or not it would be profitable to hold vegetables for higher prices on the winter market. With a view to answering some of these questions, Prof. W. Stewart, of the Vermont Experimental Station, has carried on some experiments with Hubbard squash, holding them till midwinter.

In these experiments a ton of squash weighed as taken from the field, was stored on October 3, in a dry and medium warm (50 to 60 degrees F.) room. On December 4 the squash weighed 1,810 pounds, a moisture loss for two months of 9.5 per cent. On January 4 they weighed 1,657 pounds (sound 1,622, decayed 35), a moisture loss of 8.5 per cent., and a decay loss of 1.8 per cent. On February 3, four months from the harvest, the sound squash weighed 1,488 pounds and the decayed 61 pounds, a moisture loss of 4.5 per cent., and the decay loss of 3 per cent. The total moisture loss during four months was 20.8 per cent. and that from decay 4.8 per cent.; total, 25.6 per cent.

When the squash were put in storage they were wholesaling at one cent a pound late in October at 1.5 cents, two cents late in December, and in January, owing to unusual scarcity, at 2.5 to three cents. At the conclusion of the trial the 1,448 pounds were sold at $53, an average of over 3½ cents a pound, the net gain by storage being $33 per ton. Market conditions, however, were very unusual. The common price at harvest is $15 to $20 a ton, and does not materially increase until January ($30 to $40), while during Febuary and March they advance to $50. Hence even under ordinary conhitions the increase in price amply offsets losses from moisture, decay and cost of storage, and leaves a handsome profit.

The conditions tending to minimize losses in storage Prof. Stewart states to be:

1. The squash should be well manured before harvest.
2. They should be cut or carefully broken from the vine, leaving the stem attached to the squash.
3. If possible they should be placed in small piles to ripen and harden up for two or three days before hauling from the field.
4. They should be hauled in a spring wagon, the box of which is lined with burlap or other material, to prevent bruising.
5. The storage room should be dry and moderately warm, at least for the first two weeks, to harden up the shells, after which a lower temperature, provided the room is dry, may be maintained.
6. Finally, squash from harvest to sale should be handled as one would handle eggs. Broken stems and bruised skin are sure to cause decay.

In general, Prof. Stuart concludes that squashes properly grown and handled may be held in storage till mid-winter or later.

A Fruitful Tree.

Mr. John Tobin of Kentville has what many consider the most productive apple tree in the Valley. It is a spy and in 1910 it produced 15½ barrels. In 1911 it again gave Mr. Tobin 15 bbls. and this year it beat its former record by producing 18½ barrels. It is very unusual to get such big crops three years in succession. If any one can give a better record we would be pleased to publish it,—The Advertiser, Kentville, N. S.

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Sales Branches: Winnipeg, Man., Sussex, N.B.

The "Standard" 12

Request Tariff Proteciion or Renewal of Bounties.

Representatives of all the steel interests met the ministers of the Government at Ottawa, on Friday, October 25th, asking increased tariff protection on steel products or if the government will not immediately increase the tariff, they want a temporary renewal of the bounties pending a permanent revision of the tariff We understand that the government have only promised consideration, and will again discuss the matter with them, before the season opens in November. Now the steel interests will resort to every means within their power to either get the government to pay them out of the public treasury, a fixed amount on every ton of steel they manufacture, or place higher duty on steel products, which will give them the privilege of directly taxing every user of steel in Canada.

For the past quarter of a century, the steel interests have been given enormous sums out of the public treasury, and on the strength of these immense sums, it was possible to place a large percentage of water in their stock, and still pay a dividend. Now, when the bounties are cut off, it is trouble some to show a dividend on the watered stock, and naturally they look to the government to give them the privilege of specially taxing the public in order that their stocks will hold the old market value. Are you willing to be specially taxed for this purpose? Early this present year the Sarnia Fence Company circulated petitions among the farmers, in order that they might place before the government their feelings on the matter of renewal of the bounties, or granting further protection to the steel interests, and the result was, so much objection was raised, that the steel interests were obliged to let the matter rest for a year, and now they are renewing their demands. The main argument of the steel interests before the government, is that they are not receiving as much protection through the tariff, as other lines, and they feel they are being discriminated against in not having the privilege of bleeding the public for as large a percentage as other manufacturers. They are seeking legislation which will place all steel products in their control. If they can by any methods lead the members of the government to believe through a contortion of figures that they need further protection, they will get it. On the other hand, if the farmers of Canada stand together irrespective of party politics, and refuse to spoon feed the steel interests longer, the government will listen, if you go after the matter through your member, who is your representative at Ottawa and write him personally, and tell him you will expect him to oppose any renewal of the bounties, also any further protection in the tariff, particularly the giving of a bounty on wire rods, or any change in the free admission of galvanized wire for fence purposes will be resented by you. Protests of this nature will be effective, and it is up to you to do it today, then watch the result.

When the late government placed plain galvanized wire for farm fencing on the free list, it was meant as a special concession to the farmer. He (the farmer) however, was prevented from reaping any benefit from this concession through a pool arrangement of the Fence Manufactururers. Through the policy of the Sarnia Fence Company the farmer has had a taste of what was intended for him. Are you going to sit idly by, and see the steel interests through legislation deprive you of this concession when you have the remedy in your own hands, prompt action and strong protest will do it.—The Sarnia Fence Co. Ltd.

Is your husband cross? An irritable, fault finding disposition is often due to a disordered stomach. A man with good digestion is nearly always good natured. A great many have been permanently cured of stomach trouble by taking Chamberlain's Tablets. For sale by all dealers.

Had a Weak Heart.

Doctored For Three Years Without Any Benefit.

Through one cause or another a large majority of people are troubled, more or less, with some form of heart trouble.

Little attention is paid to the slight weakness, but when it starts to beat irregularly, and every once in a while, pain seems to shoot through it, then it causes great anxiety and alarm.

Milburn's Heart and Nerve Pills will give prompt and permanent relief to all those suffering from any weakness of the heart or nerves.

Mrs. M. Shea, 193 Holland Ave., Ottawa, Ont., writes:—"I write you these lines to let you know that I have used Milburn's Heart and Nerve Pills. After doctoring for the last three years with all kinds of medicines and pills for weak heart, I heard of your Heart and Nerve Pills, so thinking I had never used anything that did me so much good, I kept on using them, and I had only used four boxes, when I was perfectly cured."

Price, 50 cents per box, 3 boxes for $1.25 at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

THIS handy farm wagon is built low (which saves time and labor loading and unloading) and will carry the heaviest load—anywhere a horse can travel. And because it never needs repairing, it's the most economical wagon on the market.

T-A Handy Farm Wagons and Wide Tire Steel Wheels

Equip your old wagons with T-A Wide-Tire Steel Wheels and they'll be just as good as new. And besides they'll carry 25 to 50 per cent. heavier loads.

For catalogue and descriptive literature write to

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Orillia, Ont.

MAXWELL'S "PURITY" FOOD-CUTTER

is entirely different from the ordinary food chopper. The barrel is in two closely fitting sections, clamped together by one set-screw. Canadian made machine.

Better in quality, capacity and price works better, better finished, **less in price.** Five different cutting plates.

"MAXWELL'S PURITY" is the only food cutter made in Canada—and in ease, convenience, perfect cutting and durability—is superior to anything imported. If your dealer does not handle "Maxwell's Purity" write us.

DAVID MAXWELL & SONS,
St. Marys, Ont.

How to Dress Calves.

Calves from three to six weeks old, and weighing about one hundred pounds, or say from eighty to one hundred and twenty pounds are the most desirable weights for shipment. The head should be cut out, so as to leave the hide of the head on the skin. The legs should be cut off at the knee joint. The entrails should all be removed, excepting the kidneys; the liver, lights and heart should be taken out. Cut the carcass open from the neck through the entire length—from head to bumget. If this is done they are not so apt to spoil during hot weather. Many a fine carcass has spoiled in hot weather because of not being cut open. Don't wash the carcass out with water, but wipe out with a dry cloth. Don't ship until the animal heat is entirely out of the body and never tie the carcass up in a bag, as this keeps the air from circulating, and makes the meat more liable to become tainted.

It is very essential that the directions for dressing calves be followed, especially in regard to letting the calves cool off properly before shipping in hot weather, as hundreds of calves are received in bad order and sold for not much more than charges, and some do not bring freight. Numerous carcasses are also condemned by the health officers. They should hang up six to eight hours or over night in an airy place to properly cool off before shipping.

Calves under fifty pounds should not be shipped and are liable to be condemned by the health officers as being unfit for food. Merchants, too, are liable to be fined, if found selling these slunks, for violation of the law. Very heavy calves, such as have been fed on buttermilk, never sell well in our market—they are neither veal nor beef.—Live Stock Journal.

The Faithful Dairy Cow.

The dairy cow, aside from her commercial importance to tne farm is a gecessity for the home. Only those who are deprived of fresh milk, choice butter and buttermilk for baking and for drinking can realize the importance of the dairy cow. Cold or hot wet or dry, early or late, the faithful old cow is ready to tender her services in supplying food for the family. She is a necessity; her services can not be dispensed with. There is no more faithful, no more economical, no more desirable animal than the dairy cow, and she should be well cared for and her services more appreciated.

Sprouting Grain for Fowls.

Where it is possible, a winter crop should be planted to furnish green food for the fowls. It does not take a large area to furnish green food for a small flock and usually plenty of space may be found for this purpose. But where one has only a city lot and a green crop is out of the question, arrangements should be made to sprout oats, rye, wheat or barley. If no other space is available, a box of soil will suffice. The box may be filled with rich garden loam if the seeds are to remain long enough for the plants to grow; if the grain is to be fed as soon as the seeds sprout, a box of sand is sufficient. The box may be set in the cellar or in the kitchen near the stove in very cold weather.

EVEN the barrel label invites your *confidence.*

It says "you must be satisfied, or your dealer returns your money."

That's because this flour yields the best quality and the utmost quantity of bread, light, white loaves, flaky pastry.

REGAL FLOUR

Eddy's Matches

MADE ON HONOUR
SOLD ON MERIT,

AT ATTRACTIVE PRICES
AND FULL COUNT.

ALWAYS EVERWHERE IN CANADA, ASK FOR EDDY'S.

MADE IN THE BRITISH EMPIRE
MADE IN CANADA
MADE IN HULL

7% GUARANTEED 7%

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Authorized Capital $1,000,000.00

Business established 26 years with trade connection in principal countries of the world. This is one of largest businesses of its kind in the world.

The company do their own financing, and pay **interest twice a year,** on 1st June and December. and allow the investor to withdraw his money at any time after one year on 60 days' notice if desired.

This security is different from any other ever issued with its **Profit Sharing Features,** and is as safe as any farm mortgage. Investors wanting the highest earning capacity with absolute safety, should write at once for full particulars to

NATIONAL SECURITIES CORPORATION LIMITED

Confederation Life Building, Toronto, Canada.

It Pays to Advertise in the Maritime Farmer.

Labour at Half Price

is insured to those who install Louden litter carriers, the modern time and labour savers. They last a life-time and should appeal to those desirous of securing clean stable and yard conditions at the least possible outlay of time and energy.

The LOUDEN Carrier

is the Boy's carrier, because it is equipped with easy running trolleys, powerful hoisting device, and endless chain for raising and lowering the bucket. No brake to set or release.

Ask your dealer about Louden litter carriers, track, switches, and swing-pole fittings.

Our book on litter carriers, hay carriers, steel stable equipment and barn door hangers is free. Write for it.

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A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

"There could be no better medicine than Chamberlain's Cough Remedy. My children were all sick with whooping cough. One of them was in bed, had a high fever and was coughing up blood. Our doctor gave them Chamberlain's Cough Remedy and the first dose eased them, and three bottles cured them," says Mrs. R. A. Donaldson, of Lexington, Miss. Lor sale by all dealers.

Management of the Alfalfa Field.

Information for the management of the alfalfa field after it has been seeded is given by O. O. Churchill, Agronomist at the Oklahoma Experiment Station in the following condensed form:

When weather conditions are very unfavorable the young plants may die. When this occurs reseed on the same land the following spring or fall, as the case may be. Do not let one unsuccessful trial discourage you.

If the leaves turn yellow or rust badly, or if severely attacked by insects, or if weeds grow rank and shade the young plants, it should be clipped.

Clip whenever the plant begins to blossom even during the first year.

Use a spring-tooth harrow, a renovator or a disc harrow in the spring just before a growth starts or just after a crop is removed when the soil becomes hard and compact or very weedy. When a disc is used set nearly straight and weight down so that it will run the desired depth.

Manure will always give good returns and especially on poor land and when the plants are doing poorly.

Do not pasture late in the fall or during the winter. Most alfalfa growers claim better results when the crop is grown for hay than when the field is pastured.

Do not pasture at all during the first three years, or until the alfalfa becomes thoroughly established.

The alfalfa crop should be cut whenever five or 10 per cent. of the plants are in blossom. A better method of telling when to mow is to watch the base of the plant and cut whenever the little buds show that a new growth is started.

Allow the plants to wilt but not to become too dry in the swath, then rake and cure in the window or in bunches.

Stack or put in the barn when cured, which will be about one week after mowing, depending upon the weather conditions.

When a seed crop is desired, the first crop should be removed and then the plants allowed to go to seed. The production of seed depends very largely upon the weather conditions and upon the thickness of the plants. The seed crop may be mowed and raked the same as the hay crop, and most of the seed can be saved by an ordinary threshing machine.

Feed this valuable hay to good stock; you cannot afford to sell it.

Home Cured Bacon.

First, if the weather is freezing, salt down at once; if not, spread out and salt next morning; rub well; use 10 to 12 pounds of salt to the hundred pounds of pork. Wrap up so that the flies will not get to the meat. Look at two or three times, see that your salt don't crust on the meat. Sometimes it is necessary to add a little more salt in warm wet weather. Get it properly salted, the rest is easy.

When the meat begins to get slick on the skin side take up and wash in strong borax water, hot as you can bear to wash in; then lay on scaffold Take pulverized borax and dust the flesh side and edges.

Dust the smokehouse good with borax and hang your meat. I never take it down only as I use it.

This is the best way that I have ever found to keep meat. Neither bugs nor worms infest it; it does not get strong.

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Are you a trapper? Are you a dealer? Are you seeking a reliable firm to ship to? Many thousands of shippers say we give best returns, good reasons—we pay as we quote, give a square grade and send your money as quick as the return mail can bring it to you. We post you reliably.

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147 West 24th Street, New York. (Mention this paper.)

References: Greenwich Bank, N. Y. East River National Bank, N. Y.

New Vitality For Men

USE THE

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Vitality gives you the manly courage to protect those depending upon you, as portrayed in the picture. No matter what thoughtless action or early indiscretion may have sapped your strength, vitality restores it to you. It makes you over into a strong, vital, manly man, without an ache, pain or weakness. Vitality puts the real VIGOR OF YOUTH into your blood; no matter how nervous or debilitated you may be, it puts the sunshine of vigorous manhood into your life; I make you feel young and keep you feeling young, without the use of drugs, without the necessity of dieting, without one bit of change in your present mode of living, except, of course, dissipation must cease. Just lead a manly life and use my HEALTH BELT; everything else will come. My HEALTH BELT, worn at night, pours a great, soft stream of VITAL STRENGTH into your blood, nerves and organs during all the hours you sleep; in one night it takes the kink, pain or weakness out of your back, ere long friends will be saying: "How well you look," and you are answering: "Never felt better in my life!" Your eyes will sparkle with health; you will have that pleasing influence to fascinate and control which comes to all full-blooded, strong, vital, manly men. Thousands upon thousands are now using my Health Belt all over the world. With special attachments it cures rheumatism, kidney, bladder, stomach disorders, etc.

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WOMEN'S SEMI-FITTING

COAT

ATTRACTIVE IN PRICE AND STYLE

56-9000. Winter-weight All-wool Beavercloth, 52 inches long, lined to waist with heavy sateen, finished throughout in best tailored style. The large graceful shawl collar and cuffs are piped with black velvet, and have tabbed button trimming in addition, while the large fastening buttons are velvet-rimmed to match. Bust sizes 32 to 44. Choice of black or navy.

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FINE ALL-WOOL SERGE

SUIT

SMART AND DRESSY VERY LOW PRICED

56-9001. Suit of fine All-wool French Serge; coat in semi-fitting style, is 32 inches long, and lined with silkaline, the trimming being a simple arrangement of small buttons and Soutache braid on the revers. The skirt is in five gores, has moderately high waist line, with plain panels back and front, the latter being trimmed with buttons on one side. Bust sizes 32, 34, 36, 38, 40 or 42; with choice of skirt lengths 38, 39, 40, 41 or 42 inches. Black, navy or brown. Price **10.00**

THE T. EATON Co LIMITED

TORONTO - CANADA

Things Equal to the Same Thing are Equal to Each Other.

It does not require the mind of a geometrical student to understand the old axiom that, "Things equal to the same thing are equal to each other."

Now let us study this old axiom as applied to plant life, and see what great lesson we can learn from it. It will be somewhat of an experiment. We will take a boy at an age where he can do some thinking and some reasoning for himself. We will place him by the side of a stalk of corn; tell him that he is going to be left alone and to study this stalk of corn; that this stalk of corn was made by the same creator that made him; and that we desire him to study out the various parts and the functions of each; that we wish him to learn the purpose for which each part was created and any other special characteristic.

The first thing that attracts the attention of the boy will be the long green blades. He thinks they are beautiful and soon learns that the deep green color is the sign of life. He examines the construction of these blades, and is much attracted by the little gutter-like ribs. He now takes a glass of water, empties it over these blades, and watches the water go splashing down in this little gutter, and then finally is distributed around the roots at the base. At once he understanhs that every little gutter will lead the water and deposit it at the same point. It is simple, yet interesting. He feels that the one who made the plant must have studied it out well before making it, and he himself does not see where if it were left to him that he could improve on its construction.

But just as he was watching the water run down around the rootlets, his attention is attracted at the base in addition to the regular root system, to a number of large roots that are shooting forth several inches above the ground, yet reaching downward, and some already have run their noses into the soil. For a moment he wonders if the plant didn't make a mistake and start these out too high above the ground. The boy is puzzled over this seemingly new discovery. He sits down and tries to study out this problem. Just about this time a great puff of wind comes; the stalk sways and yields to the wind; it is bent and he fears that it is ruined. The wind ceases and almost instantly the stalk arights itself, and is now in the same upright position. The blowing of the wind has aided him materially in solving this mystery. He saw the wind twist the stalk, and felt sure that had they not been there the stalk would have been blown down, and being of such heavy weight it could never have righted itself. The purpose of these large roots he has learned is to brace the plant. He understands why it was that they were put out above the ground on a similar plan to what he had seen his father brace some fence posts in his yard. He understands why it is that they are not needed on the baby plant. He thinks that it was a great plan, and the One who made certainly thought it out, as he himself would have done.

In like manner he takes each part of the plant and studies out or reasons out for himself the function of each plant and always comes to the right conclusion. Little by little he sees every part of the plant and thinks what he would have made it the same way had the work been left to him.

While studying the corn plant his attention is attracted by a yellow flower nearby. It is a dandelion. Some of these which he has plucked have stretched out their heads high in the air above their brother yellow flowers, and assumed the shape of little worlds and bubbles. He holds this little world near his face and the force of his breathing destroys the little world discovered; it burst to pieces, and each piece rose into the air like an airship and floated away. He is now much interested, but more amused. He follows one of those pieces that is floating near tne earth and it finally settles to the ground; He picks it up, holds it closer to his eye. He discovers that it is constructed on the same plan as the parachute that he has been reading about. But he finds that instead of carrying a person or pigmy that it has a seed. He watches another parachute light and sees that the seed strikes the ground first, the point really piercing the earth. It remains where it has lodged. He begins to think just why this should be so. He has seen the entire balloon—collection of seeds, scatter in all directions. Same have landed nearby, others have flown entirely out of sight. Then he reasons and arrives at the conclusion that this is the plan for scattering the seed. It is the way the plant was made for getting scattered and planted in other fields.

The boy then learns that another plant will grow from each seed. That each parachute carried one of these seeds and deposited it far beyond the old home where it was raised. Again he has thought out why the Creator made the parachute for each seed. That they would be scattered and when they came up next spring they would not be crowded for room. He thinks it is a fine arrangement and believes that he himself would have made it the same way had it been left for him to do.

The child thus without any help thinks the same thoughts that his Creator thought when making these plants. His mind has traveled naturally in the same channel. He believes that he would have made them in the same way. In like manner every part of every plant can and has been worked out. Without any extraneous help or influence, but naturally, the child's mind has followed that of the Creator of all things.

The product of his brain is the identical thoughts of his maker. "Things equal to the same thing are equal to each other." Is not then the child created in the image of the Creator of all things? It is incontrovertable.

The question then naturally arises, is it possible then for a naturalist to become so deeply interested in the things about him that he thinks nothing of the higher life? Is it possible for a student of nature to think of all these wonderful creations without thinking something about his own self? Is it possible for him to go down to the grave an infidel? Although he has studied plant life in the construction of plant life, has he not discovered the fact that in like manner the Creator made him for a purpose? Each fact that a student of nature learns should spur him on to something higher. It is impossible for him to admire creations, without having greater admiration for the creator. It is unnatural for one to love a creature, without loving more its creator.

When a child becomes interested in things made by the Creator, a multitude of deepest thoughts are certain to follow. He begins to be interested in his own body. He studies each part of his body more interestingly than he has studied the various parts of different plants. He discovers, along the way, that each part of his body was made for a purpose, and sees the wisdom in their construction.

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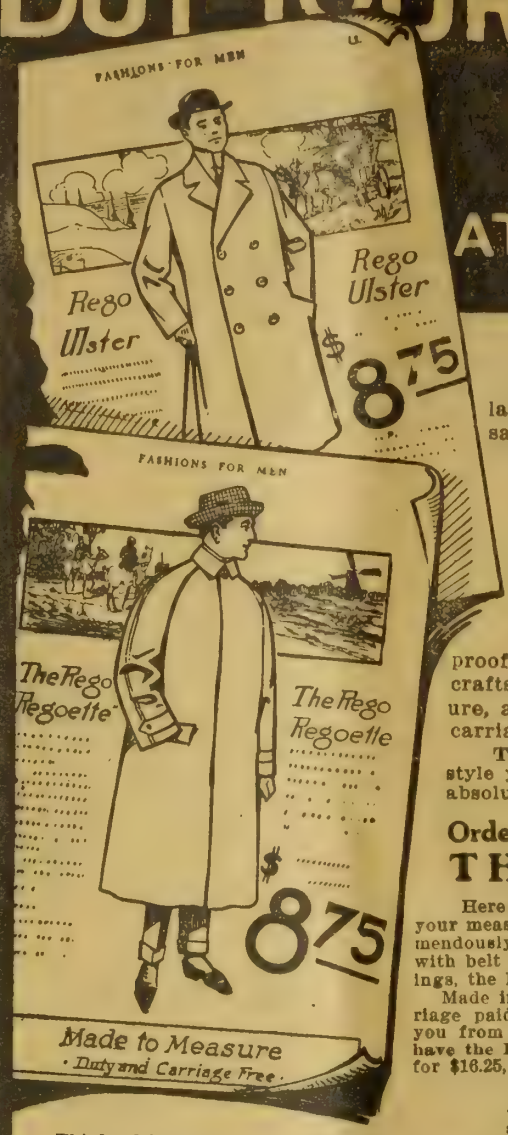

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For smart fall wear the Regoette is a stylish walking coat, as well as a perfect waterproof. It looks well, and wears well, and will be admired in any company.

Owing to our enormous tailoring business—30 branches in London alone—we are able to buy the best materials at the lowest prices. That makes it possible for us to make this offer to Canadian men:—**OUR REGOETTE RAINCOATS**, guaranteed absolutely waterproof, cut to Canadian requirements, made by expert English craftsmen, from best English materials. Made to your measure, and according to New York or London styles, for **$8.75**, carriage and duty paid.

The Regoette is made in several styles. You may choose the style you prefer, and each style carries our guarantee that it is absolutely waterproof, and cut to fit your measure, or money back.

Order Your Winter Overcoat Now!

THE TWO FOR $16.25

Here is a heavy Double-breasted Rego Ulster, made to your measure by London tailors, and which has become tremendously popular. It is smart and elegant in appearance, with belt behind. Your choice of plain Italian or fleece linings, the latter something entirely new and very warm.

Made in England, the price is low—$8.75—duty and carriage paid. The same coat made in Canada would cost you from twice to three times the money. **And you can have the REGO ULSTER and the REGOETTE RAINCOAT for $16.25, carriage and duty paid.**

Think of it—these two coats—English, made to Canadian requirements, entirely to customers' measure, of the best old country materials—**$16.25 for the two.** We pay all carriage and duty charges. We make this offer to get in touch with more Canadian customers.

Send for our free magazine, "Fashions for Men"—the only men's fashion journal published. Tells all the latest fads and fashions in clothes and men's furnishings. We will also send free samples of cloths used in the Ulsters and "Regoette" Raincoats and pattern samples of fall and winter suits, free self-measurement chart, tape, etc. You will then be able to choose styles, materials, etc.

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WIRE FENCE PRICES

HAVE ADVANCED

The SARNIA FENCE COMPANY, Limited

SARNIA, ONTARIO.

ARE you aware of the fact that the price at which we are selling the finished woven wire fence, is less than the actual cost of the wire on the the open market today? Are you aware that the only thing between the farmer, and higher prices for fence, is the contract which we, The Sarnia Fence Company, hold with our wire makers, to furnish us with wire at an agreed price for a certain period? When the amount of wire which we have contracted for is used up, we must pay more for our wire, and we in turn must increase our price of fence.

Until The Sarnia Fence Company's direct to the farmer policy became the dominant factor in the Canadian field, the price of fence has always been advanced as soon as the wire market would permit it, and the farmer had no option, but to pay the advance.

Now, we are going to sell at our old prices, as long as our contract will permit, and we urge every farmer to take advantage of our offer, and purchase his fence, at the earliest date possible. Orders will be filled in the order in which they are received, and the farmer who gets his order in first, is surer of getting his fence at the low price, than if he waited until the usual time, and then found that others had got in ahead of him, and he was left to pay the higher price.

On account of our offering to continue our extremely low prices to the farmer, in the face of advanced prices all around us, it is likely that the demands made upon us will be so great, that our supply will be taken up long before the fence season opens, we therefore cannot urge upon you too strongly the necessity of you placing your order, at the earliest date possible. Send your remittance with your order, and we will guarantee to deliver at the prices below, as long as our stock will permit. State in your order, whether you wish your fence shipped at once or held, and shipped at a later date.

The Sarnia Fence Company's direct to the farmer policy has saved the farmers of Canada, many thousands of dollars. We shipped over seven hundred car loads of ROYAL fence during 1912. We number our pleased customers by the hundreds of thousands. The above offer is another proof of our loyalty to the farmer. We propose to protect him to the utmost of our ability. Our well known guarantee YOUR MONEY BACK, AND WE PAY FREIGHT BOTH WAYS, IF DISSATISFIED, holds good on every bale of Royal Fence. READ THE PRICES, GET YOUR ORDER IN TODAY SAVE FOR YOURSELF, WHAT HAS NEVER BEEN OFFERED TO THE FARMER BEFORE.

5-40-0 Has 5 line wires. 40 in. high, 9 stays to the rod. All No. 9 hard steel wire. Spacing 10, 10, 10. 10. Price per rod	17c
6-40-0 Has 6 line wires, 40 in. high, 9 stays to the rod. All No. 9 hard steel wire. Spacing 7, 7, 8, 9, 9. Price per rod	19c
7-40-0 Has 7 line wires, 40 in. high, 9 stays to the rod. All No. 9 hard steel wire. Spacing 5, 6, 6, 7 1-2, 8 1-2. Price per rod	21c
8-34 Has 8 line wires. 34 in. high, 12 stays to the rod. all No. 9 hard steel wire. Spacing 3. 3 1-4, 3 1-2, 4 3-4. 5 1-2, 6, 8. Price per rod	25c
8-40 Has 8 line wires, 40 in. high, 12 stays to the rod. all No. 9 hard steel wire. Spacing 3, 4, 5, 6, 7, 7, 8. Price per rod	26c
7-48-0 Has 7 line wires, 48 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing 5, 6, 7, 9, 10, 11. Price per rod	22c
8-48 Has 8 line wires, 48 in. high, 12 stays to the rod, all No, 9 hard steel wire. Spacing 4, 5, 6, 7, 8, 9, 9. Price per rod	27c
9-48-0 Has 9 line wires, 48 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing 3, 4, 5, 5, 6, 8, 8, 9. Price per rod	27c
9-48 Same as 9-48-0, with 12 stays to the rod. Price per rod	29c
10-50 10 line wires, 50 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing 3, 3 1-4, 3 1-2, 4 3-4, 5 1-2, 6, 8, 8. 8. Price per rod	31c
11-54 Has 11 line wires, 54 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing 3, 3 1-4, 3 1-2, 4 3-4, 5 1-2, 6, 6, 6, 8, 8. Price per rod	35c
15-50P. Stock and Poultry Fence. Has 15 line wires, 50 in. high, 24 stays to the rod; top and bottom No. 9, filling No. 12. Spacing very close for poultry. Price per rod	35c
Staples, galvanized, 1 3-4 in., per box 50 lbs	$1.40
Brace wire (soft), 25 lb. coil, each	75c
Barb wire, galvanized (two point), 80 rod spools, each	$2.00
STRETCHER—An all-iron stretcher, top and bottom draw, very heavy chain. Extra single wire stretcher and splicer, freight paid with fence orders only	$7.50

Farm Gate made of 1 3-8 tubing, filled with all No. 9 Wire, 12x48. Each $4.00 Farm Gate, 13x48. Each... $4.25 Farm Gate, 14x48. Each... $4.50 Walk Gate, 3 1-2x48. Each... $3.00

The above prices include freight prepaid by us to any railroad station (electric and boat lines not included), south of North Bay in old Ontario. We do not prepay freight on gates, stretchers, barb wire, brace wire or staples, except when ordered shipped with fence.

Customers in New Ontario, Quebec, Maritime Provinces, and the North-West may deduct 2c per rod from the above prices of fence, 25c from the gates, stretcher and barb wire, 10c from the brace wire, and 15c from the staples; customer to pay his own freight from Sarnia. Write us, tell us what style you want, and we will tell you what your fence will cost you after paying your freight. We have never yet found a locality in the Dominion of Canada where our price with the freight added was not less by a good margin than your dealer or agent will ask you.

We urge you to get your order to us without delay, in order to save the advance. Remit cash with your orders. These prices on fence are less than the actual cost of the wire on the open market today, and in order to prevent speculators from placing large orders, thus depriving the farmer of this advantage, we reserve the right to refuse any orders, which in our judgment, would come under this head.

The Sarnia Fence Company, Limited, Sarnia, Ont.

He has now ,earned that plants cannot thrive with some of its members diseased or mutilated. Then he begins to take this lesson home to himself. And this great truth being so concerning plant life, he feels that he himself cannot thrive unless he keeps his body in a healthy condition. And lastly he has found in all his study of plant life, that each plant was created for a purpose, just the same as he has found each part of the plant served a purpose. He naturally concludes that he, himself, was then created for a purpose. He seeks that purpose. He naturally reasons then that the earth would be incomplete without each plant that was created. And of course he feels that he must then be a necessity in this world, else he would not have been created. He now realizes that he is an important being in this great world, and without him there would be something missing. He is a part of the universe. He wants to fill that purpose. When a young man feels that the world cannot get along without him, he is going to have some self-respect, self-pride, respect for others, and he will broaden out in mind, and is going to try to do something. He is going to try to learn to live in such a manner to serve the purpose designed by his maker.

"Things equal to the same thing are equal to each other."—R. S. Walker in Farm and Home.

Roots in Tile Drains.

If there is an elm or willow tree within 60 feet of a drain tile, in which water is running a considerable proportion of the year, the roots of those trees will surely find their way to the tile and choke it up. We have had this experience several times and had to remove the trees. Another trouble is with alfalfa roots. Samples have been sent us of drain tile completely filled with alfalfa root for several feet.

The Massachusetts Station has experimented with this matter for three years and has found the roots can be kept out by covering the tile with excelsior or sawdust soaked with creosote.—Hoard's Dairyman.

Sask-alta
STEEL
RANGE

When you buy a Sask-Alta Steel Range you make a permanent investment. The

SASK-ALTA

is guaranteed by makers and dealers alike to be a strong, durable range and a perfect cooker and baker.

412

McClary's

FREE
HANDSOME
FURS

Big handsome Fur Muff or Scarf, the most fashionable shape and style ever known. Made from beautiful rich full furred skins, warm, dressy, and bound to give years of wear and satisfaction. Muff is finished with corded silk wristlet, lined with finest quality black sateen and the scarf is the newest Parisian throw-over style. OVER 48 INCHES LONG. Has all the appearance of a $50.00 SET OF FURS.

We give you choice of either the handsome muff or scarf, if you will sell only 14 of the world famous Gold Dollar Flavoring Extracts among your friends and neighbors at only 25c. each. They come in all the finest flavors, Vanilla, Lemon, Orange, Raspberry, Strawberry, Almond and 20 others. Handsomely put up in new style collapsible tubes. Four drops of Gold Dollar Flavors equals a teaspoonful of ordinary extracts and each tube is guaranteed to equal five regular 25c. bottles of ordinary flavorings. Every lady who tries a tube can receive a fine present of a 50c. cook book free from us. You can sell three or four different flavors in every house. We are spending thousands of dollars to introduce these grand new extracts into every home in the land and we send such a grand assortment of flavors, that you will surely sell only 14 in a few minutes. Return our $3.50 when sold, and we will promptly send you either this handsome muff or scarf, all charges paid by us, exactly as represented. Write for the extracts to-day. We trust you with them until sold.

National Products, Ltd., Dept. F. 235 Toronto, Ont.

ONE CENT A WORD

Trappers learn to make Scofield fox scent. I'll show you how for 50 cents. Also make smokeless gun powder for 50 cents. Both 80 cents. MOSES PERRY, Cody's, N. B.

MACHINERY—We offer for sale the Machinery used by the New Glasgow Creamery Company. This machinery will be sold at scrap price as we require the room taken up by same. One Stoddard two-door power churn $15 for quick sale. This churn is as good as new and is complete with bearings, etc., all ready for power. The STEEL FURNISHING CO., New Glasgow, N. S.

Horse Comfort

No patient beast has his patience more sadly imposed upon than the horse. In a hubdred ways horses are made to suffer needless discomfort through the carelessness or thoughtlessness of their drivers. How often you will see horses working in the field on a doubletree so short that the cause the animal to be put to a concauses the animal to be put ta a constant and unnecessary strain to overconduct this indirect pull. Sometimes, too, when the doubletree is long enough to bring the centre of the singletree directly behind the horse the singletree is so narrow that both tugs press uncomfortably on the ribs.

A doubletree too low often causes heavy pressure on the back by pulling down on the back pad or in the absence of that feature on the harness brings the draft too low to strike the right point of the shoulder. The length of the checks is sometimes in wrong adjustment, so that the animals' heads are held too far in or too far out, giving them needless discomfort and annoyance. Some men will work a horse day after day with an ill-fitting collar without doing what he can to relieve the matter by adjusting the hames. It is not unusual to see horses working hour after hour with a big wisp of the mane squarely under the collar chafing the shoulder.

AS THE MAN, SO THE HORSE.

What farmer doesn't take a jug of water to the field on a hot summer day, but how many take water for the horses? Some do, we know, and are rewarded by better service on the part of their horses too. Many farmers are not thoughtful enough to face their horses toward the breeze while resting them, although this is much more refreshing than standing with their backs to the breeze.

Every implement that has a tongue to slap and pound horses should have a tongue truck. A disk without a tongue truck is an unmerciful thing on the horses obliged to carry the tongue. A binder tongue does not slap so badly, but the great weight sometimes thrown on the tongue there is a heavy burden on patient necks.

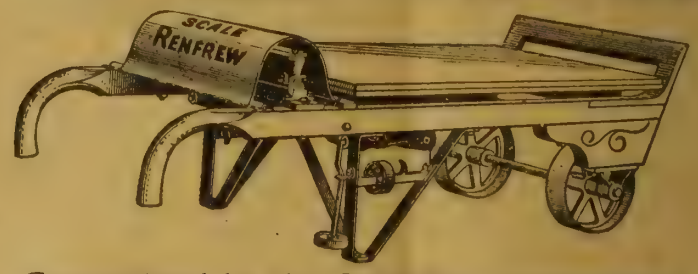
We wonder why more wagons are not built with a stationary front axle, like an automobile, and made to guide with the tongue just as an automobile is guided, not by swinging the wheels alone. This would eliminate all tongue slapping when the wagon passed over rough ground. Some wagons are, or used to be, built this way, and we have never been able to understand why the idea was not more generally accepted.

LIKE TREATMENT FOR CRUEL DRIVERS.

We have not mentioned here the driver who cruelly beats and jerks his horses. Fortunately there are not many such on farms. When we do see one, however, we want to put him in the place of the abused horses. Almost all drivers want to be square with their steeds, and make the labor as bearable for them as possible, but as we have said, thoughtlessness and carelessness lead to a great deal of horse discomfort that might be avoided. We have not attempted to point out all of the possible sources of needless suffering and annoyance to horses, but only to start some thought waves. Look your outfit over and see if you are doing all that you might do to make your horses comfortable while at work.—Nebraska Farmer.

THE FARM SCALE THAT SAVES MONEY FOR FARMERS

THE RENFREW HANDY TWO WHEEL TRUCK SCALE



Guaranteed by the Canadian Government

The Renfrew saves every cent of profit for the farmer on everything he sells by welght,—because of its absolute accuracy.

It saves for him time and labor,—simply wheel the Renfrew to what you want to weigh.

It saves for him because it is built to last,—and weighs everything from one pound to 2000 pounds.

Does your scale do these things? If not, it is time to buy a Renfrew —the farm scale built to suit your requirements.

MAIL COUPON NOW FOR OUR FREE BOOKLET

Mail Coupon For This Free Booklet—"The Profit in The Last Ounce." It tells interestingly about the business side of farming,—and how money is saved with the Renfrew Handy Two-Wheel Truck Scale.

MAIL NOW

COUPON

The Renfrew Scale Co.,
RENFREW, - Ontario.

Please send me Free of charge, booklet "The Profit in The Last Ounce."

AGENTS:—Saskatoon, Western Distributing Co.; Calgary, Reynolds & Jackson; Edmonton, Race, Hunt & Giddy; Manitoba; Clare & Brockest, Winnipeg.

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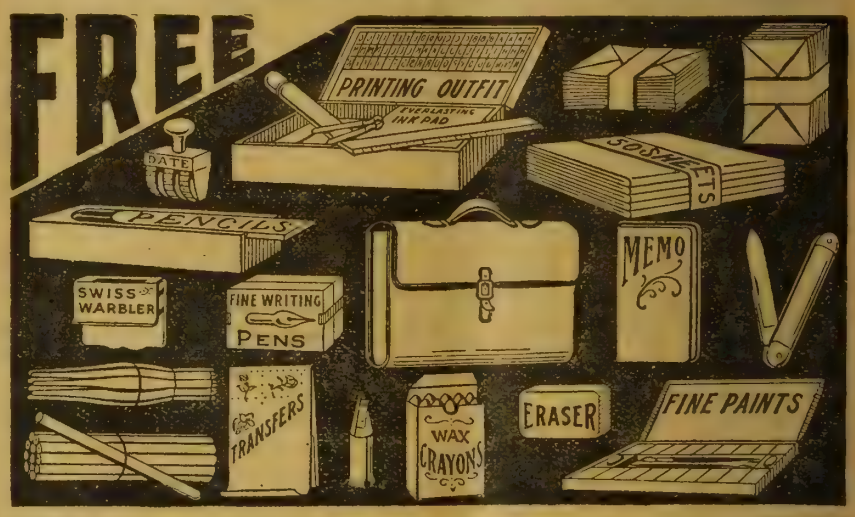
The RENFREW SCALE CO., Renfrew, Ont.



FREE This 150 PIECE Complete Scholar's Outfit FREE

BOYS AND GIRLS, NEVER BEFORE IN CANADA HAS SUCH A GRAND PREMIUM BEEN OFFERED AND SO EASY TO GET.

READ WHAT THIS GRAND SCHOLAR'S OUTFIT CONTAINS.

1 large leather bound school bag, 1 dozen fine quality H. B. pencils, 6 steel tip pen holders, 1 dozen 292 pennibs, 50 sheets of writing paper, 1 dozen envelopes to match, 1 box of 15 water color paints with brushes and pots, 10 beautiful drawing crayons of different colors, 1 fine quality steel blade penknife, 1 large hardwood slide top pencil box, 1 complete printing outfit containing type, ink, tweezers and stamping pad, 1 twelve inch ruler, 1 large memorandum book, 1 complete dater good for five years, 1 large rubber eraser, 1 steel blade pencil sharpener, and last but not least, 1 Swiss warbler the greatest invention for imitating birds and animals.

Think of it this scholar's complete outfit is FREE. We are determined to sell a million packages of Marvel Bluing this year and are sparing no expense to reach this mark.

Marvel Bluing is a great improvement on the old style of bluing and goes twice as far. Everybody buys it because it is so good and a present is given away with every package.

We will give you one of these grand scholar's outfits IF YOU WILL AGREE TO SELL ONLY 25 PACKAGES OF MARVEL BLUING AT ONLY 10c. PER PACKAGE. Any boy or girl can sell 25 packages easy. No trouble at all.

We send you the Marvel Bluing free and trust you with it until sold. Simply send us your name and address to-day. Every girl and boy should win one of these grand scholar's outfits.

Try. If you can't sell the Marvel Bluing send it back to us.

Address to-day THE MARVEL BLUING CO., Dept. S. 101 Toronto, Ont.

EVERY BOY AND GIRL IS ALWAYS PLEASED WITH OUR PREMIUMS

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in

JOHNSON'S
ANODYNE
LINIMENT

Used 102 years for internal and external ills.

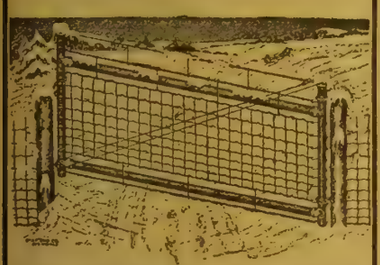
It alleviates coughs, colds, sore throat, colic, cuts, burns and bruises.

25c and 50c everywhere

I. S. JOHNSON & CO. Boston, Mass.

Parsons' Pills For Constipation

"Clay Gates"



Selected by Men Who Know

CLAY STEEL FARM GATES ARE IN USE AT THE ONTARIO AGRICULTUAL COLLEGE, Guelph; MacDONALD COLLEGE, Quebec, EXPERIMENTAL FARM, Ottawa; and on the farms of nearly all the leading Stock and Dairy Farmers of Ontario and Eastern Canada, because they are

The Best Farm Gates

made. They raise (as shown in the illustration) by easy adjustment, to lift over snow in winter or to let small stock through. They won't bend, sag, burn, blow down, or rot. Clay Gates last a life time, and are thoroughly guaranteed.

Sent for 60 DAYS FREE TRIAL. Try them before buying them 20,000 Gates sold last year on these terms.

Send for illustrated price list.

The Canadian Gate Co., Ltd. 54 Morris St. Guelph, Ont

Butter Destined for Canada.

The great demand upon Canada's dairy products, in consequence of increase in population, suggests the thought to your Commissioner that probable sources of supply for butter for next season might be interesting to know.

Butter is shipped from New Zealand to Canada by way of Vancouer direct and via San Francisco and transhipped to Vancouver. The system is to reserve cold storage space on the vessels engaged in this trade, and for the season from September to May by the Vancouver direct boats space has been reserved for 65,985 boxes, and space for 35,000 boxes is now the subject of negotiation. Together this will make 101,285 boxes of butter to be shipped direct to Vancouver for the period named.

In addition to the above, arrangements have been made to ship 23,700 boxes of butter to Vancouver via San Francisco—a grand total of 124,985 boxes of butter which will leave here for Vancouver between the months of September, 1912 and May, 1913.—W. A. Beddoe, Canadian Trade Commissioner, New Zealand.

FLORICULTURE.

M. A., St. John, writes:—Will you please tell me how to treat a three-year-old Holly Fern. Lately the leaves have started to fade and dry up and no new ones have come since July. The pot seems amply large and the drainage is good. It is free from insects. The plant stands in a large bay window with southern exposure, and is treated exactly like a fern of the same kind that is nine or ten years old. I cannot understand this continued loss of fronds.

Ans.—Turn ball of roots out of the pot and look carefully for worms or other insects. Remove dead roots and report in fresh soil in as small a pot as you can easily get the roots in. It is possible that the plant has been fruiting freely and is somewhat dormant now. Be rather sparing of water on the soil until new growth appears. It is advisable to moisten the foliage as often as possible.

Harry, of Moncton, N. B., writes:—I have a medium Christmas Cherry, which has quite a lot of flowers on it and a few green cherries. I am told that the fruit will not ripen in time for Christmas. What can I do to hasten this development? I have also some potted White Hyacinths that are showing buds, will they be all right for the holidays? What sort of seed does a Banana tree have and where can they be procured? Do they make a good home plant if kept warm?

Ans.—Unless you had sunshine every day and very favorable quarters you cannot get your Cherry red for Christmas. Plants that we rely on for finely berried plants were in bloom in August last.

If your Hyancinth are White Roman they will be about right for Christmas. See that they have plenty of water from now on. Our common fruiting Banana has no seed. You probably mean the Abysinian Banana, which produces seed that resembles weather worm cubes of flint about one-half inch square. This variety makes a very good house plant, but it is hard to start from seed as so few of them will germinate Out of twenty-five seeds if one gets two or three plants the venture may be counted a success. Bananas are very susceptible to red spider and thus require a great deal of moisture. Out of doors, in the summer, they do well if protected from heavy winds, which if located otherwise cause the plant to shed the leaves very quickly and thoroughly.

Have all your hardy plants, Roses and Shrubs covered by the middle or last of November.

Halifax Market Report.

GRAIN.—Wheat, feed purposes, $1.50 to $1.60 per 100 lbs; Oats, 55c. to 57c.; Peas, round, $6.75 to $7.00 per bbl.; Barley, split, $7.50.

FEEDSTUFFS. — Bran, $26.00 to $27.00 ton; Shorts, $29.00 to $30.00; Middlings, $30.00 to $31.00; Oil Cake, $2.20 to $2.30 per 100 lbs.; Linseed Meal, $2.20 to $2.30 per 100 lbs.; Gluten Meal, $1.60 to $1.65 bag; Corn Meal, $1.70 to $1.75 bag.

LIVE STOCK.—Milch Cows, $40.00 to $50.00; Lambs, $4.00 to $4.50.

DRESSED MEATS— Beef (carcass) 7c to 10c lb.; Beef (retail) 12c to 20c lb.; Mutton (retail) 12c to 15c lb.; Pork, 13c to 16c lb.

HORSES. — Drafters, $250.00 to $300.00; Roadsters, $200.00 to $300.00; Carriage, $250.00 to $275.00.

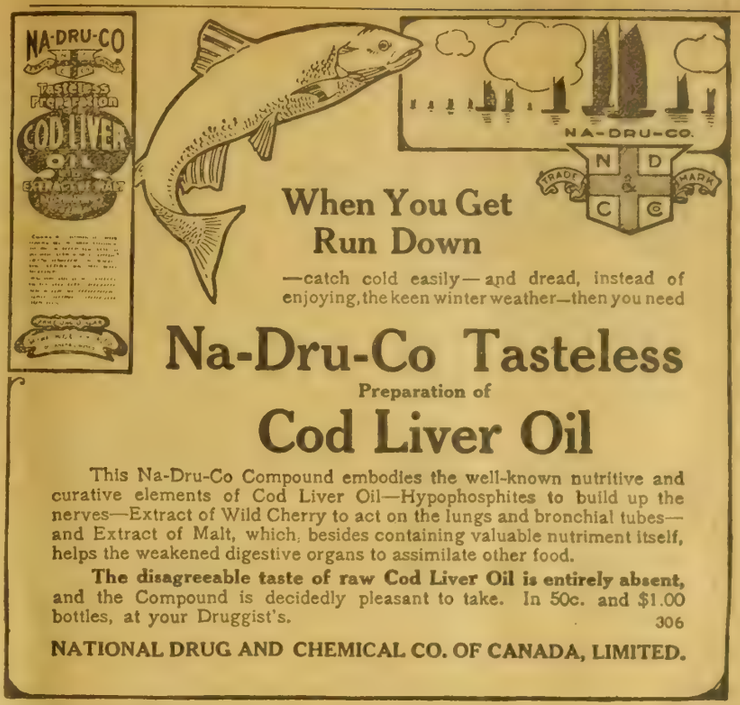
DAIRY PRODUCTS.—Creamery Butter, 29c to 30c; Dairy Butter, 28c to 29c.; Cheese, 15c to 15½c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 28c to 30c doz.; Fowl 14c to 16c lb.; Chickens, 16c to 20c. lb.; Ducks, 14c to 18c. lb; Geese, 17c. to 19c. lb.; Turkeys, 22c to 24c lb.

FRUIT.—Apples, $1.50 to $3.00 bbl. Cranberries, $6.00 to $7.50 bbl.

MISCELLANEOUS.—Hay, $15.00 to $16.00 ton; Straw, $9.00 to $10.00 per ton.

VEGETABLES—Carrots, $1.50 to $1.75 per bag, 3 bus; Potatoes, 45c to 55c per bus.; Turnips. $1.00 to $1.10 bag; Beets, 40c to 50c per bus.; Parsnips, 60c to 65c per bus.; Cabbage, $1.40 to $1.55 per bbl.



When You Get Run Down

—catch cold easily—and dread, instead of enjoying, the keen winter weather—then you need

Na-Dru-Co Tasteless

Preparation of

Cod Liver Oil

This Na-Dru-Co Compound embodies the well-known nutritive and curative elements of Cod Liver Oil—Hypophosphites to build up the nerves—Extract of Wild Cherry to act on the lungs and bronchial tubes—and Extract of Malt, which, besides containing valuable nutriment itself, helps the weakened digestive organs to assimilate other food.

The disagreeable taste of raw Cod Liver Oil is entirely absent, and the Compound is decidedly pleasant to take. In 50c. and $1.00 bottles, at your Druggist's. 306

NATIONAL DRUG AND CHEMICAL CO. OF CANADA, LIMITED.

A Good Cream Separator is a Paying Investment.

A good cream separator is one of the best paying investments on any farm where three or more cows are kept. If you have been skimming your milk from pans, cans or crocks, you will be surprised to find how much more, fine smooth, rich cream you can get by using a hand separator. In the cold winter months while the milk yield is smaller the butter fat is the more valuable and harder to separate from the skim milk than it is in the summer. For these reasons you really need a separator as much if not more, in winter than in summer and between this time and next spring the extra cream you get will go a long way toward paying for the best separator you buy. the best separator you can buy.

Then think of having the fresh, warm skim milk to feed the growing pigs, calves and chickens. When mixed with a handful of oil meal to take the place of the butter fat which has been removed, warm skim milk from the separator makes an ideal winter feed. The women will appreciate the separator when the cold days come. The skimming can be done so much easier and the separator washed in less than half the time it takes to gather the cream in the old way.

Of course, there is a big difference in separators. Some skim closer, wash easier, run easier and last longer than others. The Sharples Tubular Separator is without a doubt one of the simplest of all separators as it has no loose parts inside the bowl which make it very easy to clean. It is also light running, quiet in operation and convenient in height. The Sharples Separator Co., are the world's largest and America's oldest manufacturers of cream separators. Their machines are in daily use and giving splendid satisfaction to owners all over the world.

We suggest that you write them at once for their latest catalogue, mailed to you free and postpaid.

Protected Hands.

Always wear old gloves in cleaning or blacking the stove. If there are no worn out ones belonging to the men of the family, buy a yard of canton flannel and make several pairs of mittens; have them loose and keep some of them for dusting and one pair may be used to draw on the hands at night after some healing lotion has been used. This pair must always be clean, as nothing is gained by applying cream and then wearing soiled gloves, for when the pores are opened by the salve they absorb dirt more readily than usual.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

SHORTHORN BULLS FOR SALE. Walter Eaton, Upper Canard, N. S.

FOR SALE—New Massey-Harris binder, 5 feet cut. A bargain. S. B HATHEWAY, Fredericton.

Pekin Ducks, one year old, for sale cheap. Also a few young ones. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Pure bred imported Clydesdale mare, seven year old. MORRIS SCOVIL, Gagetown, N. B.

FOR SALE—Yorkshire boars fit for service. Bred from imported stock. Satisfaction guaranteed. A. P. SEMPLE, Hillside Farm, Brule, N.S.

FOR SALE—A splendidly bred Holstein Bull, 14 mos. old, the last I have. Cheap at the price. S. B. HATHEWAY, Fredericton.

GUERNSEYS FOR SALE—1 yearling bull, and 4 between the ages of 4 and 10 months, all very fine animals. WILLIAM COX & SON, Canard, N. S.

BROTHER—Accidentally discovered root will cure both tobacco habit and indigestion. Gladly send particulars. S. T. STOKES, Mohawk, Florida.

JERSEY BULL FOR SALE. Four years old, sire Ferror (Imp.) No. 391, dam Brampton Regan, No. 439. Apply to J. J. CLARK, Sect. Tatamagouche, N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

25 FANCY CHRISTMAS AND NEW YEAR'S CARDS, only 25c. Also 100 free. High Grade, Very handsome. Beautifully colored and gold embossed. FARMER EMPORIUM, Beebe, Que.

WANTED—Ladies to do plain and light sewing at home, whole or spare time; work sent any distance; charges paid; send stamp for particulars. National Manufacturing Co., Montreal, Que.

EXHIBITION POULTRY—We have 40 varieties of poultry, pigeons, turkeys, geese, etc. for sale. Prices right. Correspondence solicited. HARTLAND POULTRY YARDS, Hartland, N. B.

FOR SALE OR EXCHANGE—Pure Bred Registered Yorkshire Boar, Baron Lomond, for cash, or in exchange for Sow of same quality and breeding. R. G. MURRAY, St. John, N. B.

FOR SALE—One thoroughbred registered Ayrshire bull 20 months old. Also one Ayrshire bull calf, 4 months old—Gilt-edge stock. D. A. McDonald, Port Hood, N. S.

FOR SALE—Two Jersey Bulls 10 and 8 1-2 mos. old; sire, Brampton Financier, Also grade Heifers of best breeding dams, great producers. G. B. CLARK. Tatamagouche, N. S.

FOR SALE—1 five year old Oxford ram. A very fine thick set well wooled sheep. Cost forty dollars in Ontario. A few of his pure bred ram lambs. Real good ones. Prices reasonable. E. J. PETERS & SON, Elmhurst, N. B.

WANTED—An active man used to farm work, including care of dairy stock, getting firewood, etc. An agreeable man who would appreciate a good home. Wage for winter twenty dollars per month and board. CHAS. PETERS, Elmhurst.

FIFTEEN DOLLARS and EXPENSES WEEKLY for Trustworthy man or woman to act as Traveling Representative. Previous Experience not required. Traveling Expenses advanced. Commence in home territory. Winston Limited, 174 Spadina, Toronto, Ont.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

FARM FOR SALE AT SUSSEX—The Hallett Farm, Hazel Hill, one of the finest situated properties at Sussex, 100 acres, fine house, barns, etc. For further particulars apply to S. H. WHITE, Sussex, N. B.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co,, Queen Street, Montreal.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shediac, N. B., during the week ending April 20th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, Sussex, N. B.

Concentrated Feeding Stuff

We have pleasure in directing attention to an instructive article on the "Composition and Properties of Concentrated Feeding Stuffs," which appears in last month's issue of the Journal of the Board of Agriculture.

The outlay on these substances is so large that it is very desirable their use should be understood. Many farmers, it is said, supply their animals with unnecessarily large quantities of albuminoids, and thereby not only make their feeding unduly expensive, but in some cases may seriously affect the general welfare of their stock.

The value of a feeding stuff should be judged:—

1. By its composition, digestibility and productive value.
2. By its content of manurial ingredients.

The most important factor is digestibility.

It is not enough to look at the percentages of albuminoids, oils, and carbohydrates given in the vendor's analysis, because such an analysis gives no information as to the digestibility of each ingredient, and yet it is only this portion that can be regarded strictly as food. For instance comparing linseed cake and undecorticated cotton cake, we find that of the albuminoids in the former 86 per cent. are digestible, while of the latter not more than 77 per cent. are thus available. This explains the practical preference given by farmers for linseed cake, even at its higher unit cost of total albuminoids.

Then the proportion of "fibre" is important; a high proportion of crude fibre should be regarded with suspicion, since it usual,y indicates the presence of husks or other highly indigestible ingredients. In general, foods containing more than 10 per per cent. of crude fibre require special care in their use, especially if the fibre is largely in the form of hairs or wooly material. Farmers should insist on an analysis of a feeding stuff including the percentage of "fibre." In calculating the value of fibrous foods, the value of the digestible substances will be considerably overrated if the presence of an abundance of crude fibre is not taken into account.

MANURIAL INGREDIENTS IN FOODS.

Farmers naturally attach great importance to the additional fertilizing value of the manure produced by animals supplied with concentrated foods. All foods contain appreciable quantities of valuable manurial ingredients, notably, nitrogen, phosphates and potash. These ingredients are voided to a considerable extent in the solid and liquid excrements of the animals. With full-grown fattening beasts or working horses, practically all the fertilizing ingredients are recovered in this way, but in the case of young animals and cows in milk the proportion recovered is smaller. The proportion of nitrogen, phosphates and potash present vary greatly in different foods, and the value of the manurial residue arising from the consumption of equal weights of the food varies accordingly. This fact should be taken into account in comparing the cost of different foods, because the real cost of a food stuff to the farmer is obviously its price less the manurial value.

Why Horses Get Sick.

I recently had a very interesting conversation with a livery man in a nearby city, which throws some light on the cause of the ills of horses. This livery man has a dozen or more horses of his own and also boards horses for business men around town. The livery man's own horses are worked regularly. Sometimes they get almost too much driving. The other horses are only driven occasionally for pleasure; and occasionally a week or more will pass without them ever being out of their stalls. This livery man informed me that his horses were rarely, if ever, sick, while the boarding horses were being doctored for various ills half the time.

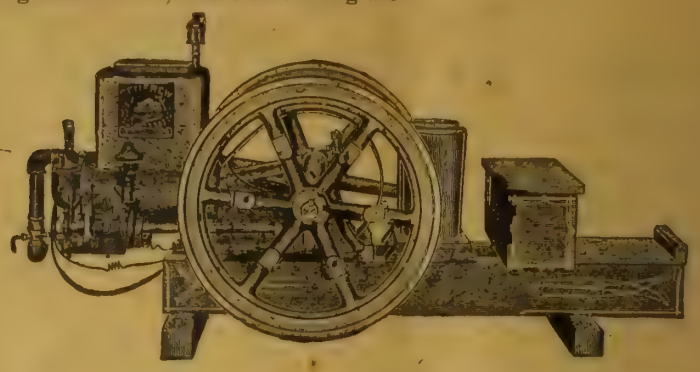
On the farm our horses are worked more of less irregularly. At certain seasons there is hard strenuous labor every day; at others there is nothing to do for long periods. It is then that our horses are troubled with indigestion, stocky legs, etc. "Regular exercise," said my friend the livery man, "is the means of keeping horses healthy, and I might add that regular grooming and regular hours of feeding also contribute to horse vigor." We farmers should remember this.—Jas. Armstrong in Farm and Dairy.

Poisoned Poultry Yards.

The poultry yard should be changed occasionally. There is such a thing as poisoned poultry yards, that is, where fowls run on land too long it becomes contaminated and diseases zand insecte are apt to become numerous. The remedy for this is to move the poultry yard, put the former grounds in some kind of a crop and cultivate it well. Such land is generally very rich from poultry droppings and it may be expected to produce plants. If the new yard is selected near the former, where it is convenient to turn the fowls into planted land, no better crop can be planted than one for green food for fowls.

The Tireless Worker

Will work 24 hours a day when necessary, and be fresh and eager for more. There's no tiring the



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gasoline engine. It never stops for a meal, or quits working when you are not looking. Do you wonder it is taking the place of man-power on the farm? Pumps water—saws wood—runs the separator, the churn, the washing machine, the electric light machine, the feed grinder, the ensilage cutter. Does a hundred and one other things that lessen drudgery and cut down expenses. Simple in construction, simple in operation. Starts easily. No cranking with the ***Renfrew-Standard.*** It's the latest and best type of gasoline engine for sale in Canada. Write for Bulletin describing the various styles and sizes. 2 1-2 h.p. to 60 h.p. Semi-Portable, as illustrated; Stationary and Portable. Fully guaranteed. Has the same organization behind it that have made such a success of the famous "Standard" cream separator.

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J. Frank Roach, Sussex, N. B.

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John H. Hughes, Petitcodiac, N. B.
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Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

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R. J. Messenger, Bridgetown, N. S.
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Springbrook Ayrshires!

Champions in the show ring dairy tests, and winners of the Silver Tea Service over all dairy breeds. Animals all ages and both sexes for sale.

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Breeder and Importer of

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Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

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Several yearling Guernsey Bulls, sired by "Golden Opinion" and "Prince of Willow." All prize winners at the Maritime Shows and Ottawa.

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Long Distance 'Phone 9—Stables near Station

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male and female all ages, from prize winning, choice stock can be seen and purchased at the St. John, Halifax and Charlottetown Exhibitions at bargain prices for delivery after the shows.

Sea View Stock Farm,
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Lawndale Stock Farm

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The following Pure bred Shorthorns

A few yearling heifers and bull calves bred in the purple. Also a few aged cows in calf to our herd bull Pontiac 82710. Prices reasonable. Call or write.

Lawndale Stock Farm, I. M. Lovett, M. D., Prop.
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Champions of Canada. **Champion of World.**

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

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We are now offering seven good grade cows and heifers due to calve in Nov. & Dec. bred to our herd bull, also some excellent purebred heifers now being bred to one of the best bulls in Canada.

LEA & CLARK, Victoria, P. E. I.

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We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

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We have the type that gives best profit. Write your wants to

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Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

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Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

In Chester White Swine I am booking orders for young pigs.

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To make room for our young stock we are offering for sale B. P. Rock Hens, (yearlings) which will be most suitable for breeding next season.

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Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

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We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.

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Creosote is one of the best preservatives for fencing posts, but the treatment requires care and a little trouble. It is in the first place most essential that the timber be thoroughly seasoned. If any sap or moisture be in the wood the creosote only encases it, and so quickens decay.

It is regarded as sufficient to treat the bottom 40 in. of the post, so that the portion in the ground and a little above will be protected. For farm use one tank is sufficient. An old iron boiler is suitable. A galvanized iron tank has too thin a bottom. Fill the tank with posts in the morning, and build a fire under it which will last about two hours before burning out. The posts will cool down during the day, and by night will be treated. More posts can then be put in, heated, and allowed to cool during the night. In cool weather three runs can be done per day. A gallon of creosote should treat three or four posts or more, according to the wood.—Pastoralists Review.

Conservative Farming.

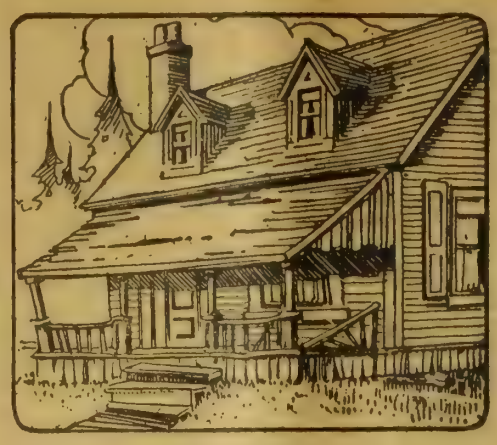
The farmer who goes into the same thing each year without stopping to figure the cost is not apt to make a success of the business. When he knows who gets the profit, he will be sure of success and will work for himself instead of others. He will not continue in any unprofitable branch because he has been at it all his life, or because his father and grandfather followed the same branch. When he begins to use his lead pencil he has started on the upward road. One of the most successful farmers I ever knew keeps an account book of everything bought and sold, of every loss on the farm, and every cent expended for labor, and at the end of every month he goes over his accounts and knows just where he stands. His family do not buy everything they want, but what is needed, and can be afforded, and it is needless to say that this farmer has very little fear of his family having to some day "go over the hills to the poorhouse."

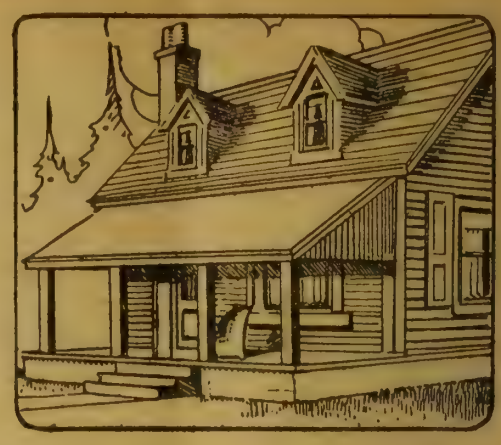
Some people learn slowly and it takes a great deal of exfierience to instruct them. Too many think they must have everything their neighbors have, and they go at such a pace that there is seldom even a dollar ahead. A young man who has just started out in married life, and who had a small farm and a tiny cottage, was asked if he was going to build a larger house. He replied, "No, father has always tried to make as big a display as his neighbor and has always been in strained circumstances to keep up. I have learned from him and intend to go slowly, and make improvements just as I can afford to make them and have a home for myself and family." In this age of "frenzied finance" it takes courage to go slowly, and most young couples think they must start an establishment equal to their parents. Too few are willing to start at the bottom and work their way up.

There is no life that can give more pleasure than that of the farmer, if he lives within his means, and works according to his strength. Too many farmers make work horses of themselves and get very little out of life.

All work and no play will spoil any life. Nearly all young farmers must work hard, but they must work intelligently and try to get something out of life besides work, if they would succeed. They should manage to have recreation at some season of the year, and can plan so as to drive their work, and never allow their work to drive them. Each and every one should try to see what he can make of himself. All the world depends upon the farmer and in this country he is one of the most independent of beings and should be one of the most intelligent, although a great many do not think so.

There should be a farmers' club in every neighborhood, and there should be the best of farm papers in every home. And brain as well as brawn must be used by the one who would succeed. Onward and upward should be the motto of every farmer, and he should strive for what is truest and best in life. Life is full of ruts and too many are content to stay in them, not hoping for anything better. Every farmer who is trying to help himself and succeed is an honor to his calling and has the respect of his fellow man.—A. M. L.





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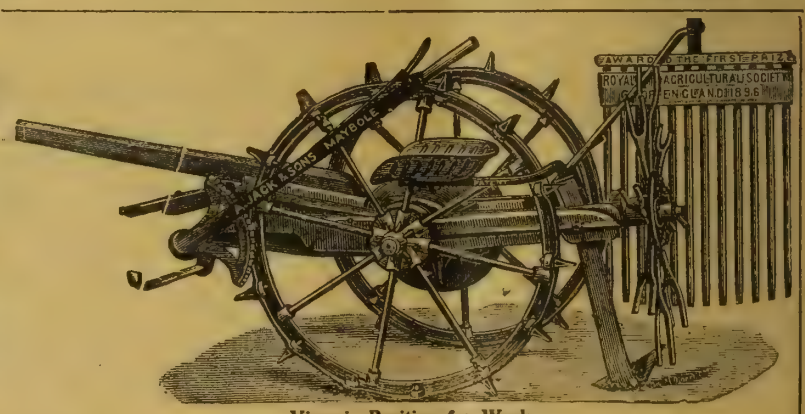

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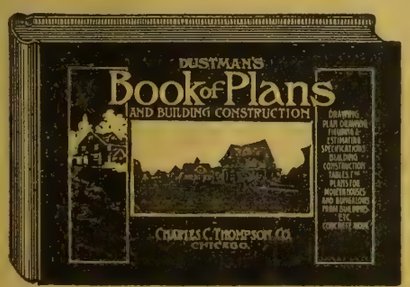
May be the dough had forgotten to *rise.*
Or had risen quickly overnight and *fallen* again—
To rise nevermore.
Twas *weak* flour, of course.
Meaning weak in *gluten.*
But FIVE ROSES is strong, *unusually strong.*
With that *glutinous* strength which *compels* it to rise to your surprised delight.
Stays risen too.
Being coherent, *elastic.*
And the dough feels *springy* under your hand.
Squeaks and cracks as you work it.
Feel the *feel* of a FIVE ROSES dough.
Note the wonderful *smooth* texture—soft—*velvety.*
Great is the *bread* born of such dough—
Your dough!
Try this *good* flour.

Five Roses Flour

Not Bleached — LAKE OF THE WOODS MILLING COMPANY KEEWATIN — Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED MONTREAL



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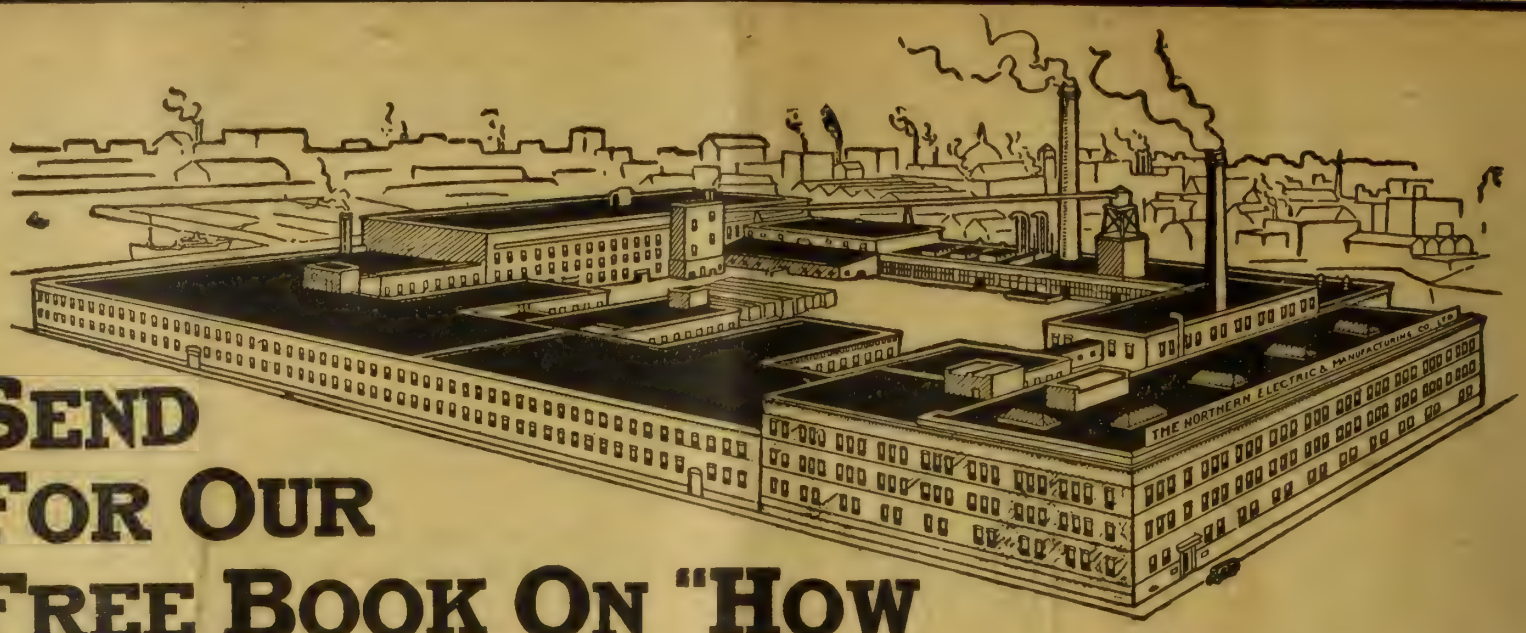

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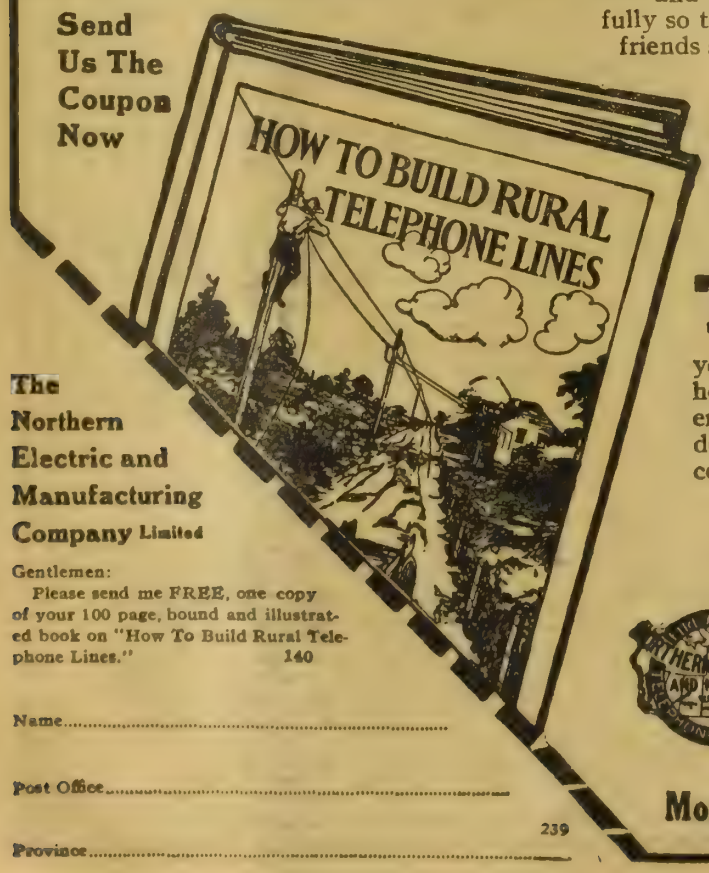

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Vol. 18. SUSSEX, N. B., NOVMEBER 19, 1912 No. 4

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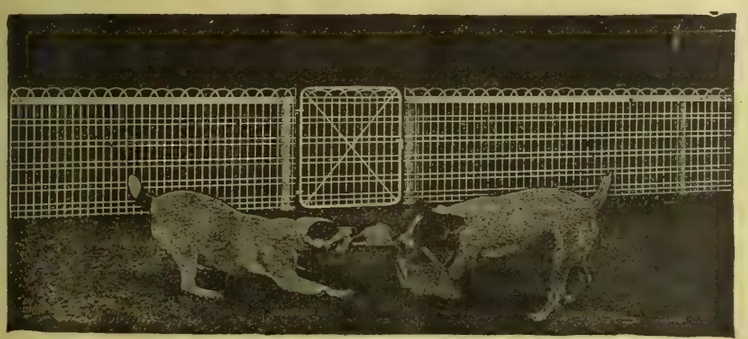

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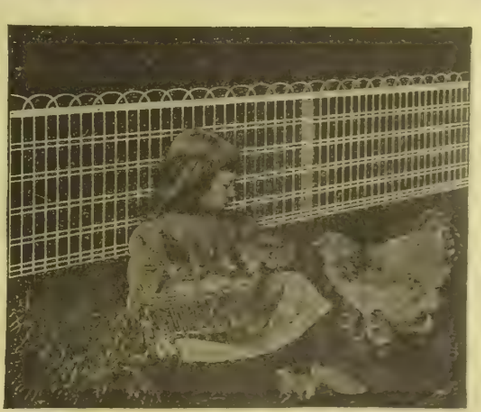

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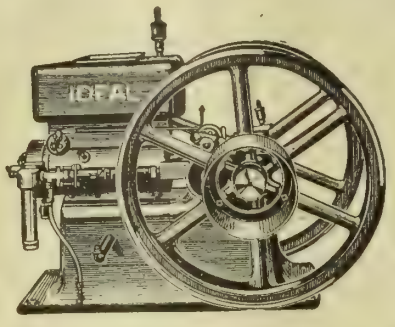

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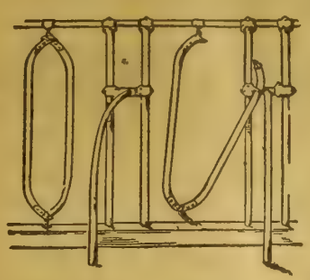

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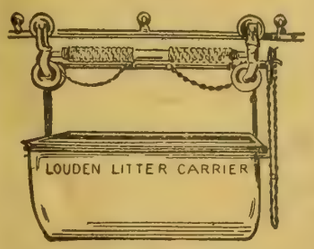

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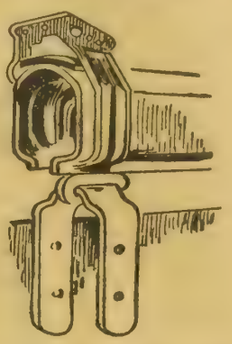

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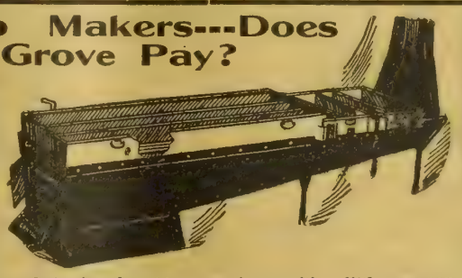

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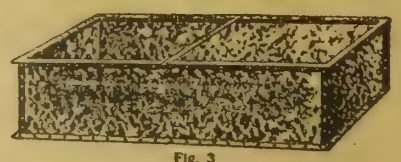

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THE PUZZLE

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SARERF
ARAIGAN
ckahewatnsaS

The jumbled letters given above represent the names of Four Great Canadian Rivers. To help you solve them we have underlined the first letter in each name. **The first is St. Lawrence.** Now guess the rest and send us in your solution of all four names in your very neatest and best handwriting.

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Volume 18. SUSSEX, NEW BRUNSWICK, NOVEMBER 19, 1912. Number 4.

The Practical Value and Necessity of Supplying Plant Food in Systems of Permanent Agriculture.

By Cyril G. Hopkins, University of Illinois.

I TAKE it that the only justification for me to review the subject of plant food in relation to soil fertility or crop production is the fact that recent publications from the federal Bureau of Soils have strongly affirmed that there is no necessity of applying plant food in the restoration and maintainance of soil fertility. Two principal questions are raised: First; Does plant food applied increase crop yields in harmony with recognized soil deficiencies and crop requirements? Second; will the rotation of crops maintain the productive power of the soil by avoiding injury from possible toxic excreta from plant roots? I shall try to present facts and data and exact quotations rather than my own opinions concerning these questions of such fundamental importance in relation to systems of permanent agriculture.

In 1803 DeSaussure, the French scientist, first gave to the world a correct and almost complete statement concerning the sources of the food of plants, including not only the confirmation of Senebier's discovery of the fixation of carbon in the formation of carbohydrates, but also the evidence of plant requirements for the essential mineral elements secured from the soil.

Sir Humphery Davy and Baron von Liebig did much tp popularize this information during the following half century; and they were followed by Lawes and Gilbert, whose extensive and long-continued investigations furnished the needed proof that the soil must furnish nitrogen as well as the mineral elements; and finally, only twenty-five years ago, Hellriegel discovered the symbiotic relationship between legumes and bacteria which gives access to the inexhaustible supply of atmospheric nitrogen for soil enrichment.

Briefly, it might be said that for nearly a century the world of science has accepted and taught, and the world of advanced agricultural methods has practiced, the doctrine that soilfertility maintainance and soil enrichment require the restoration or addition of plant food, including particularly phosphorus and nitrogen, which are most likely to become deficient in normal soils, potassium where needed, and sometimes lime or limestone, which always supplies calcium, and magnesium as well if dolomitic limestone be used. Of the other five essential elements, carbon and oxygen are secured from the carbon dioxide of the air, hydrogen from water, and iron from the inexhaustible supply in the soil; while the sulphur brought to the soil in rain and otherwise from the atmospheric supply, resulting from combustion and decomposition of sulphur-bearing materials, supplemented by the soil's supply and by that returned in crop residues, appears to be sufficient to meet the plant requirements and the loss by leaching.

After nearly a century of increasing agricultural practice of this doctrine on much of the farm land of Germany, France, Belgium, Holland, Denmark, and the British Isles, those countries have approximately doubled their average acre-yields. The ten-year average yield of wheat in the United States is 14 bushels per acre, while that in Europe has gone up to 29 bushels in Germany, to 33 bushels in Great Britain, and to more than 40 bushels per acre in Denmark. Theannual application of phosphorus even to the soils of Italy has alreadybecome greater than the phosphorus content of all the crops removed. The exportation of out highest grade phosphate rock from the United States to Europe now exceeds a million tons a year, carrying away from our own country twice as much phosphorus as is required for the annual wheat crop of all the states, and millions of acres of farm land in our own Eastern States have already been agriculturally abandoned because of depleted fertility and reduced productive power; so that it is now impossible for our Congressmen to enter the Capitol of the United States from any direction without passing abandoned farms.

Ultimate analysis has shown that the most common loam soil of touthern Maryland, almost adjoining the District of Columbia, contains only 160 pounds of phosphorus, 1,000 pounds of calcium, and about 900 pounds of nitrogen in two million pounds of surface soil, corresponding approximately to an acre of land 6 2-3 inches deep. The clover crops harvested from the rich garden soil at Rothamsted in eight consecutive years removed more phosphorus and calcium from the soil than the total amounts contained in the plowed soil of this wornout Maryland land, whose total nitrogen content is also less than would be required for seven such crops of corn as we harvest on good land in the central west, which, however, contains ten times as much of these plant foods as the depleted Maryland soil.

During the last ten years our population increased 21 per cent, the same as during the preceding decade, while the acreage of farm lands increased less than 5 per cent, and the federal government reports all future possible increase in farm land at only 9 per cent of our present acreage.

Average crop yields for four 10-year periods are now reported by the United States Department of Agriculture. A comparison of two 20-year averages shows increased acre-yields of 1 bushel for wheat, and ½ bushel for rye, while the yield of corn has decreased 1½ bushels and the yield of potatoes has decreased 7 bushels per acre, by 20-year averages. These crops represent our greatest sources of human food, even our supply of meat being largely dependent on the corn crop. Less than 20-year averages are not trustworthy for a consideration of any small increase or decrease in yield per acre. It should be noted that during the last forty years vast areas of virgin wheat land had been put under cultivation, including the Dakotas, which now produce more wheat than all the states east of the Mississippi, save only Indiana and Illinois.

A comparison of the last five years with the average of the five years ending with 1900 shows that our wheat exports decreased during the decade from 198 million to 116 million bushels, and that our corn exports decreased from 193 million to 57 million bushels.

Thus we have fed our increasing hopulation not by increasing our acre-yields, but by a slight increase in the acreage of farm land and by a large decrease in our exportation of food stuffs; and the fact must be plain that before another decade shall have passed we shall reach the practical limit of our relief in both ofthese directions.

Indeed, a most common subject already discussed in the press and investigated by national, state and city authorities during the last three or four years is the high cost of plain living.

With these facts and statistics before us, let us consider the actual results secured from field and laboratory investigations:

Where wheat has been grown every year since 1844 on Broadbalk Field at Rothamsted, England, the average yield for fifty-five years has been 12.9 bushels per acre on unfertilized land, 35.5 bushels where heavy annual applications of farm manure have been made, and 37.1 bushels per acre where slightly less plant food has been applied in commercial form.

Barley grown every year on Hoos Field at Rothamsted has produced, for the same fifty-five years, an average yield of 14.8 bushels on unfertili-

zed land, 47.7 bushels with farm manure, and 43.9 bushels where much less plant food was applied in commercial form.

Potatoes grown for twenty-six consecutive years, also on Hoos Field at Rothamsted, produced, as an average, 51 bushels per acre on unfertilized land, 178 bushels where farm manure was used (reinforced with acid phosphate during the first seven years), and 203 bushels where plant food was applied in commercial form. The first year of this investigation the unfertilized land produced 144 bushels, land receiving farm manure alone produced 159 bushels, and land fertilized with commercial plant food produced 328 bushels per acre.

Director A. D. Hall, of the Rothamsted Experiment Station, makes the following statements on "The Rothamsted Experiments."

"On the plots receiving farmyard manure, and even on those receiving only a complete artificial manure, the crop was maintained in favorable seasons. No falling-off was observed which could be attributed to the land having become "sick" through the continuous growth of the same crop, or through the accumulation of disease in the soil."

In commenting upon these same experiments, Milton Whitney, Chief of the United States Bureau of Soils, makes the following statement in Farmers' Bulletin No. 257:

"One of the most interesting instances going to show that toxic substances are formed and that what is poisonous to one crop is not necessarily poisonous or injurious to another is a series of experiments of Lawes and Gilbert—the growing of potatoes for about fifteen years on the same field. At the end of this period they got the soil into a condition in which it would not grow potatoes at all. The soil was exhausted, and under the older ideas it was necessarily deficient in some plant food. It seems strange that, under our old ideas of soil fertility, if the soil became exhausted for potatoes, it should grow any other crop, because the usual analysis shows the same constituents present in all of our plants, not in the same proportion, but all are present and all necessary, so far as we know. This field was planted in barley, and on this experimental plot that had ceased to grow potatoes they got 75 bushels of barley."

If, now, we turn to the actual records of the Rothamsted experiments grown after twenty-six years of potawe find that the first crop of barley toes was 32.2 bushels per acre on unfertilized land, only 24.8 bushels where minerals alone had been used and the soil depleted of nitrogen by the potato crops, 67 bushels per acre where minerals and nitrogen had been used, and 72.4 bushels where farm manure had been applied for twenty-six years. We also find, in strict harmony with Director Hall's statement, that the largest average yield of potatoes from the farm manure plots (3 and 4), either for one year or for five years, was secured after potatoes had been grown on the same land for more than fifteen years.

On permanent meadow land at Rothamsted, the average yield of hay for fifty years was 1¼ tons per acre on unfertilized land, and more than 4 tons per acre on land heavily fertilized with commercial plant food. During the last ten years of this fifty-year period the unfertilized land has produced an average yield of 1863 land has produced 8490 pounds per pounds of hay, while the fertilized acre.

On Barn Field at Rothamsted, mangels were grown for thirty years. The average yield per acre was 4¼ tons on unfertilized land, 19½ tons where farm manure had been applied, and 29 tons per acre where the farm manure had been reinforced with nitrogen and phosphorus in commercial form.

In 1902 the University of Illinois began a series of experiments on the common corn-belt praire land in McLean county, on a field which had grown no wheat for thirty-two years. We first grew wheat in 1905. Four plots not receiving phosphorus produced respectively, 28.8 bushels, 30.5 bushels, 33.2 bushels and 29.5 bushels of wheat per acre; while four other plots which differed from these only by the addition of phosphorus, at the rate of 25 pounds of that element in 200 pounds of steamed bone meal per acre per annum, produced 39.2 bushels, 50.9 bushels, 37.8 bushels, and 51.9 bushels, respectively per acre. Six years later wheat was again grown on this land, when the four plots not receiving phosphorus produced, respectively, 22.5 bushels, 25.6 bushels, 21.7 bushels, 27.3 bushels, per acre, and the other four plots, which differ from these in treatment only by the phosphorus applied during the ten years, produced 57.6 bushels, 60.2 bushels, 54.0 bushels, and 60.4 bushels, respectively, of wheat per acre, this being the second crop of wheat grown on this land in forty years.

This most common praire land of the Illinois corn belt contains 600 pounds of phosphorus and 18,000 pounds of potassium per million of surface soil, while one million pounds of the subsoil contain 450 pounds of phosphorus and 27,000 pounds of potassium. This is the type of soil on which, as an average of four different tests each year under four different conditions of soil treatment, the addition of phosphorus produced an increase in yield per acre of 9.6 bushels of corn in 1902, of 17.8 bushels of corn in 1903, of 14.8 bushels of oats in 1904, of 14.4 bushels of wheat in 1905, of 1.46 tons of clover in 1906, of 18.8 bushels of corn in 1907, of 17.3 bushels of corn in 1908, of 15.2 bushels of oats in 1900, of 2.56 tons of clover in 1910, and an average increase of 33.8 bushels of wheat per acre in 1911.

As an average of four similar tests during the ten years, applications of potassium (costing the same as phosphorus) increased the yield of corn by 3.1 bushels, decreased the yield of oats by 2.3 bushels, decreased the yield of clover by 70 pounds per acre, and increased the yield of wheat by .1 bushel per acre, these being the general average results from the four years of corn and from two years each of oats, clover, and wheat.

If now we turn to the extensive peaty swamp soil of northern and north-central Illinois, we find by analysis that it contains in one million pounds of the surface soil 1960 pounds of phosphorus and 2930 pounds of potassium, of more than three times as much phosphorus and less than one-sixth as much potassium as the common prairie. We also find that, as an average of triplicate tests each year, potassium increased the yield of corn per acre by 20.7 bushels in 1902, by 23.5 bushels in 1903, by 29.0 bushels in 1904, and by 36.8 bushels in 1905; while the addition of phosphorus produced a decrease of .1 bushel in 1902, and an increase of .9 bushel in 1903, of 3.9 bushels in 1904, and of .3 bushel in 1905.

As an average of the results from twenty plots of unfertilized land in the Pennsylvania rotation experiments with corn, oats, wheat, and hay (clover and timothy mixed), the crop values in two consecutive 12-year periods decreased by 26 percent; while, as an average of the twenty-four years, the crop values were increased 62 percent by farm manure and 65 percent with commercial plant food, as compared with the results from unfertilized land.

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The records from the Agdell rotation field at Rothamsted show that as an average of the turnips, barley, clover (or beans), and wheat the yields decreased on unfertilized land by 42 per cent measured by the results from two consecutive 32-year periods; and, if we span a 60-year period, we find that the yield of turnips on unfertilized land was 10 tons per acre in 1848 and less than ½ ton in 1908; that the barley yielded 46.5 bushels in 1849 and only 10 bushels per acre in 1909; the clover produced 2.8 tons in 1850 and less than 1 ton per acre in 1910; while the wheat following clover produced 29.7 bushels in 1851 and 24.5 bushels in 1911.

The application of plant food (for the turnip crop only) in the same rotation over a period of sixty-four years increased the average yield of turnips from 1¼ tons to 17½ tons per acre, increased the yield of the barley following from 24.4 to 38.5 bushels, then increased the average yield of legumes from 1945 pounds to 4413, and increased the yield of wheat after legumes from 25 to 34.8 bushels, as compared with the unfertilized land.

If, again, we span the sixty years, we find that on the fertilized land the yield of turnips was 12½ tons in 1848 and 17½ tons in 1908; that barley produced 35.9 bushels in 1849 and 33.4 bushels in 1909; that clover produced 3½ tons in 1850 and 4¼ tons in 1910; while wheat yielded 30.3 bushels in 1851 and 38 bushels peracre in 1911.

Thus, the records show that during the last four years, following a sixty-year period, the plant food applied has increased the yield of wheat by 55 percent, increased the barley by 224 percent, and the clover by 340 percent; while the yield of turnips on the fertilized land was 49 times as great as on the unfertilized land.

With these facts in mind we may well consider the following statements from Whitney in Farmers' Bulletin 257:

"Apparently, these small amounts of fertilizers we add to the soil have their effect upon these toxic substances and render the soil sweet and more healthful for growing plants. We believe it is through this means that our fertilizers act rather than through the supplying of food to the plant."

"There is another way in which the fertility of the soil can be maintained; viz., by arranging a system of rotation and growing each year a crop that is not injured by the excreta of the preceding crop; then when the time comes around for the first crop to be planted again tne soil has an ample time to dispose of the sewerage resulting from the growth of the plant two or three years before. Barley will follow potatoes in the Rothamsted experiments after the potatoes have grown so long that the soil will not produce potatoes. The barley grows unaffected by the excreta of potatoes, another crop follows the barley, and the soil is then in condition to grow potatoes again.

"In other experiments of Lawes and Gilbert they have maintained for fifty years a yield of about 30 bushels of wheat continuously on the same soil where a complete fertilizer has been used. They have seen their yield go down where wheat followed wheat without fertilizer for fifty years in succession from 30 bushels to 12 bushels, which is what they are now getting annually from their unfertilized wheat plot. With a rotation of crops without fertilizers they have also maintained their yield for fifty years at 30 bushels, so that the effect of rotation has in such case been identical with that of fertilization."

If we turn to the Rothamsted data, we find the first recorded yield of wheat on the unfertilized plot on Broadbalk Field was not 30 bushels, but only 15 bushels; that the average of the first eight years was 17.4 bushels; that the best fertilized plot on bushels, but 37.1 bushels for fifty-five years; that, as stated above, the wheat grown in rotation, following a leguminous crop, has averaged not 30 the same field has averaged not 30 bushels, but 25 bushels on unfertilized land, and 34.8 bushels were fertilizers were applied for turnips three years before.

The following pertinent quotations are from Whitney and Cameron in Bureau of Soils Bulletin 22:

"In England and Scotland it is customary to make an allowance to tenants giving up their farms for the unused fertilizers applied in previous seasons. The basis of this is usually taken at 30 to 50 percent for the first year, and at 10 to 20 percent for the second year after application; but, in the experience of this Bureau there is no such apparent continuous effect of fertilizers on the chemical constitution of the soil."

"It appears further that practically all soils contain sufficient plant food for good crop yield; that this supply will be indefinitely maintained."

In Bureau of Soils Bulletin 55, by Whitney, entitled "Soils of the United States," issued in 1909, we find under the heading "Permanency of Soil Fertility as a National Asset," the following summarized statements:

"The soil is the one indestructible, immutable asset that the nation possesses. It is the one resource that cannot be exhausted; that cannot be used up."

"From the modern conception of the nature and purpose of the soil it is evident that it cannot wear out, that so far as the mineral food is concerned it will continue automatically to supply adequate quantities of the mineral plant food for crops."

"As a national asset the soil is safe as a means of feeding mankind for untold ages to come."

As stated in the beginning, I have planned to discuss the subject of plant food in relation to soil fertility; but I felt it a duty as well as an honor to be permitted to accept a place on your program; and I have placed before you some most important and trustworthy data bearing upon the question. I have presented some statistics for consideration in connection with the gravest problem which now confronts America; namely, the problem of restoring American soil and of maintaining American prosperity. I have quaoted accurately and fairly from the teachings of Whitney and Cameron; and I also submit for your information the following quotation from Director A. Hall, of Rothamsted:

"I cannot agree with Professor Whitney's reading of the results on the Agdell field in the least. The figures he quotes for wheat are hardly justifiable as approximations, and are in spirit contrary to the general tenor of the particular expetiment.....In my opinion the results on the Agdell rotation field are directly contrary to Professor Whitney's idea that rotation can do the work of fertilizers." (From Report of the Committee of Seven, appointed by the Association of Official Agricultural Chemists "to consider in detail the questions raised," published in full in circular 123 of the University of Illinois Agricultural Experiment Station.)

A thousand additional proofs of the practical value and of the evident necessity of supplying plant food in systems of permanent agriculture could easily be cited.

All long-continueg investigations and, likewise, all practical agricultural experience show that great reduction in crop yields ultimately occurs unless plant food is restored to the soil; and, as a rule, the chemical composition of normal soil is an exceedingly valuable guide in determining the kind of material which should be supplied in practical systems of soil enrichment and preservation.

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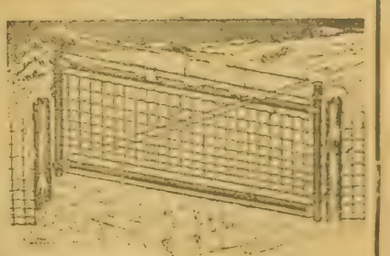

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NOVEMBER 19, 1912.

DATES OF ISSUE.

December 10-24

January 16-30

THE INFLUENCE OF THE COW

The index of the prosperity that prevails in any community is the manner in which the people live. If one goes into a section where the farms are poorly cared for there is a general air of indifference and carelessness and he finds that the homes of this vicinity contain few of the modern conveniences that make work easy and life enjoyable. He will find, if he looks over the farm stock, few of the cattle are well cared for and give evidence of the ability to yield a large profit.

If one goes into a community where cows are well kept, he will find the barns neat and attractive and on every hand there will be evidences of prosperity. The homes in this section will be equipped with every convenience that is available. There will be electric lights, automobiles, comfortable, roomy porches and well-kept, attractive lawns. This may easily be traced to the elevating influence of the dairy cow. There is many a farm home that can thank the dairy cow for relieving the occupants of much drudgery and thankless toil.

There are several reasons for this but chief among them all is the fact that the dairyman must be a business farmer. He must incorporate in his work a certain amount of system that takes the place of the endless round of uninteresting work that in the popular mind is so closely connected with farm life. The dairy farmer has a variety of interests. The fact that he has a constant income puts him on a little higher commercial level than his brother who depends upon the crop or upon an annual market of farm stock. The dairy farmer is a little more of a business farmer in the majority of cases than those whose interests are not centered in dairy stock and for this condition he may thank the dairy cow. His home is often more liberally supplied with comforts and his family is usually contented with farm life.

RECORD ATTENDANCE AT THE N. S. A. C.

The Nova Scotia Agricultural College opened its 1912-13 session on Tuesday, November 5th., last. The enrollment is 102 which is far in excess of any previous enrollment in the history of the college. At the corresponding date last year, the enrollment was 58 which number was increased to 78, being the highest number of students the regular course at the College up to that time. The attendance at the present course promises to reach well up to 125. The Nova Scotia Agricultural College has a limited consistuency in comparison with the other agricultural colleges in Canada, and besides, the course is a two years' course and the numbers in attendance are not increased by the presence of third and fourth year students. The attendance is therefore extremely good.

There is no queetion that until recently, Maritime agriculturists have been somewhat lethargic in the development of their industries, but of late years a new element has come into the agriculture of the East and the spirit of progress which is characteristic of the other parts of the Dominion has been equally characteristic of the provinces down by the sea. When the Nova Scotia Agricultural College opened its doors nearly eight years ago, there were many who had grave doubts as to its success. In the first year of its history, there were enrolled some thirty students in the regular course and some 68 students in the short course. The figures of 1912 are very striking in comparison to these, for in this latter year of grace, the attendance in the short course was 350 and as stated above, in the regular course, 102.

The best feature of all is that the students who are going out from the Nova Scotia Agricultural College are largely settling on the lands of the Maritime Provinces and are giving a most excellent account of themselves. Not only are they putting a new spirit into the actual tilling of the soil, but in Nova Scotia particularly, their influence is being felt in the establishment of new creameries, in the breeding of stock, in the growing of seed grains, and in nearly all lines which point to successful agriculture.

While the college has made a good start, it still has a great work to do, but if the people continue to rally around it during the next years as they have in the years gone by, there is no question but that much greater progress will be made not only in the college itself, but what is more important, in the constituency which it serves.

MAKE YOUR HEAD SAVE YOUR HEELS

Many a woman could save herself 50 or 100 or even more miles' walk, to say nothing of hill climbing, every year by slight changes in her house. The size and placing of rooms and the absence of step-saving devices are, perhaps, most to blame. Usually the worst, but least suspected, factors are the kitchen and the cellar stairs. The one is too big; and the other is too hard to climb. A kitchen big enough to serve both as laundry and dining room is an abomination. It not only makes for "muss," bad temper and uncouth manners, but almost always is a work-maker, not a work-saver. It should be so small that it cannot be misused. Everything should be on hooks or shelves within two steps of stove, sink, table, refrigerator and dumb waiter.

The truth of these statements is being realized by women more and more each year. Let us give an instance. A young farmer took his bride to the old homestead, which had become his. The family of two were to live in a house badly planned for eight. The dining room was big enough to seat 20 people comfortably. From the table to the kitchen stove was a journey of 15 steps by way of a hall and two doors. The kitchen, big enough for three modern ones, had neither pump, sink, dumb-waiter, refrigerator, nor even pantry. It was the last word in inconvenience.

The wife suggested changes, which the husband and his men made at odd times. A partition cut the dining room in two, and thus formed a bedroom and a living room. A doorway was cut between the kitchen and the parlor, from which latter a slice with a window was taken to make a commodious pantry separated from both rooms by swing doors. A window was cut in the outside wall and the kitchen partitioned to form a laundry fitted up with everything needful. A water system was installed, and now the kitchen, as well as the laundry, has running water. It has also sink, dumb-waiter, refrigerator, and plenty of convenient cupboards, shelves and hooks.

Hundreds, nay, thousands, of farm homes can be improved by such simple methods. The outlay for alterations need not be great. Work can be done at slack seasons. It will be a welcome change from regular farm operations. Plans should be made by the women who have to attend to the household. They should neither be hastily formed nor too soon adopted. A few weeks' or even months' thought and replanning may be very profitably spent. But anything—everything—should be done that will save woman's time and labor and that will make for more homelike and better living on the farm.

NAME THE FARM

What's in a name? There may be much or little depending upon the intelligence, the ambition and the progressiveness of its owner. Every respectable person honors his name, protects it from disgrace and likes to do good works of every kind. Every good man and woman has a cherished memory of the old home where childhood's days were spent and if that old home was on a farm, that farm should have a name that will distinguish it from all other farms of the county, so that the mere mention of the name will bring to the memory of all who knew it, its particular location, the personnal of its owners and the things it produced.

Nearly every other business house, factory or firm has adopted a name and a credit is established. Every farm is worthy of a name and every farmer can make a reputation and establish a credit for his farm and its products through intelligent, careful study and the adoption of approved modern methods of procedure.

A well chosen name lends dignity to a place and is a sort of trade mark which distinguishes it and its products; it characterizes its owner as a man of pride and stimulates all who are interested in it or its products to do and to be the best, and to make the products as good or better than those of any other.

We believe that a well selected name will furnish an incentive for better farming, that all implements, tools, vehicles, crates and products, whenever possible, should have the name of the farm indelibly stamped upon them; that it should adorn every entrance to the farm and be printed upon all stationery used on the farm. We believe that the name should relate to some distinct feature of the farm, its location, topography or products.

FEWER ACRES---BETTER TILLED

The desire of men to own land is commendable, but if this desire were modified to suit their conditions it would be better. Too many men buy too much land and encumber themselves with debts too heavy, and the interest ruins them. With intelligence a small farm will accomplish far more, when the owner is free from debt, than will a large farm to secure which a farmer 'swamps" himself, and makes it impossible for him to pay the purchase price. The "Little Landers" in California are teaching the world something worth learning, and all over the country there are men who are doing well with small farms, while their neighbors are doing poorly with large farms. With 40 or 50 acres many men can find independence and prosperity, while with a larger farm they will find themselves in the midst of ryin. Buy the small farm, and make intelligence and industry do part of the work. Othersare doing this, and you, man without a home, can do as well if you will.

We know a man who some years ago bought a farm of 50 acres. Most of the purchase price was on time. Although there have been hard years he has paid off the debt, and owns his home, and it is a real home, where he and his family have real comforts. He studies and makes his farm pay in so many ways that he hardly knows that it is a small farm, and it is all his very own. Were he consulted he would say it is better to own 50 acres than to owe for 100, and he knows, too, for he tried the other way, and lost his home. It takes more brains to make money on a small farm than on a large one, but he has brains, and after losing one home he has experience. This experience he willingly gives to others.

When the small farm is paid for it is then easier to buy another, and when two small farms are paid for, then the purchase of a larger farm is safe. There is something besides the large farm to make the purchase price upon. When men learn to buy small farms, and not burden themselves with heavy debts, they will do better, and more of them will pay for their homes.

NOTES

The man who buys a run-down farm may find much difficulty and many discouragements in making a living while he builds up the farm, yet the run-down larm may be cheaper than unimproved acreage that must be cleared, buildings erected and fences made before any returns are received. It depends upon the man as to which is the better investment. Both plans will prove a disappointment unless the buyer is fortified with perseverance and is willing to wait for his reward.

Simple Farm Drainage Operations.

"Well, Dad, when may we start seeding?"

"Can't just say. If it wasn't for the low spots, where the spare water collected when the snow went away, we might begin at once. The higher land is all right. I wish we did not have these little dips in so many of our fields."

Did you ever hear a conversation like the above? Perhaps not; perhaps you do not live in one of the parts of the country that are affected with undulating fields and "little dips" where the water delays spring seeding. If not—if your fields all drain off beautifully—this page is not for you. But if you do live in such a spot, you will be interested. What we have to suggest here has been tried out practically on many farms

Farm drainage is a very important subject. In saying this we have not in mind deep, expensive under-drainage, although that is very good for conditions such as they have in Eastern Canada; we are thinking of something simpler, that anyone may try. In this article we propose advocating the use of open drains, giving as far as possible free outlet to the water that lies in the little hollows in the fields of some parts of the country each spring. There are a great many of these spots in some districts, and on many farms, especially where the soil is heavy, seeding would be considerably faciliated by over coming the inconveniences that they present. Not only would the seeding in many cases, be done quite a good deal earlier and in much better condition, but to have these spots drained properly would also be to insure a smaller admixture of green grain in the crop at the time of cutting, and, consequently, higher grading.

In deciding upon the kind of drain to use in letting the water out of such places, there would be a number of factors to consider. Some of these would be the depth of the dip, others the lay of your land, and so forth. A pretty fair drain to many of the slightest of these depressions may be made by use of the plow, simply throwing out a good deep furrow or two each way, late in the fall. This, of course, leaves the soil alongside, and in the spring much of it will cave back again, but a little attention in the way of plowing the same place each year will eventually make a fair waterway.

To drain a decided depression is a very much larger task, and here again the tendency for all trenches through the loose soil to become filled up is the great difficulty. A pretty fair outlet may be made, but if the plow, harrow or seed drill are driven across it continuously, a good deal of soil will be filled into the depress; the water and the wind will also add to the work accomplished by them. This means that some work will need to be put upon these outlets each year to keep them open. The writer has seen very good drains made by the use of a scraper; either the wheel or the scoop scraper will do efficient work in this connection. When the low place of slough is close to the ridge through which you are working, it is a good plan to draw the dirt which you excavate from the trench into the low places. When the low places are too far removed from the place of operation, it is well to haul the dirt off to both sides and have it so distributed that it will be level, and in this way the best of conditions for natural surface drainage into the drain will be provided. It is most important that the sides of the ditch should not be cut square, because such a trench would be very inconvenient, and, besides racking farm machinery and implements, it would be killing to both driver and horses. Such places should be made, if possible, to help farm operations rather than to hinder them. In order to have a ditch that will not prove to be a nuisance rather than a benefit, it can usually be made longer and probably crooked, so as to avoid places where deep cutting is necessary. In other words, follow natural depressions.

When making such a drain it is necessary to work the scraper so that part of the soil taken out will be put on both sides of the ditch. The ground should be so levelled off at the sides that no lumps or hollows remain to shake the life out of everything that comes along. By using a scraper the sides of the ditch or drain is never pronounced, and, consequently, the field is left in a condition that will allow cultural methods to be done throughout the entire field without any extra turning, etc.

It is quite possible to do most of the draining that will be found necessary on the average sized farm in the month of November when plowing is pretty well over on account of frost. Then of course every opportunity should be taken during the period when the plowing is stopped in the mornings by the frost of the previous nights. Such mornings are just the time for using the scraper upon soil that has been loosened up by the plow the night before.

We know that many farmers are too busy this fall to give any thought to this matter, but probably there are others who can follow this suggestion.—N. W. Farmer.

Rules for Cutting Woodlots.

When timber is ripe the harvesting may be done by taking a few trees here and there, or by clear cutting part or all of the woodlot. But when making an improvement cutting, the object of which is to help the growing timber, the number of trees removed should not be great. It is impossible to give definite rules as to how much can be cut safely; this is a matter of judgment. The following suggestions from a recent reading course leaflet of the New York state They apply to improvement cuttings, not to harvesting of ripe timber:

1. Do not give a young tree so much room that the lower part of its trunk will not be cleaned of branches. These is no danger that new branches will start out on those parts of the trunk that will have been cleaned of limbs. 2. Even after the tree is well cleaned, do not give it so much room that it develops a wide-spreading top instead of a compact one. 3. Do not make an opening so large that it will not be filled by the surrounding crowns in a few years, otherwise the soil may run wild. 4. Since an opening should not be very large, it is a good plan not to cut two trees whose crowns adjoin unless there is a special reason for doing so. 5. Do not thin so severely that on a clear day you will see more than one-third of the ground with the bright sunlight reaching it; this sunlight should be in small patches here and there. It is perhaps well to repeat that these suggestions do not apply when timber it being harvested.

Improvement cuttings should be repeated frequently as there seem to be many trees that need to be helped by thinning. It is usually not necessary to do this oftener than once in five years.

A special form of thinning is often advisable where sprouts coming from a stump are using a part of the water and food taken up by the roots of the mother stump. By thinning the sprouts the rate of growth of those remaining can be greatly increased. No rule can be given as to how many sprouts should be left on each stump; this will depend on how close together the old stumps are, and how vigorous the sprouts seem to be. The aim should be to leave enough trees so they will shade the ground thoroughly within a few years, and not to make such large openings that the trees will not be cleaned of their lower branches. Usually from one to three sprouts are left on each lump. Such thinning also tends to make the sprouts straighter if too closely crowded, they are likely to twist into every little opening.

The thinning should not be done until the sprouts are several years old. If done when they are one or two years old, much of the benefit of the thinning may be lost, because a second crop of sprouts may spring up and almost overtake those of the first crop. If the thinning is not done until the sprouts are five years old or more, there is still a possibility that a second crop may start; but the first crop will have such a lead that they should quickly crowd out the younger ones.

Building Inexpensive Ice House.

Perhaps at this time of year a description of my ice house may be of some assistance to some who contemplate building. My ice house is situated on the south side of a hill. I dug into the hill so that on the north end the ground was 3 or more feet higher than one on the south end of the building. In this way it is much easier unloading, as the doors are on the north end, and in unloading from a sled you can put in your layers of ice before you are any more than even with the sled. It is somewhat harder for a team than it would be on level ground, but that is what we keep them for.

The bottom of the building is covered 1 foot or more with sawdust, thereby furnishing good drainage, which is one of the most important points in the storage of ice. The frame is 2x8-inch plank, set up straight without sills of any kind. each one has a good flat rock underneath it. In place of the sill in this case it requiret 24 of these, as the dimensions of the house are 14 feet square and 10 feet high. This makes six 2x8's on each side.

SAWDUST USED AS SIDES

These 2x8's are boarded on each side, and the place between is filled with sawdust to the plate. It has a pitched roof with six 2x4-inch rafters on the side, making 12 ralters. These with the four plates (2x4-inch and 14 feet long) are all the heavy stock required. It will take about 1400 feet of boards to board the roof and both sides of the studding. I purchased my lumber on the stump and cut it so there was not much waste. As the boards were 14 feet long, there was not any loss or extra expense of nails. I estimate the entire cost of this house was not over $50, including everything, and it will take 49 cakes of ice cut on a layer cut 20 inches square, or 36 cakes on a layer cut 22 inches square. This last size leaves a place between the boarding that has to be filled with sawdust, and I think as a whole I prefer cutting the ice 20 inches square.

We estimate the building to hold 35 to 40 tons of ice. It has been in use for 15 years with satisfactory results. The year this house was built it was the first of January before a stick of the timber was cut, and we filled the house with ice before the roof was put on. I have no ventilator on the house, and have thought sometimes that one would be an advantage, but cannot complain with the keeping of the ice.

I have tried various ways of having the ice cut, and have decided the most satisfactory for a small farm is to have a plow such as advertised in the farm papers. It is not very expensive, and can be adjusted to a number of sizes. We mark it one way and plow it down deep the other way. The advantage of not plowing the first way very deep is if there should come a storm, especially rain, you lose all that labor. We do not put the plow in more than 3 or 4 inches the first way and about 6 inches the other way, and then saw in the grooves. If the weather is favorable it is not necessary to saw only every other cake, as with a good chisel the cakes will come apart easily.—N. E. H.

Disenfect the Home Stable.

In the first place the carcass of any animal that dies of a contageous disease should be destroyed by burning. Otherwise it shauld be buried deep and completely covered with quicklime. Anthrax, especially, is frequently spread by neglect of these precautions as birds, dogs, or other animals feed on the unburied carcass and distribute the germs. The stable which has housed an animal that died of a contagious disease should be subjected to rigorous, sanitary treatment. All the infected forage and bedding should be raked out and burned, the walls should be well soaked with water and then thoroughly scraped. All rotten wood in the floors, feed boxes or stanchions should be removed and burned. A noted authority has said: "Thorough cleaning will often make disinfectants unnecessary, but no amount of disinfection will take the place of cleanliness. To control contagious diseases, both cleanliness and disinfection must be employed."

Lime is one of the most efficient disinfectants, as it destroys organic matter as well as bacteria. To prepare milk of lime, add a pint and a half of water to each quart of quicklime to be slaked. By weight, use 60 parts of water to 100 parts of lime. One quart of the resultant dry powder can be mixed with four quarts of water. This preparation should be used as fresh as possible to spray the walls, partitions and floors of infected buildings. It should be put through a fine seive or strainer previous to using to prevent the clogging of the spraying nozzle.

Every stable should be whitewashed several times a year as this inexpensive process not only is a valuable means of disinfection, but also materially improves the interior appearance of the barn. The whitewash should be made from freshly-slaked lime, using the same proportions as in the case of milk of lime. The surface of the stanchions and mangers, together with the side walls and ceiling of the barn, should be brushed clean of dust. The whitewash should then be thoroughly sprayed over the stable by means of a hand-power spraying outfit.

Two coats of whitewash a year will keep the stable in excellent sanitary condition. There is no excuse for any farm stable exhibiting dirty, filthy walls, ceilings and stanchions when such a cheap corrective is available to remedy such conditions.

Smooth up the Roadside.

Most of our roads are fringed with a heavy growth of grass. The roadways are not more than 15 feet wide, leaving about that many feet on each side where the grass grows. Those margins are so uneven that it is not possible to cut the grass. It would be of much profit to the owner of the land to smooth those margins so that a mower could be used, and make a good quantity of hay. At the same time it would greatly improve the appearance of both farm and road. This could be done by a good plowing and harrowing. Sow timothy mixed with clover and brush in.

HORTICULTURE.

The Nova Scotia Injurious Insect Pest and Plant Disease Act, 1911.

ORDER IN COUNCIAL.

At the Government house at Halifax, the 25th day of October, A.D. 1912.

Present:—His Honour the Lieutenant-Governor-in-Council.

The Governor-in-Council, under the provisions of "The Injurious Insect Pest and Plant Disease Act, 1911," is pleased to make the following additional Regulations:

1. In these Regulations, unless the context otherwise requires—

"Provisional Entomologist" means the person appointed as such for the purpose of carrying out the provisions of "The Injurious Insect Pest and Plant Disease Act, 1911," or under the provisions of any other statute.

"Inspector" means a person appointed for carrying out the provisions of said Act and the Regulations made thereunder.

"Nursery Stock" means and includes all trees, shrubs, plants, vines, grafts, scions, cuttings and buds, but shall not include green house grown plants, herbaceous perennials and bedding plants.

2. No imported nursery stock shall be delivered to any importer or consignee within the Province of Nova Scotia unless the same is accompanied by a certificate signed by such Provincial Entomologist or other authorized government officer as is approved by the Secretary for Agriculture that the nursery or other premises on which the same was grown was inspected within the period between the fifteenth day of June and the fifteenth day of September next preceding the shipment thereof, and that said nursery or other premises were found to be apparently free from San Jose Scale and such other plant diseases, insects and pests as have been declared to be injurious to vegetation by the Governor-in-Council under the provisions of "The Injurious Insect Pest and Plant Disease Act, 1911," provided that any importation of nursery stock which has complied with the Regulations of the Department of Agriculture of Canada shall be exempted from the provisions of these Regulations.

3. No common carrier, express company or other person, firm or corporation shall send, bring or cause to be sent or brought into the Province of Nova Scotia, for delivery within the Province, any nursery stock unless the certificate mentioned in the next preceding Regulation, or a duplicate thereof, is attached to each parcel or bundle thereof; provided, however that if such nursery stock is contained in a sealed car containing no other goods, such certificate may be attached to the car.

4. Every person who imports nursery stork shall give notice to the Provincial Entomologist, Agricultural College, Truro, within five days of giving the order for the same, and shall again notify the Provincial Entomologist on the arrival of the shipment in Nova Scotia. Notice shall also be given to the Provincial Entomalogist by every common carrier, express company or other person, firm or corporation bringing nursery stock into Nova Scotia for delivery within the province immediately such nursery stock is received. Such notice shall include the name of the consignor and consignee, the points of origin and destination, the name of the company or person carrying the nursery stock, as well as the nature, quantity and origin of the same.

5. (1) No nursery stock shall be brought into Nova Scotia for delivery within the province except at or through the ports and during the periods respectively hereinafter mentioned; that is to say:

Middleton, Annapolis County, from March 15th to May 15th, and from October 7th to December 7th;

Truro, Colchester County, from March 15th to May 15th, and from October 7th to December 7th;

and at such other ports during such periods as may from time to time be prescribed by the Secretary for Agriculture.

The Secretary for Agriculture may prescribe, for the purpose of this Regulation, any port at which the use of a Dominion fumigation station is available;

(2) At the ports hereinbefore mentioned all importations of nursery stock shall be inspected and fumigated in the fumigation house provided for that purpose, and a certificate of fumigation will be issued by the Provincial Entomologist, and no nursery stock shall be delivered by any common carrier, express company or other person, firm or corporation unless such certificate has been obtained;

(3) Importations by mail shall be subject to the same Regulations.

6. There shall be clearly marked or otherwise indicated on every package of nursery stock intended for delivery within the province of Nova Scotia the port at or through which such nursery stock is to be brought, and all shipments of nursery stock shall be entirely at the risk of the shippers or consignees, the Government assuming no responsibility whatever.

7. If, on inspection, nursery stock or other vegetation or vegetable matter is found to be infected with San Jose Scale or any of the plant diseases, insects and pests as have been, or may hereafter be, declared to be injurious to vegetation by the Governor-in-Council, under the provisions of "The Injurious Insect Pest and Plant Disease Act, 1911, such nursery stock shall be destroyed to the extent deemed necessary by the Inspector, and in his presence, or, if required by the consignee, shipped out of the province at the expense of the consignee. All cases, packages and packing in which such nursery stock has been contained shall also be destroyed in the same manner.

FRED F. MATHERS,
Clerk of the Executive Council.

Home Canning.

Canning is one constant fight against bacteria. Drying fruits avoids this work of bacteria by excluding the moisture. To can fruits and vegetables we must annihilate all fermenting germs, as well as spores, and exclude all others by an air-tight container. We may illustrate this by corn as follows: If you throw corn out in the sun it will not damage; but put the sprouted grains out in the sunshine for a few hours and they die. Just so with bacteria. A little heat will kill most of them but the spores require a longer process. In canning vegetables we may easily kill the plants, but the spores are more difficult We must work constantly upon the total annihilation of these spores by the application of heat. It can readily be seen that heat might be sufficient to germinate the spores and kill them before they in turn could produce spores. This is a slow process; but it is used to advantage sometimes when one wishes to pack something fine out of raw material which is injured by high temperature.

Usually in fruits the processing is done in boiling water after the cans are sealed. By the work process is meant the application of the required heat to kill all fermenting germs. Vegetables require more heat and almost invariably are processed under steam pressure. Before the cans are entirely sealed they are as the canners term "exhausted." This is accomplished in several ways, sometimes by putting the goods in the cans hot, or by filling the cans with water, brine or syrup heated to a temperature of boiling water. The fruits or vegetables and pouring in cans are quickly sealed and the shrinking of the contents on cooling causes a partial vacuum which draws the tops and bottoms in, adding materially to the looks of the container.

In processing most fruits it is not necessary to use an extreme amount of heat; because they will keep without it and subjecting to heat breaks down the tissues, causes the cane sugar to be converted into glucose destroying flavor and injuring color. On the other hand most vegetables require steam heat. Corn for illustration requires cooking for 50 minutes at a very high temperature. As can readily be seen the steam canner is an absolute necessity in the canning of corn, while for fruits and tomatoes you can usually depend upon a temperature of 212 or the hot water machine. By the addition of sugar it is possible to raise the boiling point from 212 to 240 degrees Fahrenheit. The beginner should experiment with a few cans at first and by following the instructions of the home machines he will soon reduce the failures to a minimum. In putting up certain vegetables it is necessary to par-boil or as the canners term "blanch." This takes from them certain acids which though not causing fermentation, will make the vegetable "digest itself."

Canning is a very simple process. Perhaps one reason why many people consider it difficult is the manner in which the managers and "skilled process men" have sought to advertise their work by "secret process" and "new ways," etc.

The amount of fruits and vegetables, especially peaches and tomatoes that have gone to waste in the eastern part of our state this year cry aloud the importance and future of the home canning machine. To corroborate this we have only to mention that one bushel of peaches furnish the necessary amounts to fill from 18 to 20 of the three-pound cans. The reatil price of such fruit is from 20 to 35 cents each and the demand for the home canned product is good because of its high quality and purity.

The value of ripe fruits and vegetables being substituted on the dining board for greasy bacon is inestimable. The problem is how best to secure these the "year round" at the smallest expense of time and labor. So far the home canner is the nearest solution. All admit that the success made in Texas by the canning industry is a great step in the right direction, but only a step on the long road has been taken compared to the possibilities of the little home machine working in every neighborhood. It is our belief that this will do more to decrease the high cost of living than any one thing before the American people.—F. R. Phillips, Extension Department A. and M. College of Texas, at Cotton Carnival.

Keeping Cider Sweet.

Take a clean barrel and bore several holes in the bottom. Spread a felt cloth over the bottom and then fill the barrel with clean washed sand. After the cider has gone through the first fermentation rack it off with the filter, and as it runs from this, put it into clean barrels which have been sulphured. Bung the barrel tightly and keep it in a cellar or room where the temperature is between 40 and 50 degrees. When the cider is wanted for use, it should be drawn off into bottles or kegs as it will change quickly if barrel is drawn from daily.

Another recipe is to add from four to 12 ounces of granulated sugar to each gallon of cider, according as the apples are sweet or sour, when the cider in the barrel is in a lively fermentation. Let the fermentation proceed until the cider has reached the taste to suit, then add one ounce sulphite (not sulphate) of lime to each four gallons of cider. Shake the barrel well and let it stand three days, after which it should be bottled for use. The sulphite of lime should be dissolved in a quart or more of cider before it is put into the barrel.

Don't Experiment with Roofing

It pays to buy good roofing just as it pays to buy good machinery and to keep good stock. Good roofing has good records behind it, *not claims.*

NEPONSET PAROID ROOFING

has excelled the records of best shingles. A warehouse built in 1898 was torn down last summer with its NEPONSET Paroid Roof still in good shape. NEPONSET Paroid has outworn tin and metal time and again. It is bought by Governments, by Railway Systems—by farmers, because it has proved itself the most economical roofing. Buy NEPONSET Paroid next time.

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Canadian farm barns are the finest in the world, and these plans are designed especially for your needs. Send today sure.

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Proslate Roofing
makes a handsome red or green roof for houses.

THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well, either.

So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking,

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address me personally;

G. Y. MORRIS, Manager 1900 Washer Co'p'y.

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The Leopard Moth.

The leopard moth occurs in Europe and parts of Asia and Africa, and was probably accidentally introduced into America from Europe more than thirty years ago, being first noticed at Hoboken, N. J., and later spreading toward the north and east along the coast. At the present time it is found from Ashbury, N. J., to Lawrence, Mass., but has not been taken more than twenty-five miles inland.

The larvae or caterpillars cause great damage to nearly all kinds of shade trees by boring in the branches just under the bark and cutting large galleries, often across the grain, thus girdling them. Dead branches extending above the mass of foliage in the tree-tops are a sign of attack, and many twigs will be broken off or wither during the summer. The pest has been especially destructive to elm and silver maple trees in the coast cities and towns of Connecticut, but is not so abundant in the open country. It has caused much damage also in the cities of New Jersey, New York City, Providence, Cambridge and Boston.

The adult moths are dirty white, with semitransparent wings marked with metallic blue dots. These have an expanse of one and three-fourths inches in the male or two and one-half inches in the female. The larvae is yellow or dirty white, marked with brown or black dots, and about two inches long.

The moths appear about July 1st, the males being very common around electric lights, and the females lay eggs singly or in groups of two, three or four, in the crevices of the bark or near the buds. The larvae, hatching in a few days, begin to tunnel in the twigs, and by the end of the season are about one inch in length. They leave the small branches and crawl over the bark to enter larger ones, cutting large galleries in them and expelling the frass through round holes, which they soon close with silk webs. During October the borers go deeper into the wood, and remain through the winter two inches or more beneath the bark. They pupate in their burrows the second spring, and before the moth emerges the pupa works itself partly out of the opening, and the adult flies away, leaving the empty case protruding from the burrow.

There are few natural checks, only one parasite being known in this country and four in Europe. It is believed, however, that certain birds, especially woodpeckers, prevent the spread of the leopard moth in the open country. Many larvae are doubtless killed by the breaking off of the branches, which in cities are carted away and destroyed.

Removing infested branches; injecting carbon disulphide (bisulphide) into the burrows, and stopping the opening; probing with a hooked wire for the larvae; are some of the methods of control.

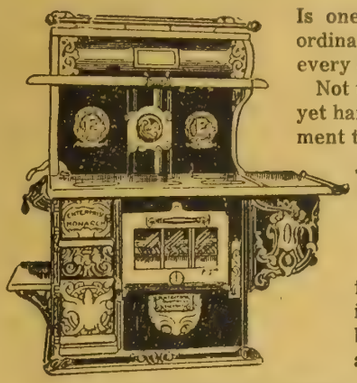
Planting species of trees not badly infested, like oaks, honey locust and sycamore, and especially those kinds that do not grow very large, and have a smooth bark; placing trees further apart, so that the larvae cannot easily crawl from one to the other; and keeping the trees well nourished and vigorous are the chief preventive measures.

Habit of the Blackberry.

There are few fruits equal to the blackberry for yield. These berries seldom fail. They do not bloom as early as the dewberry and some other fruits; blackberries seldom put out foliage until all danger of frost is past. Then the bearing quality of the blackberry is well known. An acre of blackberries, when there is a market, may be expected to yield considerable revenue. While the blackberry has a slight acrid or bitter taste that the dewberry and the strawberry does not have, it is liked by most people who eat fruits. Where the market is rather limited it is well to can blackberries, as this is a good way to save this desirable fruit. Blackberry plants may be transplanted any time during the fall after the foliage has fallen. Usually one should wait until frost, as the wood is then mature and the plants are better prepared to take root. Blackberries need cultivation and pruning for best results.

Don't waste your money by buying strengthening plasters. Chamberlain's Liniment is cheaper and better. Dampen a piece of flannel with it and bind it over the affected parts and it will relieve the pain and soreness. For sale by all dealers.

A Reasonable Range



Is one that is not too expensive for the ordinary family to buy, but good value for every dollar invested in it.

Not too ornate and hard to keep clean, yet handsome in appearance and an ornament to any kitchen.

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fills the bill in this regard. That is why it is so popular and has been installed in so many well appointed homes.

It is—MODERATE IN PRICE, EASY AND ECONOMICAL TO OPERATE, A GOOD BAKER,
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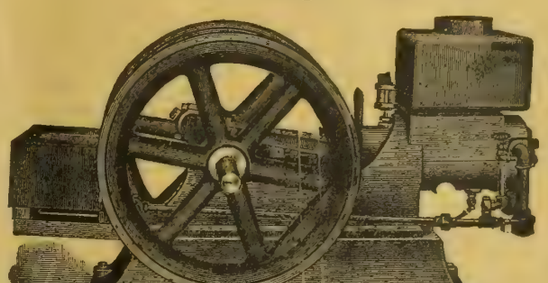
That is the average cost per horse power per hour when doing the work with



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References: Greenwich Bank, N. Y East River National Bank, N. Y.

GETTING THE PROFIT ONLY SHARPLES
Tubular Cream Separators Can Pay

John B. Cosing, whose prosperous farm home at Snelgrove, Ont., is shown above, recently discarded his disk-filled cream separator and bought the simple Sharples Dairy Tubular. He prefers a separator with double skimming force and without inside contrivances.

The great Canadian Pacific Railway Demonstration Farm, covering thousands of acres at Strathmore, Alberta, has discarded the complicated cream separator formerly used, and put in the remarkably simple, marvelously durable Sharples Dairy Tubular.

The Holy Angels Convent, at Athabasca Landing, Alberta, recently purchased a Sharples Dairy Tubular, in Edmonton. The Convent is one hundred miles from a railroad and the Tubular was carried to the Convent on a pack-horse. The Tubular was chosen by the Convent because it is the only separator so simple, durable and perfect that it can be relied upon in places where repairs are hard to get.

Those Using Tubulars get an extra profit no other separator can make. No wonder Tubulars are replacing others everywhere. Write directly to us, being sure to ask for Catalog 194 You will receive prompt and courteous attention.

THE SHARPLES SEPARATOR CO.
Toronto, Ont. Winnepeg, Man. 7

DAIRYING.

Making a Dairyman of the Boy.

"Teddy is a real boy," said his proud father, "and it won't take long for him to prove it to you." Teddy took the hint and hurried into the barn which his father explained was his very own. Soon he emerged with a riding pony weighing about 800 pounds, and following close behind was a colt.

Teddy is less than six years old and you would scarcely expect that he could saddle his own pony for a ride, but in about a minute after he had disappeared around the house he came galloping toward us with his pony all saddled and bridled. I learned later that he leads the pony up to the porch and in this way is able to put on the saddle and bridle.

"I think my system is about the only one to keep a boy on a dairy farm," the father boasted. "Teddy has this barn all to himself. I help him haul the hay, but he takes care of the two horses and colt, hauls out the manure and does all the necessary work about the barn. That one-horse wagon there is his, and he never has any assistance in hitching the horse to it. Some of the neighbors tell me that Teddy will surely be killed if I allow him to ride as much as he does, but I believe that it is making a man out of him."

A short time before this conversation I visited the same farm and Teddy was the only "man" to show me around. The intelligent answers he gave to my questions and the knowledge he displayed regarding the farm operations show that there is not danger of his ever wishing to leave his father's dairy farm. He is a real boy, and a real dairyman. The success his father has had with him serves as a splendid object lesson for other dairymen who need the help of their sons at home.

The Best Cow.

A new phase of the profit question in dairy cows has recently brought to my notice. This question hinges on the number of days the cow was giving milk, for, while it is important for a cow to have a long milking season, there is no advantage in putting in the time milking her an extra month or two if she does not give sufficient milk to pay for the labor.

Few farmers have any idea at all of what they are making. The farmer in this way differs from the manufacturer or other business man, who spends large sums to install an elaborate system of cost accounts; few farmers can even tell the number of pounds of milk which each cow in the herd yields. It is the general opinion that the cow that gives the largest quantity of milk in the year is the best cow. But is she? There is considerable difference in the profits from the cow that gives six thousand pounds of milk in eight months and the cow that takes eleven or twelve months to produce the same amount of milk. Three or four months' milking is saved, and also considerable feed.

Mr. Stockhouse has been in mercantile life and he brought the business methods of the city store to the dairy in the country. He at once saw that the really profitable dairy cow was largely a matter of guess, notwithstanding the fact that her product was known daily and yearly. So he decided on his own account to learn what his cows really were doing from the dollars and cents point of view.

The herd is at present composed of twelve cows, which gave a total of 66,961 pounds of milk for the season, an average of 5,580 pounds of milk a cow. The highest yield was 6,417 pounds, while the lowest was 4,916 pounds. It is interesting to note the difference in the number of days that each cow was in milk.

The cow with the highest record was milking 256 days, a little more than eight months, while the second highest cow, only 65 pounds lower down the scale, took 325 days to produce the milk; so it was necessary to milk the second cow 69 days—two months—longer than the first in order to produce 65 pounds less milk, which makes her a more expensive cow than would appear at first sight. The fact is this cow, though second in quantity of milk, was not really second in actual profits. This is surely a new phase of the question.

In figuring the cost of milking a cow that comes some distance down the list should be second in profit, as she produced only 243 pohnds less milk than the second best, but took 58 days, or three months, less time to produce it. Now no man can afford to milk a cow 82 days for 243 pounds of milk; so this cow, though rated much lower, is really the second best cow in the herd; and on account of having been milked 13 days less time than the first grade cow, it is questionable if she is not the most profitable cow in the lot, notwithstanding the fact that she produced some 300 pounds less milk than the premier cow.

For the same reason the cow with the lowest record, 4,916 pounds of milk should really be higher up in the profit list, as she took only 244 days, just eight months, to produce it. Another cow that produced only 14 pounds more than the lowest placed cow took 24 days longer to produce the 14 pounds of milk and is surely a much less profitable cow, as a farmer cannot afford to milk a cow 34 days for 14 pounds of milk, not to mention the difference in the cost of feeding a milking cow and a dry cow.

The above are points seldom taken into consideration, as dairymen are too much in the habit of judging a cow by the number of pounds of milk produced, without considering the number of times a man has to be paid to sit down and milk the cow. Milkers that are good milkers are high priced men, and it does not pay to have them working for you eleven months when the same work may be accomplished in eight months.

I have never noticed that the experimental farms have taken up this phase of the question. True, in their dairy reports they give the quantity of milk yielded by each cow and the cost of keep, and weare allowed to draw our own conclusions as to the best cow; but nothing is ever said about the labor question. Dairy cows cannot be fed and milked for nothing. On a good dairy farm the herdsmen and milkers must necessarily be good, high priced men, and this labor question is quite an item and should not be left unconsidered.

This cow that took thirty-four days to yield fourteen pounds of milk more than her competitor will be generally rated as the better cow, because she gave a bigger yield of milk. Few people will stop to consider the cost of milking that cow thirty-four days, the cost of some extra feeding, the cost of manipulating her milk for market, etc., and all this work going on thirty-four days for fourteen pounds of milk.

It has been the custom of dairy writers to urge on their readers the importance of persistent milking. Persistence is all right, so long as it can be made profitable. The persistent milker is, after all, very much of a fake. So long as the cow continues to milk ten or eleven months in the year, and by her slow yielding persistency manages to pile up a few pounds more milk than her mate which is not so persistent, she is considered the better cow. But is she? Is not the cow that milks, say, only eight months and yields within a fraction of the eleven months' milker, the better cow? By all odds she is. This question is well worth consideration.—J. A. McDonald.

Breaking Heifers to Milk.

When it was the fashion to milk cows in the yard, nearly every farmer had some kicking cows that were not only unpleasant to handle, but were liable to spill the milk and upset the milker. I have never found it necessary to keep a kicker. Such a cow is often the result of an irritable temper in the one who breaks her.

I once broke 10 two-year-old heifers to milk in one season, and all were gentle cows when the breaking-in process was completed. The work was done in the yard, but the same plan will hold for the stable. I tied each heifer to the fence when I was ready to milk her. A rope was tied around the horns and kept there until the heifer was broken in. The heifer was petted to gain her confidence. I then sat down to milk. First I rubbed her udder and teats until she seemed to be calm, then began to milk.

It should be remembered that a heifer often has inflammation and soreness in the udder, and if she becomes irritated and kicks, the milker should not expect to calm her with the toe of his boot. He should crowd against her side and run his arm under her thigh and crowd it down enough to get a good hold on her leg, and then gently lift the leg with a firm grasp.

If she is obstinate, straighten her leg out and hold it so high that she cannot get the other foot down enough to help herself. Hold the leg until the heifer ceases to struggle and begins to tremble, then let it down gently and commence milking. The heifer will be docile and you will have a clear conscience. Two or three such experiences will be quite sure to establish relations between heifer and milker.

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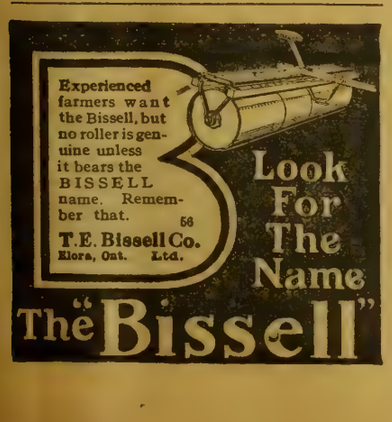

Advantage of Having the Cows Freshen in the Fall.

The prevailing idea, or rather the idea that has prevailed in the past, that a cow will yield more pounds of milk in a year when she freshens in May, has been utterly exploded by hundreds of careful tests. To be sure, a cow that becomes fresh when on full grass will give a larger yield for a month or two than one that freshens in the fall, although on a properly balanced ration with ensilage as a base, there is less differenc even in this respect than most people think.

But to go back to the cow that became fresh in May. It is only a question of a month or six weeks' time until the fly pest appears, and this in itself will shrink the yield too far below the normal. In July and August the pastures are usually scant. The cow not only falls off in the yield, but she becomes thin in flesh, and while she may pick up some in the fall, the yield of milk does not increase to normal. A cow that has once materially fallen off in the yield can seldom be brought back to her maximum flow during that period of lactation; consequently spring cows usually go through winter on a decreased production, no matter what feed and care is bestowed upon them. Economically this is exactly contrary to what it should be. Milv products without exception have a higher price in the winter time than they do in the spring and summer. Obviously, therefore, it is in the winter that the yield should be the greatest. Winter feed, also, is more expensive than summer feed, so, as a general proposition, the income from the cows ought to be the highest when they are getting the highest price feed.

YEARLY MILK YIELD OF FALL-FRESHENING COWS GREATEST.

The cows that freshen in the fall start in with a good, fair flow, frequently, indeed, a maximum flow of milk. With good care and attention, which the farmer haos time to bestow during the winter; with good feed, which the silo, clover hay or properly cured corn fodder supply; with good, comfortable quarters, which the farmer has the time to be-building material make possible, a good cow, the only kind that a good, progressive farmer would keep, will maintain her yield practically all winter. Then in the spring, when the tendency would be for her to fall off, the stimulating effect of fresh, sweet grass will keep her up a couple of months longer, so that the total yield per cow is almost invariably greater in the case of fall cows than in the case of spring cows.

Winter dairying in advanced dairy communities is an established fact. Winter dairying on the part of the general farmer is bound to come.

In the first place, the general farmer who practices winter dairying will make more money out of his crops and he will make more money out of his dairy. He will have more money to spend, which means that he will have more money with which to buy farm implements and machinery.

The Milk Scales and Record Sheet.

Few dairymen think of the cows in their herds as anything but cows. They feed what they think the caw should have and take what milk she gives as a matter of course. The modern dairyman regards his herd as a market to which he carries his feed for sale, and he expects to get the full market value for his feed. Again the modern dairyman regards each cow in his herd as a special machine which must do certain work. Every loom in a cotton factory must work to its full capacity if the factory is to pay its owners a good dividend. Just so each cow in the herd must be watched so as to see that she does her full duty. It is a very easy matter either to over-feed or under-feed a cow, and a great many cows are to-day being either under-fed or over-fed.

The best way to study the herd is to put in every dairy barn a record sheet on which is recorded every pound of feed the cow is fed and every pound of milk she gives in return. A good rule to follow is to give a cow one pound of grain for every three pounds of milk. There are times when this rule is not best, but it can be taken as an average. Some will say that it is too much trouble to keep a daily record. To these we say keep the record for two days each week. This is far better than no record at all. At the end of the year the dairyman who has kept records for the first time will have many surprises. He will find that what he thought were some of his best cows did not pay him nearly so well as some which he thought not so good. He will find that some of his herd have been kept at a loss, while others have just paid for their keep.

As examples, herds in this state will be used. Herd No. 1 was kept at a profit of $1.24 per cow, while herd No. 2 was kept at a profit of $17 per cow. In another herd the best cow gave 250 more pounds of butter in one year than the poorest cow, and at a cost of only $8 more for feed.

These illustrations simply prove that, unless the dairyman knows what he gives his cows and what his cows give him, he is running a very uncertain business, and the milk scales and record sheet give a very handsome return for the trouble it takes to keep a record.—Prof. J. M. Burgess, South Caroline College of Agriculture.

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THE HORSE.

Cause of Heaves.

It is my belief, formed from causes of which I have had personal knowledge, that heaves in horses are some times inherited from their parents, and that not when so inherited, can be brought on by violent exertion when drawing heavy loads on a full stomach pressing against the lungs.

In regard to heridity, all doctors are agreed that tuberculosis, or consumption, in the human species can be inherited from the parents, or at least a greater tendency towards its contraction.

We had a neighbor who kept a large, well proportioned mare for raising colts. She had the "heaves" badly, and that was probably the reason he never put her in his team. She raised a fine looking colt every year, which from the time it was weaned was fed about all the grain it would eat (to hasten growth) until it was sold at the age of three years, or younger. The buyer mistakenly believing that the colt would continue to grow until five years old, as colts generally do that have not been crowded with grain, and that they would have a fine horse. They paid a good price for the colts, and an additional price for the growth expected, but which never grew. I was foolish enough to buy one of these colts. He was handsome and large for his age, but never grew a pound heavier after he was three years old, and showed the heaves soon after I got him. He had it so badly I sold for half the sum I had paid.

All the colts raised from this neighbor's mare, of which I have any account, showed the heaves as soon as they were put at work, or driven fast on the road.

A noted veterinarian thinks that horses with small chests are more liable to get the heaves, but my father had a horse that got the heaves after he became old, and he was large chested. I have owned two horses besides the one mentioned, that got the heaves, one of them so badly that she dropped dead in the road when being driven in a buggy. She was an uncommonly broad breasted beast. These two, and the one my father owoed, I think brought on the heaves by violent exertion. When drawing heavy loads they would put forth tremendous efforts, without urging. Every nerve, sinew and muscle in their bodies were put to the severest tension.

Men, when lifting a heavy weight, and horses when drawing a heavy load, fill their lungs with air and hold it until the supreme effort is over. This act constantly repeated fail to thicken the walls of the lung-cells or burst some of them with an over-loaded stomach prevents their ready expansion.

It is my opinion that some horses inherit the heaves (or the tendency for it) and others bring it on by over-exertion.

An English writer says: "The main cause of heaves is sharp work, after over-feeding, causing a rupture in the air cells."

Although the disease cannot be cured, it can be greatly palliated by feeding concentrated foods that do distend the stomach, and cause it to crowd against the lungs.—I. W. INGHAM.

A Two Horse Story.

I was standing near the curbing of a street in one of our neighboring towns some time ago, when an automobile stopped close to the sidewalk.

In a few minutes I saw a horse approaching, harnessed to a large dray. Seated high above the body of the vehicle was the colored driver.

The horse showed signs of uneasiness, and when very near the automobile it became quite fearful, so much so that the driver came down from the high seat, walked up to the horse's head and turned it towards the machine. He then petted the animal and talked to it in a way that had the effect of calming its fears, and soon it followed him a few steps after which he climbed again to his seat and the horse went on as if nothing had happened.

Soon another horse came along with a white driver, a strong muscular man, with a whip and an enormous amount of human will power to use it with. This horse, a fine looking animal, also balked when it neared the machine. The driver, instead of helping the horse overcome the fear by talking sensibly and patting it kindly, just whipped the horse severely, turning, it seemed, much of his angry will power into using the whip. Finally, after much time had been lost in beating the horse, he turned it around and, driving it again to the machine several times, te animal almost desperate, dashed by the machine and went up the street by no means in a very good humor.

Both horses were frightened and were unwilling to go near a thing that seemed dangerous and that they did not understand. Of course it was natural that they should try to avoid the machine.

Both men had a problem to solve—how to get the horse by the automobile. Each man got the answer to his problem, and each man was a different man and each horse a different horse afterwards.

The first man dsed his intelligence as kindly and as patiently as he could to make the dumb animal understand there was no danger in passing. Each animal seemed to understand, and horse and driver went by, each better for the experience; the man was kinder and had more faith in kind intelligence even when used upon the animal world, and the horse had overcome another fear and was hence a better and more useful horse with a better feeling towards his driver. This man solved the problem by thoughtful action.

The second man used his unintelligent human will power, and beat his horse by the automobile, without trying to strengthen by patience and kindness, the intelligence which the animal had already shown in being afraid of the strange looking object. This horse and driver went by also, but each worse off for his experience; the man was less kind and had even more faith in unintelligent brute force, while the horse still had fear of automobiles and a stronger fear at that, because he would expect a whipping whenever he would see one, and those fears made him a less reliable and less useful horse.

The Clipping of Horses.

Those who intend to clip their horses should set about their work without delay. It is satisfactory that the practice of clipping is growing in favour, for there can be little doubt that in the great majority of cases—something depends on the class of horse and the character of its work—it is a higly useful operation, enabling the animal to perform its work with less effort. The increased popularity of the practice is due, no doubt to some extent to the recognition of its beneficial effect, but perhaps quite as much to the fact that the handy machines now available make the work far easier. It is no light task to clip a heavy-coated animal when a pair of scissors was the best instrument available for the purpose, and it is not surprising that in the old days many grooms and owners were "convinced" that the operation was unnecessary. Human nature being what it is, it is natural that a man should give himself the benefit of the doubt when a troublesome and laborious bit of work is involved. The horse that is coarse bred, or is turned out, or not very carefully groomed, will require clipping earlier than the well-bred and well-groomed animal, for the growth of the coat is very much affected, not only by breeding, but by the management. It is safe to say, however, that most horses will be ready for the operation by the beginning of the next month, and a second clipping may or may not be required, according to circumstances, though in the case of the heavy horse it will probably be beneficial. After the middle of January clipping should not be carried out again, or the production of the summer coat will be interfered with, and its appearance greatly damaged.

BENEFITS OF CLIPPING.

The horse that is unclipped sweats profusely, and the long hair acts just like a wet blanket around him when he gets cold again. The effects of

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CURBS
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TESTIMONIALS

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Very truly,
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sleeping in a wet blanket in the case of a human being would naturally be expected to show themselves in the shape of colds, chills, and perhaps deeper-seated ailments, and this is precisely what happens in the case of the horse. It is very difficult to ensure that a thorough rubbing down after return to the stable is given; indeed, it is not an easy matter to wipe dry a very heavy coat, however willing to do his duty may be the attendant. It may not be so necessary to clip the slow-moving animal whose pace rarely exceeds a walk, but in all other cases it should be done, and rugs should be used to cover the animal when it is standing during its working period. The result of clipping at this season is sometimes astonishing— a listless animal that seems quite unfit for its work becomes sprightly and energetic. It is, indeed, quite as reasonable to expect a man to dig or engage in violent exercise while he is clothed in furs or a heavy overcoat as to expect the horse to work properly with his winter "suit" on. The matter, perhaps, only needs to be put in this way to make the reasonableness of clipping evident to owners, and fortunately the task is now so much lighter than formerly that the objections of the groom or attendant are not so pronounced as they used to be. At our agricultural shows interested crowds may be seen watching the shearing of the sheep; the exhibitions are not held at the period when horse clipping is practicable, but the value of the demonstrations is quite as great to the horse owner as to the shepherd and his master. Appliances worked by electricity or other power and by hand, appliances intended for the use of a man with a large number of animals to deal with and for him who has but a few are offered in variety, and the prices are reasonable. With such facilities there is reason to expect that the practice of clipping horses will grow in favor year by year, and it is a matter of congratulation that an operation which works so greatly for neatness and convenience should also be one which acts beneficially upon the health of the animal concerned.

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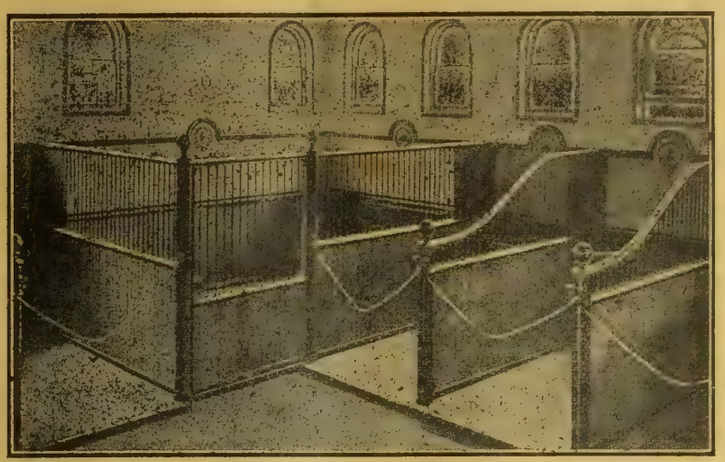

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Training the Young Horse.

When I was a boy, we thought it great sport to break the colts. The usual way was to let the colt run without even putting a halter on it until three or four years old; then get it into some corner of the stable and put on a halter, and often the same day put on a biting harness. This was simply an arrangement for pulling the colt's head up and its nose in higher than it was ever expected to be kept when at work or being driven. Then turn the poor thing loose in the yard and let it run for several hours.

We did not even think this was a cruelty to the colt; that was really inhuman, not to say wicked, because "a merciful man is merciful to his beast." There was no mercy in this, consequently it was wicked. If the colt is properly handled, there is no need of its being "broken."

The first thing is to secure the confidence of the colt; let it understand that you are its best friend. A lump of sugar now and then will be highly prized by the colt. Nothing loves sweets more than the horse, and a lump now and then to the colt will soon have it following you about, teasing for more. Accustom it, when only a few days old, to wearing a halter by putting on a light one for a day or two at a time and leading it around. When only a few weeks old, put on a light collar and back band to which the collar can be fastened, so as not to slip off when the colt puts its head down, and let it wear these for a few hours at a time. Before it is weaned, it should have a light harness put on and be driven by the side of its mother till fully accustomed to the lines. Its feet should be taken up and handled and pounded upon with some light thing until it is accustomed to have them handled in any way desired.

When a year old, it should be harnessed by the side of a gentler horse, preferably its mother, and hitched to some light vehicle without a load, and driven until fully accustomed to the use of the reins. Accustom it to robes and blankets, so that no matter where it sees them or how they may be thrown against body or heels, it will not be frightened. Never attempt to teach the colt but one thing at a time, and the first and most important thing to teach the colt is the word whoa. Let it understand that "whoa" means stop, at all times and under all circumstances. Never couple any other word with it. "Gee," and "haw," and "back" are important words and should be taught, but "whoa" is by far the most important, and if thoroughly taught will save many a catastrophe.

But in training the colt, whatever else you do or don't do, never lose your temper, nor speak harshly, or unkindly, or in an excited manner. If you get excited and lose your head, you must not blame your horse for doing the same.—L. S. Woodward in Maine Farmer.

Calculi in Mare.

Intestinal calculi, or stones, are a cause of colic, obstruction, inflammation, and, occasionally, of rupture of the bowels. They vary in the material of which they are composed, in shape, size, and in weight, from the size of a marble to a man's head, and in weight from an ounce to thirty or forty pounds. When small they are generally numerous and comparatively harmless, but when large there is rarely more than one or two. It is the large concretions that are dangerous as causing obstruction of the bowels, and as your mare has passed several small stones the indications are that those retained, if there are any, are small also, and, therefore, not dangerous. This is, of course, pure speculation, for no one can tell anything certain about the presence of intestinal calculi during the life of the animal, although they may be suspected. There is no legal obligation on your part to disclose the fact of the mare having passed a number of stones if you offer her for sale, but it is a bit shady to sell a horse to an unsuspecting purchaser for the reason that you are afraid to risk keeping it yourself. It is not quite in accordance with the "golden rule,-' which, however, rarely operates, even in ecclesiastical circles, where a horse deal is concerned. If you keep the animal as we have advised you to do, there is nothing that can be done to procure the expulsion of any calculi that may be present in the intestines, but something may, perhaps, be done by judicious feeding, or, rather, by the avoidance of certain foods, to prevent the increase in size of any that may be retained and to reduce the risk of new formations. Nothing, however, can be said about this without knowing something about the kind of "stones" passed—that is, of what the concretions are composed. If you care to send us for examination a specimen of those passed with the dung, which it is assumed have been retained as curiosities, we might be able to help you in this direction.—Pately Bridge.

Another Good Testimonial in Favor Of

VIGORA

"MR. J. B. MORIN:—I certify to have treated my mare for a chronic cough from which she suffered for two years, and when I commenced to use VIGORA she was so sick that she could nothing but the lightest work. Today she is perfectly well and can, as in the past, travel long distances quickly."

Signed, ELZEAR ALAIN,
Ancienne Lorette.

FOR SALE BY ALL GOOD DRUGGISTS AND GROCERS

J. B. MORIN, Manufacturer, 318 St. Joseph St., Quebec.

LIVE STOCK.

Big Shipment of High Grade Ayrshire Cows.

Tuesday, October 29th, was a red letter day for Ayrshire breeders in Howick and the adjoining district. The occasion was the shipment of the largest lot of high grade Ayrshire cows ever exported from Canada. The 217 cows, similar in color and type, together in one herd was a sight not often seen in Eastern Canada, and a number of spectators were on hand to see this large herd, which is being taken to the Brier Cliff Manor Farms, Pine Plains, N. Y., where certified milk is produced for the New York trade. The cows, 90 of which are in milk, the others due to freshen in the near future, together with a registered Ayrshire bull, Burnside White Cocade, purchased from Robert Ormstown, were loaded on 12 cars, and were taken through by Grand Trunk and New York Central Railways by special train for their destination, expecting to make the journey in 26 to 28 hours.

While D. T. Ness, was commissioned to make the purchase, yet the president of the company, Mr. Geo. W. Tuttle, or the manager, Mr. Sacket, personally inspected the animals before purchasing and supervised the testing with tuberculin and loading of the animals. To save delay at Malone, the port of entry, Dr. Main and U. S. Customs Officer Harman came to Howick to inspect the animals as they were loaded. A clean health bill was given with the animals, as there is no contagious disease in the district. Of 222 cows tested, only one reacted to the tuberculin test, which is a record any district may be proud of, as these cows were selected from the many choice herds in the counties of Chateauguay, Beauharnois and Huntingdon. The sellers were principally dairymen who produce milk for the Montreal market, and the going out of so many winter milkers will have a tendency to cut down the city supply. Many who sold cows did so reluctantly, but were desirous of helping to institute what may be a big trade in the future as city milk companies in New York find the milk from Ayrshire cows the most suitable for their customers.

True Value of Pedigrees.

Pedigree plays so large a part in stock breeding to-day that it is well to study the problem closely in order to ascertain its true worth; for it is quite possible to put a false value upon pedigree, just as the man who foolishly ignores it is standing in his own light. Pedigree becomes a fetish when it is held to enhance the value of a bad or indifferent animal when such a one is bought because his ancestors were good. Pedigree always enhances the worth of good stock. It may even cover minor faults in conformation or limb, but all the good ancestry in the world will not make a plain-shouldered or light-quartered bull a good one, nor a light-boned or unsound stallion a desirable sire. In the two latter cases pedigree acts as a veritable trap for the unwary. One has only to attend a few sales of stock to realize the truth. At most of these fixtures bulls that ought to have been steered and stallions that ought to have been turned out as geldings are offered, and bought by trustful people simply because of the fact that away back in their ancestry were some of the bovine or equine great ones of tne earth. The folly of such a proceeding can only be realized after the lapse of years. If a good sire leaves his impression on stud or flock, the evil influences of the bad sire are twice as potent. Scores of promising stocks have been ruined and hundreds more will be, solely because the owners have allowed pedigree to become a fetish. And the man who places no value on breeding records is just as foolish. We will remember an instance which proves in a striking way how disastrous this studied neglect of pedigree is. A certain gentleman farmer owned a large herd of Shorthorns. They had been his possession lor a number of years, and only the best Cruickshank bulls had been used. Every animal in the herd of over 300 was eligible for Coats' Herd Book if only pedigrees had been kept. At the dispersion sale a famous breeder remarked that failure to record and register the beasts had depreciated their value by at least £3,000. Young bulls which in the ordinary way would have been bought for South America had to go to English breeders for about half or one-third the price they would have made had not the late owner always always been of the opinion that "keeping pedigrees was too much trouble." And many fine cows and heifers that English owners of high-class herds would have been glad to buy had to be sold to ordinary farmers and dealers at low prices. This serves to show the folly of ignoring pedigree. But the greater sin of this age is the worship of pedigree as a false god. This is illustrated in no more striking way than by the insensate craze of many shire horse breeders for particular strains, utterly regardless of whether those strains will blend with those of the breeding stock which they possess. A stallion proves himself an impressive sire. He gets good stock when mated with suitable mares. The progeny win prizes, and are sold at big figures. Then breeders tumble over each other in the endeavour to secure nominations for the stallion himself or some of his sons. The result is chaos and disappointment, simply because the true value of records of descent was never understood. These seekers after the will-'o-the-wisp failed to realize that the great virtue of pedigree lies in its power to guide the owner of an animal in his breeding plans. Neglect of this is causing terrible havoc in the years we shall be bemoaning the loss of many strains which have done far more to make England's premier cart horse breed supreme than the much-boomed fancy sires of to-day, individually good though they be. All of which goes to prove that pedigree possesses no virtue in itself; that it is only of real value in the case of good, sound stock; and, above all, when used intelligently by the breeder as a seldom-failing guide to the production of the best. J. B. H. in Farm and Home.

Recommend John Bright for Live Stock Commissioner.

A strong deputation of stockmen waited upon the Hon. Martin Burrell, Minister of agriculture, on October 30th, and asked for the early appointment of a Live Stock Commissioner for Canada. This position was vacated by the resignation of Dr. J. G. Rutherford. Last summer Dr. Torrance was appointed to succeed him as Veterinary Director General, and took on the duties of Live Stock Commissioner temporarily until a new man was appointed.

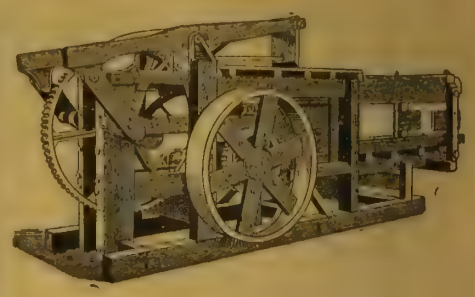
In urging the appointment the delegation strongly impressed upon the Minister the need for having a practical stockman and farmer as head of the Live Stock Branch, and recommended Mr. John Bright, of Myrtle, Ont., for the position. Each of the delegates spoke strongly in favor of his appointment, and referred to his many qualifications for the position. He is a well-known breeder and gas a knowledge of live stock from the ground up. Being a practical farmer, he is familiar with the farmer's needs and what should be done to increase his interest in live stock and the development of the industry. It was pointed out, too, that Mr. Bright, through judging at the leading exhibitions in Canada, and ocrupying prominent positions in the live stock organizations, had obtained a knowledge of the needs of the live stock industry of the Dominion that few men possess.

The following were the members of the delegation: Peter White, President, Dominion Shorthorn Breeders' Association and of the Eastern Ontario Winter Fair; Robert Miller, ex-Chairman, Record Committee, ex-President, Short-horn Association; Hackney Horse Society, Pony Society and the Dominion Sheep Breeders' Association; John Gardhouse, President, Dominion Cattle Breeders' Association, ex-President Shire Horse Association and Director of the Shorthorn Association and the Ontario Horse Breeders' Association; Robert Ness, ex-President National Live Stock Association, member of the National Live Stock Records Committee, and ex-President Council of Agriculture for Quebec; Hon. N. Garneau, member Council of Agriculture for Quebec, President General Breeders' Association, Quebec, and member Record Committee; Peter Christie, ex-President and Vice-President for Ontario of the Clydesdale Horse Association; J. E. Brethour, President Yorkshire Swine Association, ex-President and Director Dominion Swine Breeders' Association and member Record Commiteee; J. M. Gardhouse, ex-President Shire Horse and Sheep Breeders' Associations, Director Short-horn Association, member Record Committee, and Director Pony Society; John A. Boag, Vice-President Clydesdale Association, and Ontario Horse Breeders' Association; George Gormley, Director Clydesdale Horse Association, and Ontario Horse Breeders' Association; Geo. Robertson, President Eastern Ontario Poultry Association; Fred Richardson, Director Ontario Horse Breeders' Association, and ex-President Hackney Horse Society; Wm. Smith, M. P., President Ontario Horse Breeders' Association, Chairman of Record Committee, President National Live Stock Association, and Director Clydesdale Horse Association; W. R. Smyth, M. P., Captain Tom Wallace, M. P., and Herbert Lennox, M. P. P. —Canadian Farm.

YOU CAN MAKE MORE MONEY

working for and with your neighbors, during this season of the year, with our Hay Presses and Wood Cutters, than in any other way. There is an opportunity in every community for some bright and industrious farmer to make money as we say. Are you open to grasp such an opportunity? If you are, write us for prices and terms.

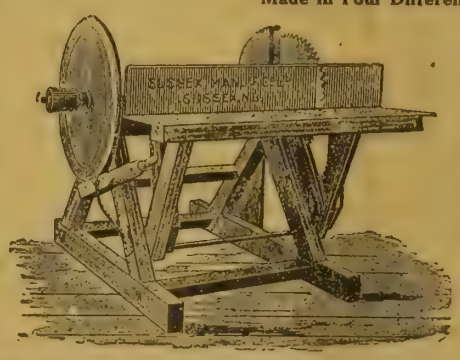
The Improved Trenholm Gear Hay Press



From the time the first Trenholm Hay Press was put on the market, it was recognized as a machine of exceptional capacity and strength, and the improvements from time to time since that date have placed it easily at the head as an ideal and eeonomical Hay Pressing Machine. The Bale Box is steel lined. The Side Springs which are thoroughly tested are made of the best quality Spring Steel. The Folder is properly located to do perfect work with these, and requires a very slight spring pressure to operate. The Large Balance Wheel weighs over 500 lbs, which adds greatly to the power in pressing. The large Gear Wheel in the centre is pinioned to the main axle, weighs over 500 lbs., and gives a very easy riding motion. The machine is operated with a Gasoline Engine, and will do more work with less power than any other on the market.

SUSSEX WOOD CUTTERS

Made in Four Different Sizes



We are offering these machines to the public with the belief that they are the best wood cutting machines on the market for the money. The Frame is made of the best seasoned hardwood, and well bolted. The Arbor is of the best turned steel, and runs in bearings made of the finest quality babbit. The Balance Wheel is a solid web and weighs 180 lbs. The Table is of heavy Steel Plates and indestructable. Wood Cutters are shipped with 28 in. saws unless otherwise ordered.

Remember we manufacture the celebrated Little Giant Thresher, The Sussex Root Pulper, Farmer's Feed Boilers, Grain Grinders, etc.

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SUSSEX, N. B.

This Wife and Mother

Wishes to tell you FREE How She Stopped Her Husband's Drinking

By all Means Write to Her and Learn how She did it.

For over 20 years James Anderson of 193 Spadina Ave., P.B. Toronto, Canada, was a very hard drinker. His case seemed a hopeless one, but ten years ago his wife in their own little home, gave him a simple remedy which much to her delight stopped his drinking entirely.

To make sure that the remedy was responsible. for this happy result she also tried it on her brother and several of her neighbors. It was successful in every case. None of them has touched a drop of intoxicating liquor since.

She now wishes everyone who has drunkenness in their homes to try this simple remedy for she feels sure that it will do as much for others as it has for her. It can be given secretly if desired, and without cost she will gladly and willingly tell you what it is. All you have to do is write her a letter asking her how she cured her husband of drinking and she will reply by return mail in a sealed envelope. As she has nothing to sell do not send her money. Simply send a letter with all confidence to Mrs. Margaret Anderson at the address given above, taking care to write your name and full address plainly. *(We earnestly advise every one of our readers who wishes to cure a dear one of drunkenness to write to this lady today. Her offer is a sincere one.)*

The Show Ring Hog.

To make a good showing with hogs, fitting and careful growing is very essential. Most of the county fairs come late enough in the season so that the pigs may be grown out. The old hogs may need to be fed up a little to get the hair laying properly, but too much of this is not desirable. The young stock should all be carefully grown and fed. Good feeding helps to make hogs look well. The weak spots are covered up. That is why the expert showman highly fattens his stock, often in a ruinous manner.

Exercise.—It is a great mistake to feed hogs heavily without plenty of exercise daily. Grown as hogs usually are, little worry over this matter need exist, yet with heavy hogs this is very essential. Flabby hogs cannot stand hauling to and from fairs or stand the necessary handling at an exhibition.

Handling.—The real hog man knows his hogs and they know him. Working with them gives a familiarity difficult to gain in any other way, but wich is important at a fair. This applies to hogs of all ages. Boars should have their tusks removed so as to make them safe to handle and for a protection to other hogs that may be shown. This can easily be done by putting a mouth rope around his upper jam, snubbing him up to a post and with pinchers break out the dangerous tusks.

Hauling Hogs.—Frequently the heaviest hogs are lost going to fair. Hauling should be done in the early morning when it is cool. As open racks as possible should be used and as little crowding resorted to as is absolutely necessary.

Keep Hogs Presentable.—The pens at the fairs should be carefully bedded and kept clean and airy. Nothing looks more filthy than a hog in a muddy pen. When not in use feed troughs should be set outside the pen out of the way of visitors as well as the attendant. The hogs should be brushed down and fed regularly so that they will present a neat appearance.

Showing Hogs.—Hogs are shown with the advertising view in mind. Visitors should be treated courteously, one cannot tell when a prospective buyer is talking, besides one owes it to the public to be a gentleman, and it pays. Many foolish questions are asked, but these should be overlooked and answered with the good questions. In the show ring, present the hogs in the best condition and dress, and show them to the best advantage. At this time one should tend to his showing and that alone. One is displaying his products and should do so to the best advantage possible. Unless attended to properly hogs can get into very awkward looking shapes at such times and is not desirable.

Making Entries for Showing.—One should go over the premium list carefully and make all entries where he possibly will show and then keep records of entries made. This will avoid much regret as well as confusion at time of showing. Exhibitors frequently lose prizes because of failure to make entry. The fault lies with the exhibitor.

Feeding Baby Beef.

This is a more specialized industry than the feeding of heavier cattle, because quick gains and a high finish are essential. The most successful feeders of baby beef demand calves of the very highest beef type and the best individuals obtainable.

To be a first class feeder a calf should never lose a day's growth but should be pushed from birth. The feeding and care of the cow is therefore an important detail of successful baby beef finishing. At weaning time such calves should weigh from 450 to 500 pounds and should be vigorous and well conditioned.

When taken away from their dams they should be put on grass or succulent food such as silage, and such ground grain as they have already learned to eat. Much pains should be taken to prevent the setback at weaning time.

Get the calves on heavy feed as soon as possible and crowd them all the time. Good corn silage is almost indispensable to the most profitable handling of baby beef. Feed heavily on silage during the earlier part of the feeding season and push the grain more and silage less during the finishing period.

Ground corn and oats in the proportion of about one to four makes an ideal grain ration in connection with corn silage and some dry roughage such as clover or alfalfa. Silage can be depended upon for the bulk of the roughage, but dry forage of some kind should be kept constantly before the calves.

If the calves are put in the feed pen about November 1 begin to feed a little cottonseed meal early in January. Feed this on the silage, beginning at the rate of one-half pound per head daily and gradually increase until by April 1 as much as three profitable results. Plenty of water and salt, and reasonably good shelter are, of course, essential. All beef pounds can be fed. Oil meal is a desirable feed, but too expensive for cattle should have better shelter when fed on silage than in the old-fashioned dry feeding.

Calves of the type described can be finished in this manner at the age of 16 to 18 months and put on the market weighing from 900 to 1000 pounds. They usually command fancy prices.

Profits from feeding baby beef, as in any other kind of cattle feeding, depend on too many factors to warrant a general statement. With prime beef at the high level of recent years, however, the feeder who has reasonably cheap feed and who buys right can scarcely fail to pay out on the venture. Profits depend principally upon the skill and shrewdness of the feeder.

Dairy calves do not make the most desirable baby beef, but this industry nevertheless affords a profitable way for disposing of the surplus calves in a dairy district. By careful management and constant crowding, dairy calves can be fed into acceptable and profitable baby beef. Local circumstances must largely determine whether they should be fed for baby beef or sold as veal.—Breeders' Gazette.

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The Worlds Greatest and Surest Veterinary Remedy

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Supersedes All Cautery or Firing. Invaluable as a CURE for

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We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made Every bottle sold is warranted to give satisfaction Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

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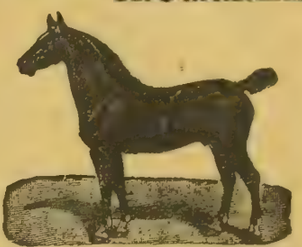
Always Reliable. Sure In Results.



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Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

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I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

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TORONTO, ONT. CLEVELAND, OHIO.

A Suggestive Dairy Record.

I have felt for a long time that there was a place on a great many farms for a small flock of sheep. I have kept a few for several years, and since January 1, 1910, have reported the receipts from them, thinking that it might possibly be of interest to some. January 1, 1910, I had 12 grade Oxford Down ewes, and in the two years from then to January 1, 1912, I sold the following: Sheep and lambs $146, wool sold $52, won in premiums at county fair $35, making a total of $233.

I had on hand January 1, 1912, 21 good young ewe sheep, not one of which was over three years old. From them I had May 1, 1912, 26 nice lambs, several of which weighed from 50 to 60 pounds alive. These sheep have never had extra care from what any farmer could give them. They run on pasture in the summer, pasture with 40 head of young cattle, a large part of the time in a large and get their own living from early in May until snow comes in November. In the winter they run in a dry barn cellar, and are fed out of doors on the snow every day that it does not storm.

The early morning feed and on stormy days they are fed in a rack in the cellar directly from the barn floor. They are given good mixed hay, with considerable clover in it. For the past two winters I have fed a very little grain each day in a long trough out of doors, generally corn on the cob and oats ground together. The lambs commence to come in February, and for a while the sheep are looked after a little more carefully. Grain is put where the lambs can get to it away from the sheep, and in a few days they will learn to eat it. They have it every day until they go out to pasture.

I have not received any fancy prices for anything. The wool has been sold at the market price, and the lambs have always been sold to the local butcher by the pound dressed weight. As they have been good ones, dressing about 50 pounds each, in July and August I have received 15 cents per pound. The best ewe lambs have been kept each year, and some of the older ewes have been sold for breeders to other farmers, and as a whole the returns have been quite satisfactory for the labor and expense involved.—E. C. Buzzell in Maine Farmer.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

ASPIRATION.

I sat one day beside the flowing river
And watched it as it glided on its way,
So smooth and placid in its onward motion
Avoiding all delay.

Within its bosom was a moving purpose,
A longing wish to reach the mighty sea
And all its strength it gave to that one object
But yet now noiselessly.

And I have learned that somewhere in the distance,
Beyond the mountain and the spreading lea,
Still moving in tha? calm majestic sweetness
The river found the sea.

Channing Gordon Lawrence.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

"David," making his lips thin, by pressing them together, "if I have an obstinate horse or dog to deal with, what do you think I do?"

"I don't know."

"I beat him."

I had answered in a kind of breathless whisper, but I felt, in my silence, that my breath was shorter now.

"I make him wince, and smart. I say to myself, I'll conquer that fellow; and if it were to cost him all the blood he had, I should do it. What is that upon your face?.'

"Dirt," I said.

He knew it was the mark of tears as well as I. But if he had asked the question twenty times, each time with twenty blows, I believe my baby heart would have burst before I would have told him so.

"You have a good deal of intelligence for a little fellow," he said, with a grave smile that belonged to him, "and you understand me very well, I see. Wash that face, sir, and come down with me."

He pointed to the washing-stand, which I had made out to be like Mrs. Gummidge, and motioned me with his head to obey him directly. I had little doubt then, and I have less doubt now, that he would have knocked me down without the least compunction, if I had hesitated.

"Clara, my dear," he said, when I had done his bidding, and he walked me into the parlor, with his hand still on my arm; "you will not be made uncomfortable any more, I hope We shall improve our youthful humours."

(God help me, I might have been made another creature perhaps, for life, by a kind word at that season. A word of encouragement and explanation, of pity for my childish ignorance, of welcome home, of reassurance to me that it was home, might have made me dutiful to him in my heart henceforth, instead of in my hypocritical outside, and might have made me respect instead of hate him. I thought my mother was sorry to see me standing in the room so scared and strange, and that, presently, when I stole to a chair, she followed me with her eyes more sorrowful still—missing perhaps, some freedom in my childish tread—but the word was not spoken, and the time for it was gone.

We dined alone, we three together. He seemed to be very fond of my mother—I am afraid I liked him none the better for that—and she was very fond of him. I gathered from what they said, that an elder sister of his was coming to stay with them, and that she was expected that evening. I am not certain whether I found out then or afterwards, that, without being actively concerned in any business, he had some share in, or some annual charge upon the profits of a wine-merchant's house in London, with which his family had been connected from his great grandfather's time, and in which his sister had a similar interest; but I may mention it in this place, whether or no.

After dinner, when we were sitting by the fire, and I was meditating an escape to Peggotty without having the hardihood to slip away, lest it should offend the master of the house, a coach drove up to the garden gate, and he went out to receive the visitor. My mother followed him. I was timidly following her, when she turned round at the parlor door, in the dusk, and taking me in her embrace as she had been used to do, whispered me to love my new father and be obedient to him. She did this hurriedly and secretly, as if it were wrong, but tenderly; and putting out her hand behind her, held mine in it, until we came near to where he was standing in the garden, where she let mine go, and drew hers through his arm.

It was Miss Murdstone who was arrived, and a gloomy-looking lady she was. Dark, like her brother, whom she greatly resembled in face and voice; and with very heavy eyebrows, nearly meeting over her large nose, as if, being disabled by the wrongs of her sex from wearing whiskers, she had carried them to that account. She brought with her two uncompromising, hard, black boxes, with her initials on the lids in hard brass nails. When she paid the coachman she took her money out of a hard steel purse, and she kept the purse in a very jail of a bag which hung upon her arm by a heavy chain, and shut up like a bite. I had never, at that time, seen such a metallic lady as Miss Murdstone was.

She was brought into the parlour with many tokens of welcome, and there formally recognized my mother as a new and near relation. Then she looked at me, and said:

"Is that your boy, sister-in-law?"

My mother acknowledged me.

"Generally speaking," said Miss Murdstone, "I don't like boys. How d'ye do, boy?"

Under these encouraging circumstances, I replied that I was very well, and that I hoped she was the same; with such an indifferent grace, that Miss Murdstone disposed of me in two words:

"Wants manner!"

Having uttered which with great distinctness, she begged the favour of being shown to her room, which became to me from that time forth a place of awe and dread, wherein the two black boxes were never seen open or known to be left unlocked, and where (for I peeped in once or twice when she was out) numerous little steel fetters and rivets, with which Miss Murdstone embellished herself when dressed, generally hung upon the looking glass in formidable array!

As well as I could make out, she had come for good, and had no intention of ever going again. She began to "help" my mother next morning, and was in and out of the store-closet all day, putting things to rights, and making havoc in the old arrangements. Almost the first remarkable thing I observed in Miss Murdstone was, her being constantly haunted by a suspicion that the servants had a man secreted somewhere on the premises. Under the influence of this delusion, she dived into the coal-cellar at the most untimely hours, and scarcely ever opened the door of a dark cupboard without clapping it to again, in the belief that she had got him.

Though there was nothing very airy about Miss Murdstone, she was a perfect Lark in point of getting up. She was up (and, as I believe to this hour, looking for that man) before anybody in the house was stirring. Peggotty gave it as her opinion that she even slept with one eye open; but I could not concur in this idea: for I tried it myself after hearing the suggestion thrown out, and found it couldn't be done.

On the very first morning after her arrival she was up and ringing her bell at cock-crow. When my mother came down to breakfast, and was going to make the tea, Miss Murdstone gave her a kind of peck on the cheek, which was her nearest approach to a kiss, and said:

"Now, Clara, my dear, I am come here, you know, to relieve you of all the trouble I can. You're much too pretty and thoughtless,"—my mother blushed but laughed, and seemed not to dislike this character—"to have any duties imposed upon you that can be undertaken by me. If you'll be so good as to give me your keys, my dear, I'll attend to this sort of thing in future."

From that time, Miss Murdstone kept the keys in her own little jail all day, and under her pillow all night, and my mother had no more to do with them than I had.

My mother did not suffer her authority to pass from her without a shadow of protest. One night when Miss Murdstone had been developing certain household plans to her brother, of which he signified his approbacry, and said she thought she might tion, my mother suddenly began to have been consulted.

"Clara!" said Mr. Murdstone sternly. "Clara! I wonder at you."

"Oh, it's very well to say you wonder, Edward!" cried my mother, "and it's very well for you to talk about firmness, but you wouldn't like it yourself."

Firmness, I may observe, was the grand quality on which both Mr. and Miss Murdstone took their stand. However I might have expressed my comprehension of it at that time, if I had been called upon, I nevertheless did clearly comprehend in my own way, that it was another name for tyranny; and for a certain gloom arrogant, devil's humour, that was in them both. The creed, as I should state now, was this. Mr. Murdstone was firm; nobody in this world was be be so firm as Mr. Murdstone; nobody else in this world was to be firm at all, for everybody was to be bent to his firmness. Miss Murdstone was an exception. She might be firm, but only by relationship, and in an inferior and tributary degree. My mother was another exception. She might be firm, and must be; but only in bearing the firmness, and firmly believing there was no other firmness upon earth.

"It's very hard," said my mother, "that in my own house—"

"My own house?" repeated Mr. Murdstone. "Clara!"

"Our own house, I mean," faltered my mother, evidently frightened—"I hope you must know what I mean, Edward—it's very hard that in your own house I may not have a word to say about domestic matters. I am sure I managed very well before we were married. There's evidence," said my mother sobbing: "ask Peggotty if I didn't do very well when I wasn't interfered with!"

"Edward," said Miss Murdstone, "let there be an end of this. I go tomorrow."

"Jane Murdstone," said her brother, "be silent. How dare you to insinuate that you don't know my character better than your words imply?'.

"I am sure," my poor mother went on, at a grevious disadvantage, and with many tears. "I don't want anybody to go. I should be very miserable and unhappy if anybody was to go. I don't ask much. I am not unreasonable. I only want to be consulted sometimes. I am very much obliged to anybody who assists me, and I only want to be consulted as a mere form, sometimes. I thought you were pleased, once, with my being a little inexperienced and girlish, Edward—I am sure you said so—but you seem to hate me for it now, you are so severe."

"Edward," said Miss Murdstone, again, "let there be an end to this. I go tomorrow."

"Jane Murdstone," thundered Mr. Murdstone. "Will you be silent? How dare you?"

Miss Murdstone made a jail-delivery of her pocket-handkerchief, and held it before her eyes.

"Clara he continued looking at my mother, "you surprise me! You astonish me! Yes, I had a satisfaction in the thought of marrying an inexperienced and artless person, and forming her character, and infusing into it some amount of the firmness and decision of which it stood in need. But when Jane Murdstone is kind enough to come to my assistance in this endeavor, and to assume, for my sake, a condition something like a housekeeper's, and when she meets with a base return—"

"Oh, pray, pray, Edward," cried my mother, "don't acduse me of my being ungrateful. I am sure I am not ungrateful. No one ever said I was before. I have many faults, but not that. Oh, don't my dear!"

"When Jane Murdstone meets, I say," he went on, after waiting until my mother was silent, "with a base return, that feeling of mine is chilled and altered."

"Don't, my love, say that!" implored my mother very piteously. "Oh, don't Edward! I can't bear to hear it. Whatever I am, I am affectionate. I know I am affectionate. I wouldn't say it, if I wasn't certain that I am. Ask Peggotty. I am sure she'll tell you I'm affectionate."

"There is no extent of mere weakness, Clara," said Mr. Murdstone in reply, "that can't have the least weight with me. You lose breath."

"Pray let us be friends," said my mother. "I can't live under coldness or unkindness. I am so sorry. I

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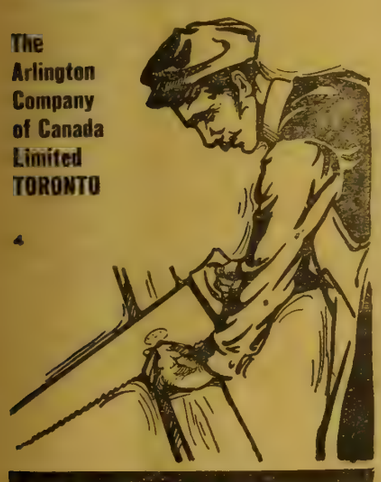

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have a great many defects, I know, and it's very good of you, Edward, with your strength of mind, to endeavor to correct them for me. Jane I don't object to anything. I should be quite broken-hearted if you thought of leaving—" My mother was too much overcome to go on.

"Jane Murdstone," said Mr. Murdstone to his sister, "any harsh words between us are, I hope, uncommon. It is not my fault that so unusual an occurance has taken place tonight. I was betrayed into it by another. Nor is it your fault. You were betrayed into it by another. Let us both try to forget it. And as this", he added, after these magnanimous words, "it is not a fit scene for the boy—David, go to bed!"

I could hardly find the door, through the tears that stood in my eyes. I was so sorry for my mother's distress; but I groped my way out, and groped my way up to my room in the dark, without even having the heart to say good night to Peggotty, or to get a candle from her. When her coming up to look for me, an hour or so afterwards, awoke me, she said that my mother had gone to bed poorly, and that Mr. and Miss Murdstone were sitting alone.

Going down next morning rather earlier than usual, I paused outside the parlor door, on hearing my mother's voice. She was very earnestly and humbly entreating Miss Murdstone's pardon, which that lady granted, and a perfect reconciliation took place. I never knew my mother afterwards to give an opinion on any matter, without first appealing to Miss Murdstone, or without having first ascertained by som(sure means, what Miss Murdstone's opinion was; and I never saw Miss Murdstone, when out of temper (she was infirm that way), move her hand towards her bag as if she were going to take out the keys and offer to resign them to my mother, without seeing that my mother was in a terrible fright.

The gloomy taint that was in the Murdstone blood, darkened the Murdstone religion, which was austere and wrathful. I have thought, since, that its assuming that character was a necessary consequence of Mr. Murdstone's firmness, which wouldn't allow him to let anybody off from the utmost weight of the severest penelties he could find any excuse for. Be this as it may, I well remember the tremendous visages with which we used to go to church, and the changed air of the place. Again the dreaded Sunday comes round, and I file into the old pew first, like a guarded captive brought to a condemmed service. Again, Miss Murdstone, in a black velvet gown, that looks as if it had been made out of a pall, follows close upon me; then my mother; then her husband. There is no Peggotty now, as in the old time.

I listen to Miss Murdstone rumbling the responses, and emphasising all the dread words with a cruel relish. Again, I see her dark eyes roll round the church when she says "miserable sinners", as if she were calling all the congregation names. Again, I catch rare glimpses of my mother, moving her lips timidly between the two, with one of them muttering at each ear like low thunder. Again, I wonder with a sudden fear whether it is likely that our good old clergyman can be wrong, and Mr. and Miss Murdstone right, and that all the angels in heaven can be destroying angels. Again, if I move a finger or relax a muscle of my face, Miss Murdstone pokes me with her prayer-book, and makes my side ache.

Yes, and again, as we walk home, I note some neighbors looking at my mother and at me, and whispering. Again, as the three go on arm-in-arm and I linger behind alone, I follow some of those looks, and wonder if my mother's step be really not so light as I have seen it, and if the gaiety of her beauty be really almost worried away. Again, I wonder whether any of the neighbors call to mind, as I do, how we used to walk home together she and I; and I wonder stupidly about that, and all the dreary, dismal day.

There had been some talk of my going to boarding school....Mr. and Miss murdstone had originated it, and my mother had of course agreed with them. Nothing, however, was concluded on the subject yet. In the meantime I learnt lessons at home.

Shall I ever forget those lessons! They were presided over normally by my mother, but really by Mr. Murdstone and his sister, who were always present, and found them a favorable occasion for giving my mother lessons in that miscalled firmness, which was the bane of both our lives. I believe I was kept at home for that purpose. I had been apt enough to learn, and willing enough when my mother and I had lived alone together. I can faintly remember learning the alphabet at her knee. To this day, when I look upon the fat black letters in the primer, the puzzling novelty of their shapes, and the easy good-nature of O and Q and S, seem to present themselves again before me as they used to do. But they recall no feeling of disgust or reluctance. On the contrary, I seemed to have walked along a path of flowers as far as the crocodile-book and to have been cheered by the gentleness of my mother's voice and manner all the way. But these solemn lessons which succeeded those, I remember as the death-blow at my peace, and a grievous daily drudgery and misery. They were very long, very numerous, very hard—perfectly unintelligible, some of them, to me—and I was generally as much bewildered by them as I believe my poor mother was herself.

(Continued in next issue.)

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Flour and Breadmaking.

(Continued from last issue)

PASTRY.

The soft flours are generally used for making pastry, and are, consequently, called pastry flour. It does not follow, however, that good pastry cannot be made from the stronger flours. In fact, experiments made in Macdonald Institute have clearly shown that it is possible; but more shortening must be used to get results obtainable from the softer winter wheat flour. The greater gluten content, expansive powers, and good colour of the stronger flours are not necessary requisites for pastry purpose; and, consequently, it would not appear to be good practice to purchase these more expensive flours and then use larger quantities of shortening in order to obtain the same results that may be secured by the use of the cheaper flours and less shortening. Practically the matter resolves itself into one of cost.

SHORT PASTRY.

1 lb. flour.
½ lb. shortening.
Ice-cold water.

The shortening may be a mixture of butter and sweet lard or sweet dripping.

If the fingers are cool, the shortening may be rubbed into the flour; otherwise, it should be cut into it with two knives until thoroughly mixed with the flour.

Mix into a dough with the ice water, using only enough to hold it together. It should be so dry that it will not stick to the bowl anywhere.

Turn out on the floured board, and knead only enough to make the ball smooth, when it is ready to cut into pieces for rolling out to line pie-plates, etc.

The quantity of shortening may be lessened for a plainer pastry.

FLAKY PASTRY.

1 lb. flour.
½ to ¾ cup butter.
Ice-cold water.

Rub two ounces of the butter into the flour. Cut the remainder into half-inch dice, and stir through the flour. Mix the water in with a broad-bladed knife, using only enough to hold the flour and butter together in shreds. If the quantity is difficult mix without cutting through the butter lumps, flour the board, lift out the part that mixes first, and proceed to mix the rest. The object is to avoid any further breaking of the butter lumps. Turn the mixture out on the board in a pile, pack it together with the hands, and roll out into a sheet. Use a broad-bladed knife, and fold it into three or four layers, tucking in all the loose shreds about the edges. Be sure it is not sticking to the board, turn it around, and roll Fold in half and set away to chill, out again. Fold and roll out again. if necessary, before rolling out to line pie-plates, etc.

This requires a hot oven at first to puff it, but a cooler one to complete the baking.

PUFF PASTRY.

½ lb. flour.
½ lb. butter.
Ice-cold water.

Wash the butter, form it into a flat round cake, and put it away to chill. Make the flour into a stiff dough with ice water, and knead until perfectly smooth. It should be firm enough to roll out without much contraction, but should not be dry. Roll into two pieces a trifle larger than the butter pat; place the butter on one, moisten the edge, place the other on top, and press the edges together. Put aside to chill. Roll it out in one direction only, until about three inches as long as board, fold into three or four layers, turn around and roll again in the other direction, then set aside to chill. Roll and chill twice more in the same way, but fold it in half the last time. It is then ready to roll out and cut into shape for baking.

The oven for baking should be rather hot at first, then cooler, to permit of baking the pastry thoroughly without burning. One-quarter of the butter may be replaced with lard.

The cook books indicate many different ways of making puff pastry, and all of them are good in skilful hands. Skill is attained only through practice and the judgment of experience.

It would seem important to exercise care, as follows:

1. To make the dough of just the right consistency.
2. To prevent any softening of the butter during the rolling operations. If the maker can work in a temperature just above freezing, no special chilling is necessary.
3. To roll lightly, but evenly, to avoid crushing layers together.
4. To regulate the oven carefully to secure the strong heat necessary to puffing the layers and yet avoid burning.

COMPOSITION OF BREAD MADE FROM DIFFERENT KINDS OF FLOUR.

It has been pointed out that many changes take place during the process of breadmaking; but while these changes affect the composition of the various groups of materials, as the proteids and carbohydrates, they do not materially alter their proportion to one another. The increased percentage of water in the bread naturally decreases the percentage of other constituents from what they were in the flour. The following table gives the average results of a number of analyses of bread made from different grades and different kinds of flour. All the breads analyzed, with the exception of that marked baker's bread, were made in our own flour-testing laboratory.

COMPOSITION OF BREAD.

Kinds of Flour	Moisture	Protein	Fat	Ash	Soluble Carbohydrates
Patent	36.80	7.60	1.80	1.25	52.53
Bakers' Grade	36.84	7.82	1.71	1.32	52.20
Standard patent 85 per cent.	37.40	7.74	1.71	1.27	51.88
Bakers' Bread	38.02	8.23	.43	1.13	51.63
Home-made Spring wheat	37.24	9.28	1.54	.92	51.04
Home-made Winter wheat	33.31	6.17	2.54	1.06	56.91

The strong flours always absorb the most water, consequently a greater weight of bread can be made from them than from the softer and weaker flours. Notice the low moisture content of the home-made bread from soft winter wheat, as compared with the same kind of bread made from spring wheat. With very low grade flour of the red dog type the water absorptive power is greater than it is in the better flours, but the loaf of bread produced is not marketable.

Some of the bakers' bread and the home-made bread from spring wheat were made with flour from wheat grown in the season of 1909. This accounts for the high percentage of proteids, as the wheat of the 1908 crop was much lower in this constituent. Incidentally, it may be mentioned that because of this increased proteid content and, consequently, gluten content, the flour from this year's crop of wheat is very much superior to that of last year. Naturally, the bread from the soft winter wheat is low in proteid, as the flour and wheat it is made from are low in this constituent.

The low fat content of the baker's bread is due to the fact that no lard or other fat materials were added to this bread. In all other cases some lard was used. The home-made bread from the winter wheat flour evidently contains the most fat, but this cannot be credited to the flour. It is due to larger amounts of lard being added in the process of making the bread. The high soluble carbohydrate, or starch content of the bread from winter wheat flour is naturally due to the comparatively low percentage amounts of protein and water.

It is evident that there is not much difference in the composition of the ordinary bread made from the higher grades of the spring wheat flours, but there is considerable difference when we compare this bread with that made from the winter wheat flour. We are frequently asked which of these breads actually furnishes the most nourishment to the body. To answer this question we made bread from four kinds of flour and analyzed it. The flours used in the work were the patent and bakers' grades, from Manitoba spring wheat, an 85 per cent. or standard patent, from the same grade of wheat, and 85 per cent. from all Ontario soft winter wheat. The bread was made in the regular way in our flour-testing laboratory—in fact, the loaves were taken from some of the regular testing work. In this work we used twelve ounces of flour for a loaf, and each lot of flour received exactly the same amount of yeast, salt, etc., and all the water it would absorb. The bread was weighed, dried, and the whole mass ground to an impalpable powder and analyzed. The average results of a number of analyses are given in the following table. As the actual size of the loaves, their colour, texture, etc., do not enter into the problem, these data have been omitted. It may be stated, however, that the bread was all of good quality. Naturally, the loaves from the Ontario flour were not so large, but the bread was a fair sample of that got from these flours.

PERCENTAGE COMPOSITION OF THE BREAD

	Av. wt. of loaf *grams	Water	Protein	Fat	Carbohydrates	Ash
Patent	502	36.48	7.92	1.76	53.42	1.05
Bakers'	506	36.75	7.39	1.71	52.81	1.32
85% Manitoba	501	36.10	7.93	1.73	52.92	1.33
85% Ontario	468	32.90	5.74	1.63	58.58	1.15

*28.34 grains in 1 ounce.

It will be seen from the above table that the various spring wheat flours produced about an equal weight of bread which was very similar in composition, while the Ontario winter wheat flour gave less bread with a lower water, protein, and fat content, and a considerably greater amount of carbohydrates. This is as expected, as the soft flour is starchy and poor in protein.

In order that we may make a closer comparison of the amounts of the various food constituents furnished by each 12 ounces of flour, the weights

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of protein, fat and carbohydrates contained in each loaf were calculated and are given in the following table. The fuel, or calorimeter value of each loaf was also calculated and is given in the last column of the table.

WEIGHT IN GRAMS OF FOOD CONSTITUENTS AND FUEL VALUE OF EACH LOAF OF BREAD

	Protein	Fat	Carbo-hydrates	Ash	Fuel valve
Patent	36.60	8.84	268.17	5.27	1399.
Bakers'	37.39	3.65	267.22	6.68	1382.
85% Manitoba	39.73	8.67	265.13	6.66	1388.
85% Ontario	26.91	7.63	274.15	5.38	1351.

It is generally assumed that, provided any given food is consumed as part of a well-balanced dietary, the number of calories of heat it will produce when burned, or, in other words, its fuel value, is the best basis for making a comparison of the nutritive value. Taking this as the basis, we have the figures given in the last column.

It will thus be seen that the soft wheat flour gave bread that contained approximately one-third less protein, or flesh-forming material, a little less fat, but more carbohydrates, and that it would furnish only 3.5 per cent. less energy than the bread from the spring wheat flour. From these figures we must conclude that, when eaten in the usual way as part of a mixed diet, bread from the soft wheat flour is practically equal in nutritive value to that obtained from the hard spring wheats.

(Continued in next issue)

In the Sewing Room.

Every woman should have a shirt waist pattern that has been fitted to her and is perfect. It is well to make this of cloth as it will see much service, not only for blouses, but for (orset covers, chemises and night dresses.

This pattern should indicate just how the sleeve is to be set in, just where the waistline comes and should have written on it the neck measure, the measure of the top of the collar, the waist measure, and the length of the sleeve. With a pattern of this kind it is often possible to make a waist without trying on at all.

Every woman who does much sewing should have a form. If several are to use the form make for each person a tight fitted lining of drilling (so it will not stretch) and get one of the inflated forms. If only one is to use the form a stock form can be used and the fitted lining padded where necessary. This is cheaper. The form is a great help in many ways.

The well dressed, well bred girl is never conspicuous and her clothes never attract undue attention on the street.

Floors and Floor Coverings.

Housekeepers are very generally falling into line and adopting rugs in place of carpets, for sanitary as well as aesthetic considerations. Even when floors are old, if they are not too uneven, they can be put into satisfactory condition to use with rugs. There are various brands of crack fillers, which can be applied to all cracks and holes so deftly that a hardly noticeable unevenness is left. After the filler has been applied, two and even three coats of paint are put on, allowing each coat to dry thoroughly before the next is applied. Housekeepers who have tried darker colors say that in painting the floor the color would be kept light, so not show readily.

that footprints and heel marks will

In the course of reading prepared for the farm home by the supervisor of the department of the College of Agriculture at Cornell, it is suggested that when an old floor is found to be badly warped, unepen, and with wide cracks, it is better to cover it with matting until a new floor can be afforded to take its place.

"Japanese straw matting in the natural buff color laid over a paper lining is excellent for this purpose. It is finely woven, inexpensive, smooth in surface, and easy to care for. A carpet sweeper or a soft cloth on a broom keeps it in good condition; but of course, like carpet, this must be taken up occasionally, as some dirt sifts through. Matting should be sewed together and the reversible kind should be used. Chinese mattings that are cheaper, but less durable, are not so artistic in effect. Many persons onject to the odor of straw matting on damp days. There seems to be no remedy for this. Perhaps we are over nice, for a hayfield or wet sod we call fragrant. The odor is clean and temporary; sun, air or an open fire will remove it.

The Cellar.

The cellar is generally a place for everything, where nothing is in its place. There is many ao old country house cellar that could be profitably overhauled and turned ibto a useful place of storage, and some, if enough, could be turned into workshops with a little outlay. Cellars should be well ventilated to prevent damp, and a window, if possible put in to dispel the gloom, or, in any case, several large gratings are necessary for the sweet air to circulate freely. If it can be afforded, a concrete floor should take the place of the wooden one, if there be such, or none at all as is often the case. Walls should be scraped and white washed, or limewashed, the windows cleaned and any woodwork hereabouts could with advantage be painted a light color, and thus add still more light. The coal cellar should not be used for the storage of rubbish or turned into an ash pit. Care should be bestowed on the wood cellar that no paper be allowed to gather there.—G. A. C.

Household Hints.

To Remove Wagon Grease From Cloth.—Rub with lard or unsalted butter, then after filteen minutes wash out thoroughly with hot water and soap.

To remove machine oil from cloth apply cold water and soda and spots will disappear.

To Remove Grease Spots From Silk —Place a piece of blotting paper under the spot on the silk. Scrape French chalk over it; lay a piece of thin paper over the chalk; press with a warm iron and the grease spot will disappear.

Keep the Cellar Clean.—Look after the cellar these days, and do not allow rotting fruit or vegetables, mould or mildew, to pollute the atmosphere. If the cellar is dark and damp and poorly ventilated, fruits and vegetables will decompose rapidly. Boxes of unslaked lime set about in dark corners or damp places will absorb moisture and sweeten the air.

Iodine Stains.—Iodine stains can be removed either from the skin or linen by the use of common household ammonia.

Spring Rain Good for Pillows.—For the heavy, lifeless pillows, hang them on the clothes line during a heavy shower of spring rain, leave on the line, and turn the feathers seperal times by working with the hands and when dry they will have new life. They should be allowed to get thoroughly wet through, and thoroughly dried.

Scorch and Mildew.—When pressing a colored dress and you have the misfortune to scorch it, take a silver coin, lay it flat on the scorched part and rub it briskly, and you will find the scorch disappear.

To remove mildew, wet the goods, rub common brown soap on the spot and scrape white chalk on it. Brush off the chalk when dry.

To Mend Hot Water Bags.—Apply several coats of liquid courtplaster to the holes, allowing each coat to dry before adding the next. The result will be waterproof and not affected by hot water.

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This RACCOON COAT is made from selected skins with high storm collar, quilted lining, leather arm shields. Sizes 38 to 46 inches chest and 52 inches long. The workmanship is of superior order throughout. REMEMBER! There is no mistake about the value--it is a genuine $90.00 garment for $59.50 and we pay the express charges.

$200.00 IN GOLD GIVEN AWAY FREE

LPAPE	NREOCA	UPML	ATSWRYREBR
CPAHE	RCYREH	YBRAPRSRE	ERPA

Can you arrange the above sets of jumbled letters into the names of eight well known fruits. If so, YOU CAN SHARE IN THE DISTRIBUTION OF THE ABOVE PRIZE. It is no easy task. But by patience and perseverence you can probably make out 5 or 6 of them. To the person who can make out the second largest number we will give the sum of One Hundred Dollars. To the person making out the second largest number the sum of Fifty Dollars. To the person making the third largest number the sum of Thirty Dollars. To the person making the fourth largest number the sum of Twenty Dollars. Should two persons send answers equally correct, the first two prizes will be divided between them, (each receiving $75.00) Should three send in equally correct answers, the first three prizes will have to be divided, (each receiving $60.00). Should four persons send equally correct answers, the whole sum of $200.00 will be equally divided (each receiving $50.00), and so on in like proportions, provided they comply with a simple condition about which we will write as soon as answers are received. WE DO NOT WANT A CENT OF YOUR MONEY WHEN YOU ANSWER THIS ADVERTISEMENT. If you can't make out anything like a complete list, write us at once enclosing 2cent stamp for our reply. DO NOT DELAY, WRITE AT ONCE. Address, CANADIAN MEDECINE CO., Dept. 81 MONTREAL, QUE.

House Helps.

Ink Stains—Hot tartaric acid will take ink stains out of white cloth.

To Make Ferns Grow—To make ferns have a luxuriant growth feed occasionally with five drops of castor oil.

Keeping Children's Feet Warm—Put into the rubber a piece of batten enclosed in cheese cloth. This will keep the feet warm in winter.

For Biliousness—If a member of the family is suffering from sickness of the stomach try the white of an egg slightly beaten. It acts like a charm.

To Clean Silverware—To clean silverware let the pieces to be cleaned stand in buttermilk over night. Then in the morning wash with hot water and soap.

For Those Who Cannot Sleep—For a sick person who finds it difficult to go to sleep, try a pillow made of dried sage leaves. This is excellent to give one a drowsy soothing feeling

To Keep Paint Fresh—If a tin of paint has to be left open stir it thoroughly in order to mix all the oil then fill up with cold water. When the paint is needed pour off water and paint will be found as fresh as when opened.

TO LOOSEN A CAKE—When a cake sticks to the pan wring a cloth or folded towel in hot water, lay flat and place the cake pan on this for a few minutes. This forms a steam and causes to come out perfectly.

A Refreshing Odor For Invalids—Sprinkle a spoonful of ground coffee upon a fire-shovel upon which two or three live coals have been placed and immediately a sick room will be filled with a fileasant odor which is very refreshing to an invalid.

Sewing in Sleeves—When sewing sleeves in a waist this is a good rule to take for a guide. Measure back from shoulder seam one inch; crease the armhole at this point, and the spot exact,y opposite will be the place to put the under-arm seam of the sleeve.

To Clean Silk—Grated potato and soft water clean silk better than any other preparation. Use a large potato for a quart of water, and make a day or two before using. Use only the clear part of the water and let the silk be just dipped in and out, and then hung to dry.

Using Old Flour Bags—The 100-pound and 50-pound flour bags that one buys from the mills can be used for a variety of purposes. Wash them well, then boil in strong soda water to remove the lettering. They can then be used for pinafores, pillow covers, tea-cloths, etc., either as they are, white, or dyed according to taste.

To Restore Roses—Place roses in a large basin of water and hold each stem under water while the end is snipped off with a pair of sharp scissors. Keeping the stem under water excludes the air and the flower absorbs the water and begins to revive at once. Leave the flowers in the basin a short time and they will be as fresh as when gathered.

To Wash Woolen Goods—Take enough good soap to make a strong suds, cut it fine into enough water to cover the goods. Bring it to boiling heat, put aside to cool. Then immerse goods, leaving them for 24 hours. Then squeeze but do not wring out. Rinse in two or more cold waters, squeeze as dry as possible. Place in a plate to dry over register or in a cool oven.

Correct Sauces For Meals—With roast beef, grated horse-radish; roast veal, tomato or horse-radish; roast mutton, red currant jelly; roast pork, apple sauce; roast lamb, mint sauce; roast turkey, chesnut dressing and cranberry jelly; roast venison, black currant jelly; roast duck and roast goose, apple sauce; roast fowl, bread sauce; veal sausage, tomato sauce or grated parmesan cheese; boiled rabbit, onion sauce or black currant jelly.

To Prevent Icing From Running—Before putting icing on a cake wet it slightly with cold water. This will prevent the icing from running if it be a little soft. Then to prevent the icing from running down the sides, double a piece of stiff waxed paper and pin it to the cake closely, letting the band come about half an inch above the top of the cake. Do not remove the paper until the icing is set.

Mending Hot Water Bottles—Rubber hot-water bottles may be mended as follows: Cut one cubic inch of clear para rubber into small pieces and place in one pint of benzine, cover tightly, and leave two or three days or until the liquid is about as thick as honey. Apply this cement to the surface of the bag and the patch, which should also be of rubber. Join the two, press down evenly, and in a very few minates the mend will be perfectly complete.

The boy's appetite is often the source of amazement. If you would have such an appetite take Chamberlain's Tablets. They do not only create a healthy appetite, but strengthen the stomach and enable it to do its work naturally. For sale by all dealers.

Dish Washing.

Necessary utensils for dishwashing consist of dishpan, draining pan, dish cloth, clean dry dish towels, boiling water and soap.

Before clearing the dining table, prepare a place in the kitchen for the soiled dishes. All pots and pans should have been put to soak as soon as the contents were emptied. These should be scraped and piled and placed by themselves ready for washing.

Gather up the soiled dishes in a methodical manner; glasses by themselves, then silverware, cups, saucers and plates uniform in size in separate piles, scraping the bits of food and grease from the dishes before putting them in the dish water.

Fill the dishpan half full of hot soapy dish water. Have the draining pan at the left of the dish pan. Wash the glasses first, rinse, dry and set aside. Use soft towels for wiping and see that the glass ware is shining when put away. Wash, rinse and dry the silver in the same way. Be sure to use perfectly dry towels for the silver. Next the smaller pieces of china, then the larger pieces are washed and placed in the draining pan. Pour hot water over these and a little polishing with a dry towel will be all that is necessary.

Wash pots and pans and scald well before wiping. If steel knives are used they should be scoured.

Put away all dishes.

Empty the dish pan, put the rinsing water in it and use to scrub the clean table and sink. Wash, scald and dry the tea and coffee pot after each meal.

Usually after the midday meal the dish cloth should be washed in good soapy water, wrung out dry and hung to dry in the sunlight and fresh air if possible.

Clean the stove and teakettles. Wipe the teakettle off after each meal and very frequently wash it inside.

Empty the garbage pail and clean pail with the remaining suds.

The dish water should be kept hot and soapy enough to prevent a ring of grease on the pan. If the rinsing water is good and hot, fewer towels will be needed.

Kitchen Travels.

A convenient arrangement of the kitchen can be made to reduce the work considerably. Mrs. John A. Widtsoe, of the Utah Agricu,tura, College, has done some figuring on this. She estimated the distance that had to be traveled in a year in getting the meals in a house that she moved into to be 125 miles. Later she had a kitchen which was arranged after her own plan, and in getting the same number of meals in this for a year the distance traveled was reduced to 57 miles. This is certainly quite an item and deserves a good deal of study. The distances that need to be considered are those from stove to dining table, from stove to sink, from dish-cupboard to dining table, from sink to dining table, from work table and pantry to stove, from dish cupboard to stove and dining table. If this is given careful attention it will be found that without very much re-arrangement these distances can be cut down a great deal.

--I consider it almost criminal not to have a high stool in the kitchen," is the statement made by Mrs. Reno in The Farmer, and she continues, "And remember after you have it, use it all you can. Sit down to wash dishes, prepare vegetables, iron, churn, etc., as you will have to be on your feet enough anyway." The farmer has seats on all his machinery. He will do scarcely any work standing up. If he has an implement, as

FREE TO MEN

You Yourself Can Restore Your Vitality

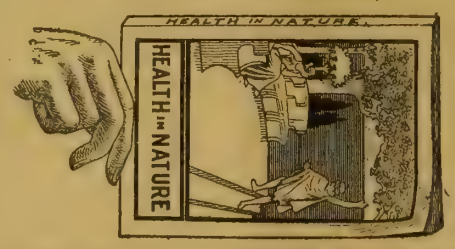
VITALITY is the greatest power in the world. If I renew your VITAL VIGOR I restore you to full and complete manhood. No matter what your age, whether you are young or elderly, no matter what early indiscretion may have sapped your courage. If I resupply you with new VITALITY I give you the strength that all healthy, vigorous men possess. I know the source of this VITAL SUPPLY. My HEALTH BELT, with suspensory attachment, pours a great stream of VITALITY into your system hour after hour all night while you sleep. Thousands have said it immediately benefits and takes the pain and weakness out of the back from one night's use. No drugs, no medicines, no restrictions of any sort excepting that all dissipation must cease. The man who indulges an excesses and unnatural practices can never be other than a weakling, but if you promise me as man to man that you will be decent, take ordinary care of your health and then use my HEATH BELT every night for 60 to 90 days, I should then be able to do in your case exactly what all these other thousands of men have said I did for them. Please write for my booklet to-day. Never mind about purchasing a Health Belt now; first get into communication with me, read what my book says, then later, if we decide between us that you should have a Belt and if you decide that you want to use it, I will arrange for you to have one to wear until you are cured. My Health Belt is the greatest vitalizer the world has ever known. With special attachments it is a remedy for kidney, liver, stomach, bladder disorders, rheumatism. etc.

Let Me Send You THIS BOOK Free

Fill in the coupon; let me send you at once my free booklet in plain sealed envelope; it is profusely illustrated with half-tone photos; keep it in your pocket for easy reference; read the chapter on Vitality; read the chapter on Debility; read the chapter on those subjects which interest every man. young or old, who would be strong in manly vigour. It is a word of hope, a carefully written, interesting booklet which should be in every one's possession. Therefore, send to-day. If in or near the city, call at my office. Hours 9 to 6

DR. M. F. SANDEN CO., 140 Yonge St., Toronto, Ont.

Dear Sirs :—Please forward me your book, as advertised, free.



NAME .....

ADDRESS .....

a harrow, which does not have a seat he does not hesitate to spend ten or fifteen dollars to buy a truck which has a seat on it and attach to the harrow so that he can do the work and ride. If the farmer's wife gave as much attention to reducing her work and making it easier as the farmer does it would help a great deal.

Sleep of Health.

A very famous doctor summarizes the secret of longevity in the following nineteen rules:—

1. Eight hours sleep.
2. Sleep on the right side.
3. Keep the bedroom window open all night.
4. Have a mat to the bedroom door.
6. No cold tub in the morning, but a bath at the temperature of the body.
7. Exercise before breakfast.
8. Eat little meat, and see that it is well cooked.
9. (For adults) Drink no milk.
10. Eat plenty of fat, to feed the cells which destroy disease germs.
11. Avoid intoxicants, which destroy those cells.
12. Daily exercise in the open air.
13. Allow no pet animals in living rooms—they are apt to carry about disease germs.
14. Live in the country if possible.
15. Watch the three D's—drinking water, damp and drains.
16. Change of occupation.
17. Take frequent and short holidays.
18. Limit your ambitions, and
19. Keep your temper.

Cure for Choking.

"Raising the left arm as high as you can will relieve choking much more rapidly than being thumped on the back," said one of the resident physicians of a local hospital. "This should be more generally known, for often a person gets choked while eating when there is no one near to thump him or her. Very frequently at meals and when they are at play children get choked while eating, and the customary manner of relieving them is to slap them sharply on the back. The effect of this is to set the obstruction free, so that it can be swallowed. The same thing can be brought about by raising the left hand of the child as high as possible, and the relief comes much more rapidly. In happenings of this kind there should be no alarm, for if a child sees that older persons or parents get excited it is very liable to become so, also. The best thing is to tell the child to raise its left arm, and immediately the obstruction passes down the throat."—Philadelphia Record.

ONE CENT A WORD

FOR SALE—Registered Holsteins. 1 bull four years old; 2 bull calves dropped in April, 1 bull calf dropped in October, all good stock. W. GARFIELD CAMPBELL, Salisbury, N. B.

FOR SALE—Oxford Dawn ram lambs and ewes of all ages, choice stock, prices reasonable. R. G. McLEOD & SONS, Lansdowne Station, Pictou Co., N. S.

FOR SALE—Six pure bred Yorkshire sows, one and one-half years. Also one boar three months. BOYD A. WETMORE, Bloomfield Station, N. B.

100 CHRISTMAS AND NEW YEAR'S POST CARDS 50c
FOLDERS AND BOOKLETS, SEALS TAGS, LABEL, ENCLOSURE CARDS

Works of art beautifully printed in most handsome colors and gold embossed. This BIG 100 piece Christmas Set is the greatest value ever offered for only 50c. Agents can double their money selling these sets to their friends. With every order we send a handsome

24 PAGE POST CARD ALBUM FREE

The actual value of these goods is $1.25 if bought in a store. The Booklets alone sell for 50c. We send EVERYTHING mentioned all POSTPAID to any address for 50c. We will include premium list. Money returned if not delighted. Order now. Address

International Emporium, Beebe, Que.

Well Known Separator Men Leave Sharples for Empire.

On October 31st, last, a considerable number of well known officers and employees of the Sharples Separator Company left the employ of that concern and joined the EMPIRE CREAM SEPARALOR COMPANY of Bloomfield, N. J. Almost without exception the individual membert of this body of men, trained in the cream separator business, now occupy with the EMPIRE concern the same position formerly held with the Sharples Company.

The following gentlemen, widely known to farmers, dairymen and local dealers throughout the country, are among those who made the change.

J. H. Colville, General Manager; C E. Stowell, Manager of the Chicago Office; J. B. Decker, Credit Manager of the Chicago Office; N. N. Spear, Advertising Manager; L. N. Somes, Manager of the Dallas, Texas Office; E. H. Fralick, Manager of the Portland, Ore. Office; Z. L. Wright, Southern Sales Manager; F. W. Knight, Eastern Trade Manager; H. E. McWhinney, Assistant Manager of the Chicago Office and Sales Manager for Kansas, Neb., Col., and Wyoming; Geo. P. Buttel, Sales Manager for Minnesota, Montana, North and South Dakota; E. S. VanNorwick, Sales Manager for Iowa and Wisconsin; H. L. Smith, Sales Manager for Indiana and Michigan; E. M. Zentmeyer, Sales Manager for Illinois and Missouri.

A number of traveling men and change. Those who have made the other employees have also made the change state that they had excellent reasons for so doing and that their expectations, based on their new association with the EMPIRE CREAM SEPARATOR COMPANY, have already been more than realized.

Implement Firms Change Hands.

An announcement of considerable interest to farmers and gardeners, as well as implement dealers, in the United States and Canada, is that which has been recently made of the purchase, by the well known American firm of Bateman Mfg. Co., makers of the famous "IRON AGE" implements, of the Wilkinson Plough Co., Limited, and the Toronto Pressed Steel Co., both of Toronto, Canada.

The two latter companies are well and favorably known throughout the Dominion for their line of ploughs of all sorts, ensilage and straw cutters, pressed steel pan and wheel scrapers, land rollers, wheel barrows, drag harrows, beet pullers, etc., which they have been manufacturing for some time.

The Bateman Mfg. Co., established seventy-seven years at Grenloch, New Jersey, U. S. A., also makes a widely popular line of garden and farm tools, potato diggers, hand ploughs, harrows, pumps, spraying outfits, etc., sold under the trade name "IRON AGE."

The Wilkinson Plough Co. and the Toronto Pressed Steel Co. will continue to make their goods in their original plants under the new organization, which is to be known as the BATEMAN-WILKINSON COMPANY, LIMITED, with headquarters at Toronto, Canada. In addition to their manufacture of "IRON AGE" impleformer lines, they will begin the ments. These latter will be distributed rapidly to the growing trade throughout Canada—a demand that has increased through the satisfactory service rendered by the "IRON AGE" farm machinery.

Dealers and customers may secure full information regarding the "IRON AGE" line by writing for booklets and descriptive literature to the Bateman Mfg. Co., Grenloch, N. J., U. S. A.

WILL GIVE $500 TO SICK READERS OF MARITIME FARMER

Famous Scientist Who Originated the Now Wonderful "Home Treatment" Offers $1.00 Package Free to Sick and Ailing.

In order that every reader of Maritime Farmer who may not have heard of this wonderful "Home Treatment" may have an opportunity to test this celebrated medicine, the now famous scientist, Dr. James W. Kidd, offers to give absolutely free a full size $1.00 package to five hundred readers of this paper, to prove the wonderful claims which have been made for it. In making this offer the scientist said: "I know that there are many people who have been suffering for years with some chronic disease and many of them have spent large sums of money seeking a cure. I know that these people hesitate about investing money in medicine because they have despaired of ever getting well. Thousands have told me that story and many thousands of the same people have told me afterwards that my treatment had cured them after doctors and everything else had failed. I want to prove to a limited number—no matter what the disease, no matter how long they may have suffered no matter how blue and discouraged—that my treatment really and actually does accomplish the wonderful results that have been reported."

People who suffer from Rheumatism, Kidney Trouble, Stomach Trouble, Liver or Bowel Disorders, Catarrh, Bronchitis, Asthma, Chronic Coughs, Weak Lungs, Lumbago, Piles, Urinary Disorders, Female Weaknesses of any kind, the weak, worn out, broken-down and despondent will be delighted at the effect of a few doses. This wonderful treatment creates a fine appetite and helps the digestive organs to carry on their functions as they should. It strengthens the kidneys, too, and drives rheumatism poisons from the blood as if by magic. That is why people who try it become so enthusiastic.

Any reader of Maritime Farmer who will try this extraordinary medicine that has created so much excitement by its cures can obtain absolutely free a full $1.00 treatment by simply filling in the coupon below or writing a letter describing their case in their own words, if they prefer, and mailing it today to James W. Kidd, Toronto, Canada. No money need be sent and no charge of any kind will be made.

As this offer is limited, you should write at once, in order to be sure to receive your free treatment.

Coupon CB-260 For Free Dollar Treatment

Dr. Jas. W. Kidd, Toronto, Canada.

Please send me a Full $1.00 Course of Treatment for my case **free and postage paid**, just as you promise.

Name _____

Post Office _____ Province _____

Street and No. _____

Age _____ How long afflicted? _____

Make a cross (X) before disease you have suffer most. Two crosses (XX) before the one from which you

....Rheumatism	....Kidney Trouble	....Impure Blood	....Female Weakness
....Lumbago	....Bladder Trouble	....Anemia	....Womb Trouble
....Catarrh	....Weak Lungs	....Pimples	....Ovarian Trouble
....Constipation	....Chronic Cough	....Eczema	....Painful Periods
....Piles	....Malaria	....Neuralgia	....Hot Flashes
....Diarrhoea	....Asthma	....Headache	....Bearing Down Pains
....Torbid Liver	....Hay Fever	....Dizziness	....Leucorrhoea
....Indigestion	....Heart Trouble	....Nervousness	
....Stomach Trouble	....Poor Circulation	....Obesity	

Give any other symptoms on a separate sheet. Correspondence in all languages.

New England Tomato Soup.

To one quart of canned tomatoes add one pint of hot water, one tablespoonful of sugar, one teaspoonful of salt, four cloves, saltspoonful of white pepper; bring to a boil; in the meantime put one tablespoonful of butter in a saucepan; when it melts put in one tablespoonful of spring onions, one tablespoonful of parsley; fry five minutes; add one tablespoonful of cornstarch dissolved in two tablespoonfuls of cold water; stir into hot tomato, strain and serve with boiled rice.

How to Preserve Health.

A health almanac containing information calculated to improve the health of Kansas people was issued by the state board of health. The first charge to the public is to "avoid patent medicines as you would a pestilence."

Here are a few epigrams about health contained in the book:

"An open window is better than an open grave."

"Warm rooms have killed more people than have ever frozen to death."

"A stiff drink makes the stomach warm, but the skin cold."

"A mustard bath for the feet will do far more to ward off pneumonia than a gallon jug."

"A dirty well is more dangerous than a dirty kitchen."

"It takes time to boil a baby's bottle, but it saves sorrow and sleepless nights."

"Flies in the kitchen may be almost as dangerous as rough on rats in the pantry."

"If your milkman brings you warm milk, make it hot for him."

We wish to call the attention of our readers to the advertisement of Guernsey and Jersey bulls for sale, offered by Glenview Farm, Walter McMonagle & Sons, Sussex, N. B. These animals are sired by Fairy's Nonpareil and Imported LaChasse Foxey, respectively. They are both a fine quality of large size, very suitable for an agricultural society, and will be sold at a reasonable price for immediate sale.

Last Call for the Winter Fair.

The Twelfth Annual Winter Fair will open at Amherst on Monday, Dec. 2nd.

By the time this copy reaches its readers the entries will be in.

It is necessary, however, that we should call attention to the fact, that this fair is entitled to the support of all in the Province interested in agricultural work.

While we have our respective provincial and county fairs each year, this is the only one of the kind where a great portion of the work is given to education. This year for the first time a milking machine will be operated by electricity. The usual arrangements have been made for transportation over all railway lines, and it is hoped that each and every person will make an effort to attend at least one day during the week.

Fall Spraying for Scale.

Before cold winter weather sets in there should be some spraying done wherever the San Jose scale is present. If present in such numbers as to cover or encrust parts of the tree their injurious work is generally manifested by some dead branches or the premature falling of the leaves.

It is not safe to wait till spring and think that no further damage will be suffered by the trees. While the scale does not propagate during cold weather, it continues to draw nourishment from the sap and when plentiful enough to cover the bark, the drain on the vitality of the tree is severe and it emerges in the spring much weaker than it was in the fall. In some cases it is weakened beyond recovery and dies.

This, then, is a good and sufficient reason why spraying should not be postponed till spring, but there are further reasons of weight. One of these is that the shell of the scale is softer in the fall, for it grows harder through the winter, and consequently is more susceptible to the action of the various sprays. Fall spraying is more thorough and effective than in the spring. A greater per cent of scale will be killed and the same work will have better results.

There are other reasons of lesser importance, such as the fact that the weather is more propitious in, say November, than in windy and changeable March. Freedom from high winds generally prevails in the fall. The ground is firmer and will permit the passage of wagon or sled. In the spring the soil is often wet and miry for weeks at a time.

Farmers and fruit growers are much more at leisure in the fall and the work of spraying is not so costly in the time it consumes. Time is precious in the spring, for many kinds of work call for our attention all at once and there is loss in delay. Sometimes spraying for the scale is prevented entirely by continued rains, for scale sprays must be applied before the buds open. In fall spraying there is a wide latitude, for it may begin as soon as the leaves fall and extend up to and through the winter whenever the temperature is above freezing.—L. R. Johnson in N. E. Homestead.

Fall Spraying is Desirable.

I would close up the year with a thorough spraying of everything, including not only the orchard trees, but the walls of the barns, stables and hen houses. I would not store my apples until the cellars had been thoroughly cleansed with bordeaux, and possibly kerosene emulsion. The germs of mildew and other forms of decay will not only start rot in the fruit, but will spoil the flavor. Nearly all apples which we find in the winter and spring markets have a moldy taste.

The trees have special need of bordeaux well sprayed into the cracks of the rough bark. Plum trees are well supplied with germs of black knot to be developed in midwinter. Look out for these.

In the barns and stables a good coating of whitewash should be added right after kerosene emulsion. Let the insects start out at the greatest disadvantage in the spring.

Then at it again before the foliage starts in April. The currant worm comes first, and it should be met with a thoroughly good dose of arsenate of lead and white hellbore. This spraying should not wait for the early foliage to be half eaten. It should come just as the buds are swelling, and then again as the blossoms are opening.

You will hardly get through with the currants and gooseberries before your plum problem is on hand. And here again the arsenate of lead will do a good job for you applied after the petals drop. And from this time on we have a steady fight through the year, but it will be very much lessened if the fall and winter spraying had not been neglected.

If anthracnose has ever showed itself in your vineyards, swab the vines with a solution of copperas before the buds break in the spring. Only a little later use bordeaux for the black rot. Occasionally the leaf folder turns up in vast numbers, and it will be desirable to keep ahead of it by a winter spraying of lead arsenate, followed by another in the spring.

form as you can get along without,

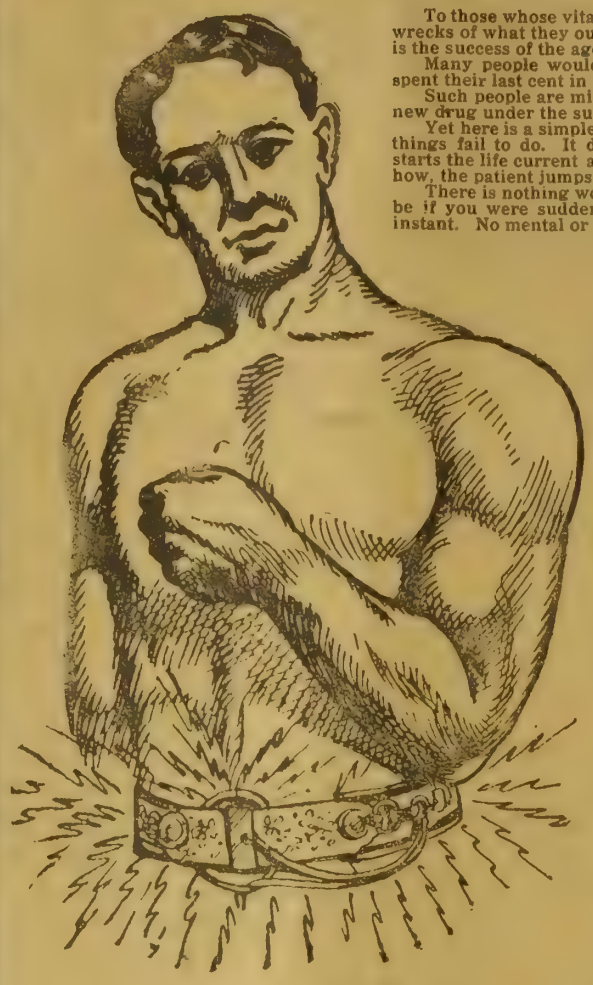
Use just as little kerosene in any applying it mainly to old trees and on the bark. All through the summer be ready for bordeaux mixture to spray your plum trees at the first sign of yellowing leaves, but you will have very little trouble from fungus if you have given these trees a thorough fall or winter treatment.

Spraying as a preventative is of vastly more importance than as a curative. It is for this reason that I would not let up when the summer fight is over, but would give the trees, even the largest trees a spraying of bordeaux after the orchard has been picked, sometime in November. This spray will get at a large amount of spores and germs that lie quiescent during the winter and are ready for business as soon as the buds begin to swell in the spring.

It must never be forgotten that fungus spores are not any more than held in abeyance by frost. The plum knot does its work in February and March and sometimes earlier. In other words this business of spraying depends for its success upon keeping ahead of our enemies.—E. P. Powell in N. E. Homestead.

DR. McLAUGHLIN'S ELECTRIC BELT

IS MADE FOR YOU



To those whose vitality is exhausted and who find themselves, young in years, broken down wrecks of what they ought to be, the Dr. McLaughlin Electric Belt is full of encouragement. It is the success of the age in elevating the condition of those suffering from a loss of vitality.

Many people would give all they possess to regain the health they have lost. Many have spent their last cent in its pursuit—and thrown their money away.

Such people are mislead by custom and the well-meant advice of friends. They take every new drug under the sun and find them useless.

Yet here is a simple, natural remedy, Dr. McLaughlin's Electric Belt, that does what other things fail to do. It does not poison the system nor depress the spirits. On the contrary, it starts the life current anew and produces health. It invigorates the mind. Without knowing how, the patient jumps from despondency to health and ambition.

There is nothing wonderful in this change. It is all so natural. Think what the effect would be if you were suddenly deprived of all the electricity in your body. You could not live an instant. No mental or physical life could exist without Electricity. Naturally, when the amount is below normal you are less vigorous, less ambitious.

Then is the time my Belt does great things for you. It recharges your nerves with life-giving current. Soon strength and vitality are restored. You feel the old stimulating glow of heath. You now have the right amount of Electricity and you feel "equal to anything."

What is my Belt? It is a body battery, made for the purpose of applying Electricity to the human system in the most scientific and effective way. It is made on an entirely-different plan from the worthless devices known by "Electric Belt" Its current is of guaranteed strength and constancy. It is provided with a regulator. This enables you to change the current to suit varying needs. You wear it at night. It's soothing currents send you to sleep. You wake up refreshed and invigorated. Before long you feel like a different person---and you are different. Your friends tell you so.

The benefits of my Belt are being daily demonstrated by thousands of patients, and it is heartily endorsed by those who have been cured.

If you are sick or weak, and your doctor isn't helping you much, you ought to try my Belt. It's a grand remedy. All such troubles as Indigestion, Constipation, Torpid Liver, Tired Feeling, Weak Kidneys, Rheumatism, Neuralgia, Lame Back; Lumbago, Sciatica, Sleeplessness, Nervousness and Headaches are cured completely with Electricity applied with my Belt; it overcomes all signs of weakness or breakdown in men and women. My Belt not only cures the sick, but gives the well a greater zest in life.

Dear Sir,---I have had your Belt in my home for some little time; my family have used it, also myself; and I find it a great cure. We could not do without it. Yours with much respect, MRS. R. E. McELROY, Arcola, Sask.

Dear Sir,---I beg to report that the Belt I received from you some time ago is doing good work, and wish to say that I am feeling better in every way. My stomach is very much better; also my nervousness is rapidly leaving. I can now sleep quite soundly and get up quite refreshed. Sincerely yours, C. E. SCANTEBURY, Supt. Ry. Mail Service, Calgary, Alta.

Dear Sir,—I have felt no pains in my back since I discontinued to wear your Belt some months since. I must say it was a marvel how quickly it effected cure on me and I shall have great pleasure in recommending your Belt to any one who suffers from a bad back. Thanking you, I beg to remain. WM. BUTTERS, Gull Lake, Sask.

Dear Sir,—I am glad to say that I am completely cured of my Rheumatism by the use of your Belt. I certainly felt the benefit of it and am glad to say that I am quite clear of Rheumatism and my Belt is worth more than what I paid for it. You can refer any sufferer to me who is in doubt. Wishing you every success, I remain, ED. JOHNSON, 109 Elmwood Ave. E., Winnipeg, Man.

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If you cannot call and see me personally, you can write for my book. It will cost you nothing, and will tell you lots of things you ought to know. Send coupon for this beautifully illustrated 84-page Free Book to-day, "Electricity is Life." I know best how to apply the remedy, and thousands of men owe their health and happiness to-day —their success in life—to DR McLAUGHLIN'S ELECTRIC BELT.

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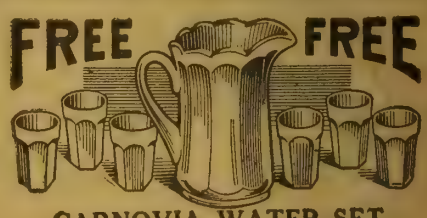

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These elegant Carnovia Water Sets are made of the finest fire-finished crystal glass, and prescut into a beautiful octangular design. They are rich and massive looking, with the brilliant lustre that distinguishes the finest cut glass.

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They are caused entirely by bad blood, and to get rid of them it is absolutely necessary to put the blood into good condition.

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Mrs. James Mageean, Floral, Sask., writes:—"I was troubled for eight years with boils on my face and body, and I tried everything I could think of. My neighbors told me to drink water off of sour corn meal, but I kept getting worse until one day a woman in town asked me why I didn't try Burdock Blood Bitters. My husband got me two bottles, and before one was gone my boils had all disappeared, and I feel like a different woman. I can't tell you how thankful I am for your medicine. I will recommend it to all suffering women."

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Diseases in Autumn.

We enter on the autumn months with birds that are not as forward as last year, neither are they as physically sound taken generally. Every morning the fields are covered with heavy dew, and though the birds rise early and search far and wide for animal and insect life, they do so at very great risk of catching cold. This is one of the reasons why the months of September, October and November are so treacherous to the poultry keeper. Prevention at all times is better than cure, and with this in view the poultry keeper should make special efforts to provide good, roomy houses, properly lighted and ventilated, and with the flour very dry. Damp floors are responsible for more colds in fowls than anything else. If a good scratching shed is provided in addition to the house, and the floor is littered to a depth of eight inches with peat moss, and several inches more with straw, it will form an ideal scratching place during bad weather. It is the number of idle hours which fowls spend out in the open, and often with cold winds blowing, that result in so many different complaints arising. There are many kinds of colds, some of them are much like a severe cough in human beings. This can generally be cured with stiff doses of glycerine, while some people make a practice of placing roup powder in the food and drinking water two or three times weekly. The quickest way at all times, and the safest, is to isolate the birds immediately any sign of disease is present. Some kind of hospital should be made on every farm, but unless this is a warm building it will be of little use for bringing the patients round.

CANKER.

Diptheric roup, or canker, as it is frequently called, can generally be told by the offensive smell from the birds' throats. If a white cheesy matter is formed this has to be scraped off, and though the sore place may bleed profusely, it is a practice which has to be done day after day. With the growth removed the affected parts should be treated with weak carbolic acid. Only medicines of a very strong nature are effective. If a feather is dipped in the solution, this is one of the best ways of administering it.

SCALY LEG.

Fowls which are housed under proper conditions should not suffer from scaly leg, no matter how long they are kept, but when it is noticed (and it must not be forgotten that it can spread from one flock to another, just like other complaints), successful treatment can generally be carried out by wrapping the legs in cotton wool which has been immersed in paraffin. If this is done for three weeks, in nine cases out of ten a complete cure will be made. I have always noticed that scaly leg is most prevalent where no grass is on the ground and where cleanliness is not strictly carried out. All the houses should have powered lime thrown in weekly, while a few times yearly the interior should be treated with a good wood preservative. Even the perches must not be forgotten.

BOWEL TROUBLE.

It often happens that chickens with cold suffer from bowel trouble, the droppings are often of a liquid nature, also very yellow in colour and it is only with great difficulty that bowel trouble can be cured. Some people believe in giving boiled rice. This is certainly harmless, and has a tendency to do good, while a little charcoal may also be added with the soft food. Suitable diet will sometimes prove a very effective treatment.

FACTS—NOT THEORY —ABOUT

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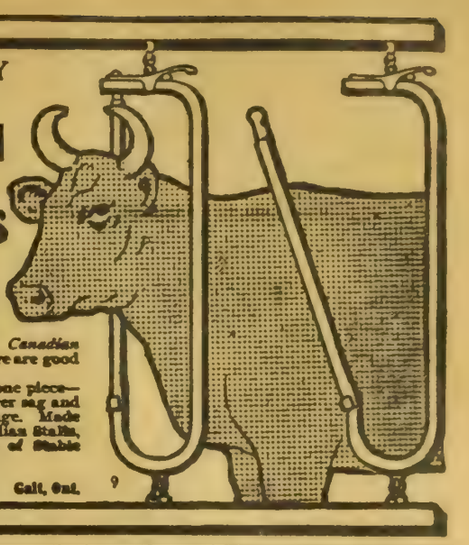

When big stables like the Central Experimental Farm at Ottawa — the new barn at Silver Spring Dairy Farm, Ottawa—the Brindale Farm at Toronto — are equipped with *O.K. Canadian U-Bar* Patented Steel Stanchions—there are good reasons for it.

O.K. U-Bar Steel Stanchions are of one piece—have no rivets or joints—therefore never sag and stand up against the most severe usage. Made in 5 sizes. We also make O.K. Canadian Stalls, Water Basins and a complete line of Stable Equipment. Write for catalogue H

Canadian Potato Machinery Co., Limited, Galt, Ont.

EGG-BOUND PULLETS

These are more noticeable during autumn months than at any other time of the year. If the chickens have been allowed unlimited food, especially of a fattening nature, it often happens that when the time comes for the first egg to be laid they are not in that sound condition so essential for successful laying. The ovary is crowded with thick layers of fat, and the passage of the first egg is a process of considerable difficulty. Sometimes a good dose of castor oil will answer the purpose, while at other times the affected bird will have to hold over a steaming kettle, vent downwards, and assistance rendered in order to induce a free passage for the egg. Weak-legged cockerals and pullets, especially if they are four or five months old, are frequently noticed during the autumn months. It is generally a case on feeding on too forcing foods, or attempting to grow the birds too quickly, with the result that the body has grown so heavy and the legs so long they do not seem strong enough to support the full weight. A few doses of chemical food, with milk and bread to eat, will often prove a speedy cure, but I have seen several times when this trouble has continued for many weeks, and only persistent treatment has brought about any degree of success.—Poultrymen.

To Investigate Markets.

T. R. Arkell, formerly professor of animal husbandry at the New Hampshire State College, who was recently appointed by the Dominion Government to make a thorough investigation into the Canadian sheep industry, left for Great Britain last week to commence his work. His first duty will be to make a study of the market of the Old Country, their demands as to grade and quality, methods of marketing, and to gather any information that may be of value to Canadian sheep raisers.

To Get Good Cows, Raise Them.

The question is frequently asked, whether it is better to breed or to buy cows. This, of course, depends a great deal upon circumstances, but experience has taught that the most successful dairymen breed their own cows. As a rule, sellers do not part with their best cows, and consequently there are more culls on the market than high price animals. In buying one has much picking and choosing to do, and good milkers nearly always bring their full value. No keen business man would buy goods at a high price and sell them at a loss. Yet this is practically what many dairymen do. They purchase cows much above their value and it costs more to keep these cows than the amount received from their milk.

The best way to get good cows is the best sires and only the heifers of to breed them. Grade up by keeping the most profitable cows. In this way each generation will be better than the last. Selection and rejection have a great deal to do with success in breeding.

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Enter as soon as you can, so as to be ready for work when the call comes.

Our new Catalogue gives our rates and just the information you want. Send for it to-day.

THE ST. JOHN Business COLLEGE

S. KERR
Principal.

Factors in Tile Drainage.

When the farmer has the funds and can do a thorough job of drainage at once it is best to do it. No farm investment where drainage is needed will yield a better return or replace it in making possible the most profitable working of the land for the greatest number of crops. When it is not possible for want of funds to complete the work at once the most productive fields should be drained first, those most convenient for cultivation and the handling of the crops.

The wettest parts of the fields should be tiled first and where the tile has shown what influence it has on the land there will still be found drainable soil that has not before been thought too wet for best results from cultivation. Then the work can be continued until finished. With a sod covering the land, the work will be most pleasantly done. If the land is worked in rotated crops, then the drainage work will come in order, the winter or spring before the land is plowed for corn. When sod is broken each year on a part of the fields the work can go on each fall, winter and spring, coming in regularly each year as a part of the farm work.

A half century ago each farmer as a part of the winter's work cut the timber off some of his land, making it ready for cultivation; now that the timber is gone tile drainage on most farms can well take the place of the old time clearing. The work should be planned ahead. When the land cannot be worked because too wet is a good time for the owner to be looking over it and finding out where tile is most needed.

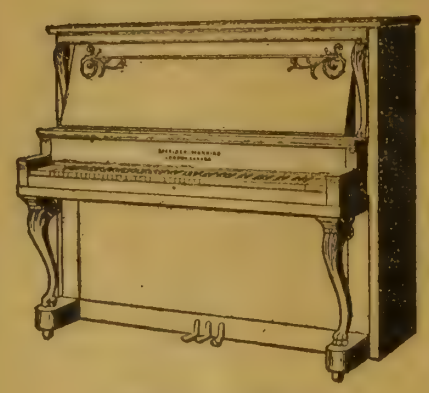
Years ago when rain was pouring down I commenced by putting on a raincoat and walking over the fields where prospective work was to be done at the earliest possible date, noting where the water stood the deepest on the surface and the location of the riffles where the water ran away. Sometimes I drove stakes to locate these places for future reference, as they marked the course of the water, the lowest points and the future location of the drains. Oftentimes the distances were stepped, carried in mind or made note of to help sum up the amount and sizes of tile needed. These things can be more correctly done when the rain is falling on the land than when it is cracked open from drouth. The abundance of water tells the need of the land for tile, the cracks in the soil the need of moisture as well as of tile. Oftentimes this study of the contour of the land will save the employment of an engineer. But there are times that to do the best work it is absolutely necessary to employ an engineer. Using the water-flow and the engineer's skill together is best. Unless the grade is quite steep the engineer's work, barring mistakes, is the safest and the condition of the soil often makes it necessary.

To make sure that the contemplated ditching will be done on time the tile should be purchased and hauled when the roads are solid and the tile can be had. After harvest tile are in abundance and the roads mostly good. At the finishing of the work in the spring the factory yards are empty and the roads in the worst condition for this work. When the work of an engineer is necessary it should not be considered finished until the farmer has a carefully prepared plat, and unless the workmen are entirely reliable and of much experience the engineer should not be dismissed until he knows the work is correctly done.

One of the most serious matters connected with farm drainage is the ignorance of the owner regarding the work and requirements to make the work perfect. On the part of the workman it requires more than skill in handling the tools to make the finish practical. Judgment and honor are most necessary factors. Some men by experience become very skillful in cutting and finishing a ditch for tile, yet there seems in most to be a lack of study and planning to save labor in handling the soil. The drains are too often cut too wide from top to bottom, the work being done with spades that have the blades too wide. Often to grade the bottom such scoops are used as are found on the market, never thinking that a good blacksmith can take the blade of an old shovel and make a scoop much more convenient and better in every way for this last and most important part of the work. The ditcher that profits by experience will soon learn that the work should be finished as it goes, leaving no ditch open for the tile over night. Two or three times I have found to my sorrow in the morning that both sides of the ditch had slipped into the drain. While the reasons for leaving the drains unfinished seemed reasonable and sound, the work of throwing out this caved-in soil was a convincing argument against the practice.

One should never expect entire success with a drain when the outlet is in any way obstructed, Always plan the system for as few outlets as possible. It is a prosperous sign to see tile at certain seasons piled about on the farm, to be used when the land is too wet to cultivate. But it shows that a farmer is not alive to his opportunities when tile remain in piles until they have a tumbled-down appearance and are overgrown with weeds and bushes.—John M. Jamison in Breeders' Gazette.

The Sherlock-Manning 20th Century Piano
"Canada's Biggest Piano Value"



Louis XV.—Style 80.

THE final consideration of all careful piano-buyers is summed up in the words: **will it endure?** When you buy a piano make sure of the **inside** features—**features that assure** not only **lasting tonal qualities** but also **the lasting life** of the instrument itself.

A piano, to be a permanent investment, **should** have the famous **Otto Higel Double Repeating Action--Poehlmann Wire**--the best imported--**Weickert Felt Hammers, none** better—**Billings Brass Action Flange,** the latest innovation. The

Sherlock-Manning possesses all these and every feature that makes for piano perfection.

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Sherlock-Manning Piano & Organ Co.
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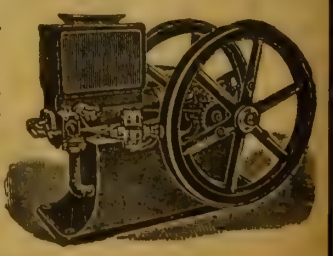
Home Tanning of Leather.

The method of tanning here described is the easiest and at the same time the cheapest and most simple. The only tools needed are a drawing knife and a butcher's knife. An ordinary tub answers the purpose of a vat. The first step taken in preparing a hide or skin for tanning is removing the hair. To do this place the hide in enough strong lime water to cover it, using a peck of lime to four gallons of water. Let the hide remain in this solution until the hair slips easily, airing the hide for five minutes every three hours during this process. Place the hide on a beam and remove the hair with the back of a drawing knife. Wash the hide thoroughly and soak for about 10 hours in clear water. The hide is then ready for the coloring compound. For this use two pounds gum camboge,one-fourth ounce extract soda

Monarchs---The Cure For Farm Drudgery



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and one-fourth ounce ammonia to four gallons of water. Boil until the ingredients are thoroughly dissolved and when cool soak the hide in this solution for 24 hours.

Boil in a small quantity of water one ounce of hops, one-fourth ounce of wild cherry. Pour this into the coloring solution, place the hide in the mixture and let it remain for from three to 15 days according to the thickness of the hide. When the hide is taken from this solution, wring it as dry as possible and hang it in a cool, dry place. When nearly dry begin working and stretching it. This is done to remove the glue and to make the leather soft and pliant. If any hard places remain when the hide is dry, wet them with a little of the solution from which it was last taken and rub in until dry. The main thing in hand tanning is to work the leather thoroughly while the hide is drying. This makes the leather more serviceable where a soft leather is desired.

Another method of tanning is to place the skin in wet ashes and let it remain for about 24 hours. Air the skin two or three times while in the ashes. This will take the hair off and leave the skin a bluish color. If the skin is rubbed between the hands while drying it will turn a cream color and remain soft indefinitely. When using this method of tanning the most important part is the rubbing, as this takes out the greenness and makes what is called dressed skins. No chemicals are used and for this reason dressed skins are much stronger and more pliant than tanned leather.

This process of dressing skins is better than any other as there is practically no expense and the time required is much shorter than tanning with chemicals or with the old bark tanning process. Of course, for tanning heavy hides such as horse and cow hides the method given in the first part of this article is best as the tanning solution draws out most of the glue and makes less work in finishing the leather The formula for making this leather can be filled at the drug store. It costs about 75 cents to tan a 50-pound cowhide, including the cost of lime used in removing the hair.

Destroying Stumps With Acids.

The Agricultural Gazette of New South Wales, issued under the direction of the minister of agriculture of that country, says a farmer there has discovered that a mixture of equal parts of sulphuric and nitric acid will destroy a stump of the hardest wood in a few weeks.

The stump of a mahogany tree three feet six inches in diameter was destroyed so completely in five weeks by the use of 12 cents' worth of acid, that it could be knocked to pieces with a garden hoe. On the subject of applying the acid, the Gazette says: "The acids are used in equal parts and nothing is added to them. A hole is bored in the stump with a two-inch augur, deep enough to hold the quantity of acid to be used, and then one acid is poured in and the other added. The hole is then plugged air tight with a wooden plug."

A stump three feet in diameter should be treated with about one-half pint of each acid. The nitric acid is poured into the stump first, and the sulphuric acid is added in all cases, and not the reverse. In mixing these acids much heat is generated and care must be taken not over a half pint of each to be mixed at one time, whichmust be allowed to cool before any more is added. Both of these acids are extremely corrosive and should not be allowed to come in contact with the person or their clothing.

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England is the home of "Tweeds"—and is, too, the home of good tailoring, both in style and workmanship.

This winter overcoat will excite the envy of your friends who have paid three times as much.

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(Cut in either American or English styles.)

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The "Regoette" Raincoat is right up to date in cut, style and finish. Light in weight, it may be carried over the arm without inconvenience, whilst as a walking coat in cool weather it is just right. Easy fitting and good looking. The excellence of both material and tailoring is apparent at once to discriminating men. It carries an absolute guarantee to keep out the water or money refunded.

This is a smart, dressy raincoat, of which thousands are being worn by well-dressed men in England—men who are notoriously hard to please in the matter of clothes.

(American or English cut.)

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Such a price is only possible by reason of our huge business—one of the largest in London—enabling us to purchase largely, and therefore cheaply.

Have your garments made to your measure. Maintain individuality in your dress.

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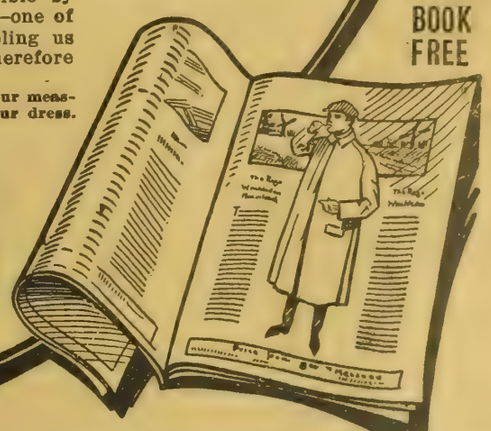

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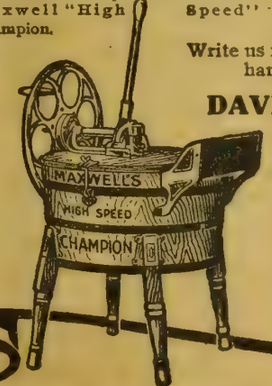

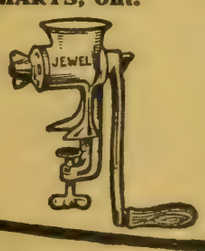

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Milking Cows Before Calving.

The writer is inspector of live stock breeding for the agricultural department of the grand duchy af Baden, Germany. He says:

In the literature and in public addresses it is recommended to milk, and even to milk dry, animals whose udders are greatly swollen before calving. Experience has, however, shown that this unnaturally early milking may, for one thing, postpone the birth for a considerable time. Furthermore, it exercises other far reaching influences on the act of parturition. The birth pains are greatly diminished. The physical stimulus which is designed to be exerted by the congestion of blood to the entire hind parts of the animal is broken by the emptying of the udder, the stimulus on tne entire sex apparatus is reduced, the birth pains are delayed and finally are much less violent. Whoever has repeatedly observed the effects of such premature milking before calving will understand that the postponing and diminishing of the birth pains exercises an unfavorable influence on the whole act of parturition and may result in miscarriage. For these reasons, milking before calving should be avoided with extremely rare exceptions.

If there should be a case where the swelling of the udder of the cow becomes so colossal that not only the udder and the teats are stretched tight, but unusual swellings also appear in front and behind the bag, and the animal when standing still suffers serious pain without being touched, and perhaps the milk drips out—this is an exceptional case where some milking may be justified before calving. But it should be done only enough to relieve the extraordinary tension, but the cow should never be milked dry, as is often done. Besides the difficulty of dropping, the calf would lose the colostral milk which is so important for the cleansing of the intestinal tract and the prompt growth of the young animal.

What is Casein?

Prof. H. H. Dean, in answer to the question, "What is casein," says in the Farm and Dairy:

It is the chief nitrogenous compound found in milk and consists chemically of the elements carbon, hydrogen, oxygen and nitrogen. It is distinguished from milk fat, in that it contains the element nitrogen, the most valuable of all elements for plant, animal or human food. It is the most expensive fertilizer which the farmer needs to purchase. It is the most expensive ingredient which the housekeeper buys in food. The white of an egg, the lean portion of meat, the curd of cheese, are common examples of foods containing the element nitrogen. It alone builds muscle in the animal or human body. Plants deprived of nitrogen wither and die.

Casein is secreted in milk by the cow, by means of special cell activity. Its primary source is the nitrogenous material in the foods fed to a cow, which is transformed into blood, and from the blood it passes into the milk through the action of cells. The foods fed to a cow containing nitrogen are the most expensive to purchase, such as clover hay, peas and gluten meal, bran, oil cake and cotton seed meal. Without a fair proportion of foods fairly rich in nitrogenous matter, it is impossible for the cow to produce milk economically. And yet in testing milk at cheese factories some would utterly neglect this important ingredient of milk and cheese.

Turnips for Milch Cows.

Some dairymen avoid feeding turnips to dairy cows although they are among the best milk-producing feeds. The principal objections are that they require so much time and lgbor to cut and that they taint the cow's milk rendering it unfit for cheese or butter making.

During the past season I have fed turnips to dairy cows with very satisfactory results. I give a liberal feed of turnips when the cows enter the barn to be milked. The turnips are not cut, but the cows are allowed to eat all they can manage whole. What they leave in the manger are cut to proper size before the next feeding. The cows soon learn to eat turnips of almost any size. I was cautioned that they would bruise their gums and make their mouths sore, but as yet have observed no such results.

To prevent taint of milk from feeding turnips, I exercise the following precautions: The stables are kept clean, for I have observed that manure has a much more offensive odor when turnips are fed than in ordinary feeding. The cows are salted liberally to facilitate disposal of intestinal products, and the stable is kept well ventilated, especially at milking time This last precaution reduces the odor. The cheese maker at the factory has told me frequently that he has been unable to detect the slightest taint in the milk.—Monroe Conklin, Sr., Allegany Co, N. Y.

Profitable Longevity of Dairy Cows.

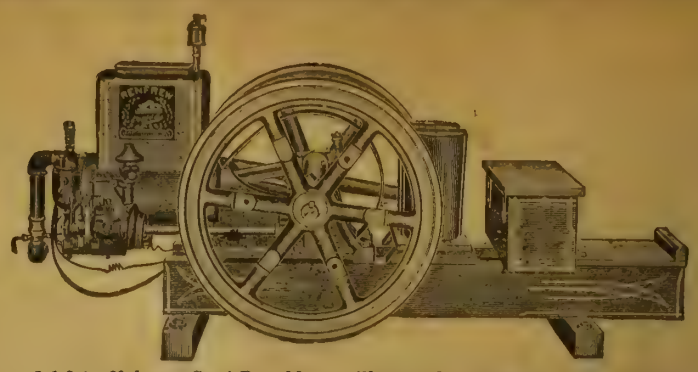
Prof. C. H. Eckles of the Missouri Experiment Station sums up their investigations along the line of the profitable longevity of the dairy cow in part as follows:

"Probably the majority of dairy cattle are rejected from the herd on account of failure to breed, or from udder trouble before the effect of advancing years can be observed to any marked event. It is a fact often observed that a cow may make her best record when 10 or 11 years old, although as a rule she does her best rather earlier. If a dairy cow continues to breed, she usually shows no marked decline until at least 12 years old. Occasionally a cow continues to breed until she is 16 or 18 years old.

"While it is not entirely safe to judge the future milk production of a cow from her 2-year-old record, it is reasonably safe to judge the richness of her milk.

"A dairy cow on the average as a two-year-old may be expected to produce about 70 per cent; as a 3-year-old, around 80 per cent; as a 4-year-old, about 90 per cent of the milk and butterfat she will produce under the same treatment when mature.

"The richness of the milk remains practically constant from year to year, except that after the third milking period there is a slow gradual decline with advancing years."



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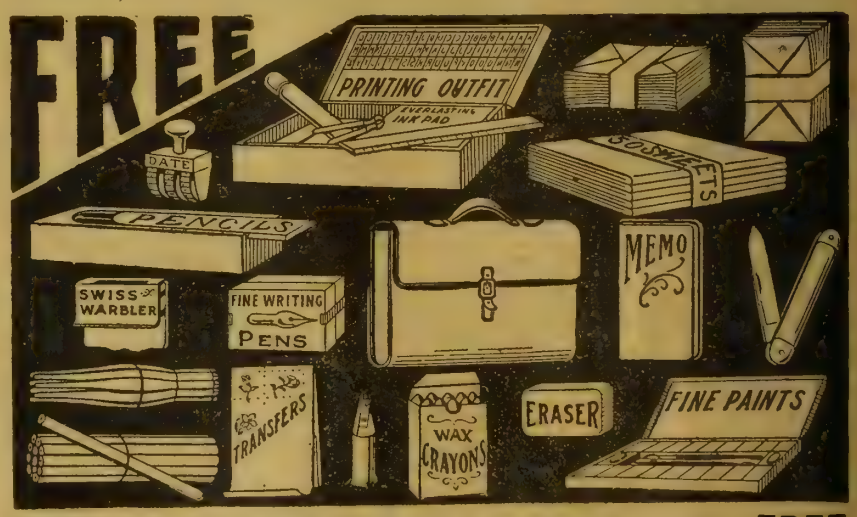

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To Prevent Sunscald.

Sun scald has done great damage in our orchards. It will continue to do damage, until we apply ourselves energetically to its eradication. The following letter recently written by I. F. Metcalf, B. S. A., District Representative of the Ontario Department of Agriculture, to the fruit growers of Manitoulin Island, will be of interest to fruit growers everywhere whose trees suffer from sun-scald:

"You may have had trouble with some of your younger trees dying this season and did not know what was the matter with them. Perhaps you thought it was blight, when it was something else. If you find at the crotches of the limbs—and in some cases along the limbs—spots where the bark is dead and shrunken, it is probably sunscald that did the damage. In many cases you will find the limbs almost girdled from the effects of the sunscald.

"Sunscald is caused by getting a few very warm days early in the spring, such as you did last March. The sap is started by the heat of the sun, then cold weather sets in, and the sap freezes. Most of your trees will stand lots of cold, but will not stand the combination of heat and cold.

CUL OUT AFFECTED PARTS.

"The injury usually happens on the south or south-western side of the tree. The only remedy is to cut out all dead bark and put on a poultice. In many cases the injury is so bad that the only remedy is to cut off the wholetop of the tree. This will force new shoots to grow out along the sides of the old trunk and in a very short time you should have a new top on the tree since all the energy of the old trunk and roots will be devoted to produce this new growth.

"Prevention is much better than cure. Prevention consists in protecting the tender wood from the rays of the sun. This may be done by enclosing the trunk and crotches with corn stalks, building paper or shading by nailing two boards together in a V-shape and placing upright on the south side of each tree.

SIMPLEST METHOD OF ALL.

"By far the easiest and simplest method is to give the trees a coating of whitewash the last thing in the fall, so that rain will not wash it off. This white color will throw off the sun's rays instead of absorbing them, and thus act as a protection. It will also protect the buds starting too soon in the spring. Every person having an orchard of young or tender trees in this northern district would do well to make a practice of applying whitewash to his trees the last thing every fall.

"Of course there is only one way of applying the whitewash satisfactorily, and that is by means of a spray pump. This does not need to be a large outfit but should have plenty of power (or pressure as it is called) for its size. Such an outfit as I have been using this past season (Spramotor No. 0) should be a very satisfactory outfit. If you have not purchased a spray outfit yet, I would advise you to go in with one or more ofyour neighbors and buy one of those pumps. It will be of use to you in spraying lime and sulphur in the spring for the oystershell bark louse, and in spraying lime and sulphur and arsenate of lead at the time the blossoms fall to prevent codling moth (the worm in the apple) and scab. It would also come in handy for you to whitewash your sheds, stables, etc., and in many cases in using mineral paints."

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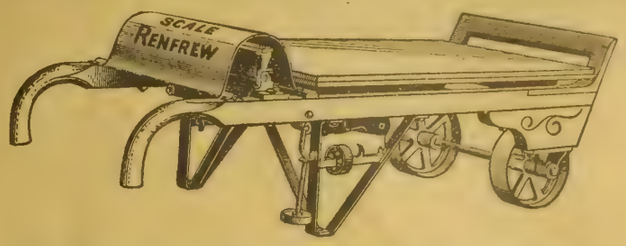

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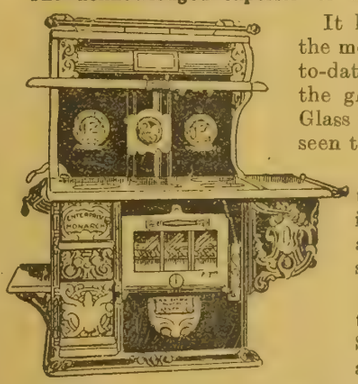

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Box Measures.

The figures given below refer to inside measurements'—

A box 17.329 (approximately 17 1-3) inches long, 17 inches wide and 8 inches deep will contain a bushel, or 2, 218.192 cubic inches, each inch in depth holding one gallon.

A box 24 inches long, 11.553 (approximately 11½ inches) inches wide and 8 inches deep will also contain a bushel, each inch in depth holding one gallon.

A box 12 inches long with the width and depth given in the last foregoing paragraph will hold half a bushel, each inch in depth holding half a gallon.

A box 6 inches long by 5.776 (approximately 5¾ inches) inches wide, and 8 inches deep will contain a gallon, or 277.274 cubic inches.

A box 4x4 inches square and 4.332 (approximately 4 1-3) inches deep will contain one quart.

Feed Stock Intelligently This Winter.

Careful feeding is an art which every stock farmer should try to master. General principles remain the same, but changing conditions and varying prices of feeds make it necessary that the feeder exercise both brain and lead pencil. Talk of balanced rations, protein, carbohydrates, fat, concentrates, etc, needlessly frightens some farmers. Articles have appeared from time to time in these columns carefully explaining fundamental principles of feeding.

General principles were laid down which enabled the feeder to calculate any combination for any condition that might arise. It was explained that a maintenance ration is that which keeps the animal alive and does not allow for production, as, for instance, 15 quarts milk daily from the dairy cow. Protein is the most expensive compound that farmers buy, and it is the only one which contains nitrogen. Hence, a ration carrying a large amount of protein is called a nitrogenous feed. There are no other compounds that will take its place. Protein, may, when fed in excess, do the work of carbohydrates and fats, but at a greater cost. Growing animals and animals giving milk need extra protein. On the contrary, if an oversupply of protein is given, it becomes a waste product, hence the importance of the feeder knowing when he reaches the profitable point. Grains like cottonseed and gluten are exceedingly rich in protein.

PROTEIN ALONE NOT SUFFICIENT.

Essential as is protein, carbohydrates and fat must be available. The former is usually produced in large quantities on the farm, and constitutes the crude fibre or coarse material found in hay, cornstalks, etc. A feed that has a large amount of carbohydrates in comparison to protein is called a carbonaceous feed. Corn is typical of such a feed stuff. This coarse fiber is used by the animal body to supply heat or energy, and for the building up of the body fat. This explains why corn meal is the first feed usually thought of if an animal is to be fattened.

The fat in feed serves the same general purpose, supplying where the carbohydrates fail. Fat also has a soothing effect on the digestive tract, and helps to keep the animal in good condition. Animals require a certain amount of fiber or roughage. Balancing these different elements of protein, carbohydrates and fat for the most economical results is what is meant when one speaks of a balanced ration.

Now that the winter season is here, it behooves every farmer to take an interest in what he is feeding his animals. He must first do his duty before he can call any animal a robber. Poor feeding is more the result of indifference than complex problems. Any average man can feed intelligently if he will only apply his natural ability and take a few minutes to think straight and observe accurately.

FEEDING CATTLE TO ADVANTAGE

The feeding of beef cattle does not cut much figure in the East. Eastern farmers appear content to let other sections of the country and the beef trust monopolize that branch of stock husbandry. However, feeding dairy cows, horses, hogs and sheep is fully as important, and there are few farmers it does not interest.

Milk producers of experience know that best results cannot be obtained from cows without grain, even when in good pasture. Grain will increase the milk yield. Stimulate the cows to give the best possible flow during the early stages of lactation, then maintain this flow by judicious feeding. If a cow drops off three or four quarts in production through decreased feed, it will take much extra feeding to bring her back to normal.

Despite the fact that nitrogenous grains, like gluten and cottonseed meal are more effective in milk production than corn, hundreds of farmers will group their grain ration about corn meal. Fortunately, the introduction of special feeds, already balanced, is over-coming this tendency. When a grain ration may vary from two to 12 pounds per day per animal, it shows the wide latitude for judgment on the part of the feeder. Only good cows are liable to utilize 10 to 12 pounds grain daily. Only the feeder who has the animal under daily supervision can tell the most economical quantity. Where grain prices have been the past six months, cottonseed meal has been the most economical source of protein. Farmers are fast learning the value of this feed. It should never be fed alone, being very concentrated and not palatable to the animals. The Mississippi experiment station found a pound of cottonseed meal equal to three pounds corn and cob meal for milk production. Gluten is much more palatable, but carries less protein, and prices of the feed largely determine which is to be used, or what combination of them.

WHAT TO FEED THE PIGS

When it comes to feeding hogs, general principles do not vary. However, remember the hog's stomach is much smaller than that of a cow, and where the latter will do well on two feeds daily, the hogs should have at least three, four is better. They will generally consume less food and make better use of it if the rations are varied. An elaborate experiment with 500 animals showed that a mixed grain ration of 432 pounds produced 100 pounds pork, whereas it took 485 pounds corn to give the same grain, and 472 pounds oats and 452 pounds wheat.

The Maine experiment station finds that the addition of pea meal or gluten meal to corn meal adds to its efficiency, this both during the growing and the fattening periods. Provide the pigs with plenty of nitrogenous foods, especially when animals are young and growing. Carbonaceous foods, like corn, but this does not mean that milk, barley, ground peas, etc., should be ignored.

Tests at different experiment stations and the experience of farmers indicate several general conclusions: That growing pigs require nitrogenous feeds, like milk, shorts, ground peas, oats or barley. Ashes fed regularly to hogs increase the strength of the bones by 50 per cent. Cooking feeds for pigs is unnecessary, with the exception of fruit crops. The increased grains made on ground grains are seldom sufficient to pay for the extra cost of grinding. Boaked grains can be more economically fed than dry grains, this usually being equivalent to grinding.

Hogs gain more rapidly and can be fattened more economically before they have reached maturity. Corn and its by-products are the most effective grains for finishing off hogs. Shorts and buckwheat tend to produce a soft meat. Exclusive corn rations in the early stages of growth reduce the size of the muscles and kidneys, diminish the strength of the bones and reduce the quantity of blood. A mixture of charcoal or ashes, with salt and possibly a pinch of sulphur, should be kept where hogs may help themselves from time to time.

CLOVER EXCELLENT FOR SHEEP

The farmer who has plenty of good clover hay isn't much troubled with a satisfactory feed for sheep. The Wisconsin station reports that corn fodder fed with oats and bran gave better results than when these feeds were combined with oats straw or hay. Breeding ewes receive one-fourth to one-half pound grain daily when the roughage is clover. More will be required if straw or fodder is used. The grain ration may be whole oats, peas or bran, or a mixture of these. Feed corn sparingly to breeding ewes; two or three tablespoons of oil meal may be fed profitably, and as every farmer knows, silage or roots will provide the highly desirable succulence. The Wisconsin station reports that the best and heaviest lambs were produced when lambs were fed one-half pound grain per head daily, with 2½ pounds corn silage and two pounds mixed hay. It is not economical to withhold the grain from breeding ewes, as lambs are more likely to be weaklings and lack thrift.

It is pretty well settled that lambs may economically be given grain before and after weaning. The Wisconsin tried corn, whole oats, bran, cracked peas, corn and oats, and corn and peas. The estimated value was very low, corn being 30 cents a bushel, oats 20 cents, peas 45 cents and bran only $13 a ton. They concluded that the cheapest grains were made both before and after weaning with ground corn. Bran gave good results, but was rather bulky for young animals, and not easily digested. It developed that where ground corn was used, and lambs were apt to be sick than where mixed rations were provided.

The winter fattening of lambs born the preceding spring, as well as for old sheep, means more liberal grain feeding. Start them out with a very small portion, and increase gradually until they are receiving one pound when four weeks along, and two pounds when eight weeks. The

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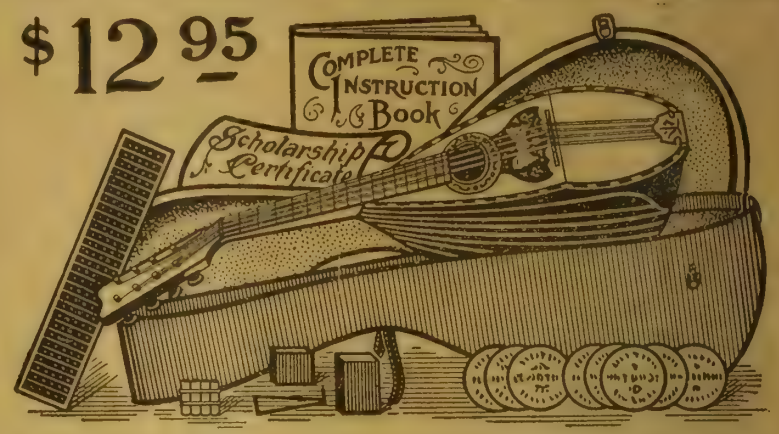

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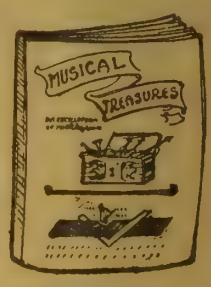

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McClary's Pandora Range

general rule is to feed all they will eat and still maintain a good appetite. If lambs get off feed, it may take a month or more to get them back. Palatability is another important thing in feeding lambs.

PICKING A RATION FOR THE HORSE

"Feed the horses all the hay they will clean up, and a bucket of oats, is the general advice, this with little reference to what the hay is, and the size of the bucket. Timothy hay is the standard for roughage. Clover hay is more nutritious, but is feared more or less by horsemen on account of its tendency to produce heaves. This is a needless fear if it is not fed when in a dusty and unclean condition. Corn silage has been fed horses with good results, but they must be broken in so gradually that it is doubtful if the average farmer should attempt to keep his horse from the silo instead of the haymow. Straw is frequently resorted to, and is really equal to some grades of hay. Oats straw is a satisfactory feed, but more grain must be provided than when hay is used. Many farmers like to feed carrots, since horses like them so well. However, these are very laxative, and stimulate the stomach and kidneys. They are recommended in colds and stomach disturbances. Feed them to the work horses sparingly.

The best grain ration will depend largely upon prevailing market prices. Oats are used extensively. Corn and bran mixed are relished by norses and provide grain at a moderate cost. One extensive foreign experiment reports that horses did best on a ration containing chopped hay mixed with ground grain.—N. E. Homestead.

Construction of Small Concrete Ice-Houses.

During the sweltering heat of summer many a country family longs for the comforts afforded by a home supply of ice. Too often summer passes without any preparation having been made for harvesting the winter ice crop. Now is the time to get ready for next summer by building an ice-house. For a private supply, many persons are using concrete ice-houses, since concrete is heat-resisting, is not rotted by the continual dampness from the ice and is ready every winter without repairs. Likewise a concrete building is fireproof, a quality especially valuable in the country.

With a concrete house, successful storage of ice depends only upon careful packing, air-trapped drainage at the floor line, and well regulated ventilation beneath the roof. Therefore the ice-house must be located on a well drained site and, if possible, in the shade of other buildings or trees. It should be turned end to the south.

The size of the building is dependent on the needs of the family. Nearly any household will consume one hundred pounds every day, or ten tons for the season. One cubic foot of ice weighs 57 pounds and a ton in the ice-house occupies about 40 cubic feet. If the ice is of a poor quality, meltage frequently amounts to one-third the quantity harvested; therefore it is wise to build a house of a capacity twice the calculated needs. For a farm with a small dairy, a sufficient supply can be stored in a building 10 by 14 feet (inside measurements) by 9 feet to the eaves and 13 feet to the comb of the roof. With an allowance of 1 foot on all sides of the ice for a packing of sawdust, the capacity of the structure is 20 tons.

Either concrete blocks or solid concrete may be used for the walls. Dig the foundation trenches 10 inches wide and 2½ feet deep. To remave water from the melting ice, lay a string of 4-inch drain tile from a point outside the building and ending at the service door, so that the top of the last pipe, a sewer "goose neck," will be at floor line 4 inches above natural ground level. Fill the foundation trenches with concrete proportioned to 1 to 2½ to 5. Above ground level the walls may be made of blocks (laid in a 1 to 2 cement sand mortar) or of solid concrete. For the solid wall mix the concrete 1 bag of Portland cement to 2 cubic feet of sand to 4 cubic feet of crushed rock, or 1 part cement to four parts bank-run gravel. Use movable forms, 3 feet high and extending around the entire building, to hold the mushy wet concrete until it sets. The day after they are filled, the forms may be loosened, moved up and filled again. During the placing of the concrete, reinforce the walls, 3 inches from the outside, with woven wire lencing or with ⅜-inch rods spaced 18 inches apart and running in both directions. Stagger the rods by placing half of them 3 inches from the inside surface of the walls. Imbed two rods or an old wagon tire in the concrete two inches above all door openings. During the construction set a service door frame (2½ by 6½ feet) between the forms at one end of the building. Likewise, while pouring the concrete for the gable ends, make provision for small ventilation doors 2½ feet square.

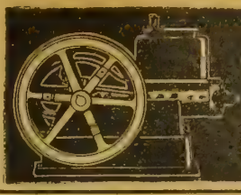
A wooden roof, while not durable like one of concrete, is more easily built. To hold the plates on the top of the side and gable walks, sink ½ inch bolts 8 inches long, heads down 6 inches into the concrete. Use 8-foot rafters and cover the building with a watertight roofing material.

Lay a 4-inch concrete floor upon the natural ground and give it a slope of ¼ inch to the foot in the direction of the drain at the service door. Place a trash strainer in the drain opening. The water in the "goose neck" sewer pipe will act as a seal and keep out the warm air of the drain.

Hinge the small doors in the gables to outside and top of the frames, so that they can remain slightly open at the bottom yet shut out rain. The service door also swings outward. The frame is fitted with short removable sections of boards set in slots or grooves so as to hold the packing in place.

In storing ice use a thickness of 12 inches of sawdust or 18 inches of marsh hay or straw over the floor and around the sides of the house. Set the ice on edge and pack it tightly together without any filler between the cakes. To prevent blocks from slipping, lay them in courses lengthwise in opposite directions in what masons call "headers and stretchers". When the house is full, cover the ice-pack with sawdust or hay weighted down. Keep the service door closed while removing ice and take care that the pack is again well covered. See that the drain works properly and prevents water from standing on the floor.

For building this solid wall concrete ice-house, there will be required 27 barrels of cement, 8½ cubic yards of sand, 17 cubic yards of crushed rock and 74 pieces (250 pounds) of ⅜-inch rods 9 feet long. If good pit gravel is at hand, haul 18 cubic yards: no sand will be required other than that in the gravel. The approximate total cost of these materials is $75.00. Such a structure will not rot out and will keep the ice with minimum shrinkage. And by means of ice, not only can more comfort be secured in hot weather, but also fruit, poultry and dairy products can be marketed at a greater profit.



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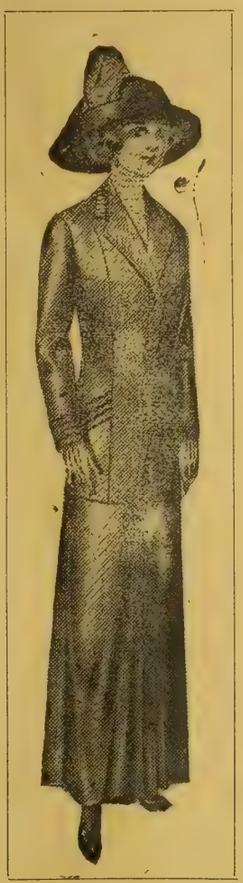

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This wonderful value sent prepaid

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SHORTHORN BULLS FOR SALE. Walter Eaton, Upper Canard, N. S.

FOR SALE—New Massey-Harris binder, 5 feet cut. A bargain. S. B HATHEWAY, Fredericton.

FOR SALE—Pure bred imported Clydesdale mare, seven year old. MORRIS SCOVIL, Gagetown, N. B.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

FOR SALE—A splendidly bred Holstein Bull, 14 mos. old, the last I have. Cheap at the price. S. B. HATHEWAY, Fredericton.

GUERNSEYS FOR SALE—1 yearling bull, and 4 between the ages of 4 and 10 months, all very fine animals. WILLIAM COX & SON, Canard, N. S.

BROTHER—Accidentally discovered root will cure both tobacco habit and indigestion. Gladly send particulars. S. T. STOKES, Mohawk, Florida.

JERSEY BULL FOR SALE. Four years old, sire Ferror (Imp.) No. 391, dam Brampton Regan, No. 439. Apply to J. J. CLARK, Sect. Tatamagouche, N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

25 FANCY CHRISTMAS AND NEW YEAR'S CARDS, only 25c. Also 100 free. High Grade, Very handsome. Beautifully colored and gold embossed. FARMER EMPORIUM, Beebe, Que.

WANTED—Ladies to do plain and light sewing at home, whole or spare time; work sent any distance; charges paid; send stamp for particulars. National Manufacturing Co., Montreal, Que.

FOR SALE—1 five year old Oxford ram. A very fine thick set well wooled sheep. Cost forty dollars in Ontario. A few of his pure bred ram lambs. Real good ones. Prices reasonable. E. J. PETERS & SON, Elmhurst, N. B.

WANTED—A Newfoundland dog (pup). Write stating price to G. E. STEEVES, Hillsboro, Albert Co., N. B.

Will sell five colts from five months to 3 1-2 years old, all sired by imported black Percheron stallion, D. W. McKENZIE, Nerepis Station.

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MUSICAL NOVELTY, POST CARD SONGS—Every song copyrighted. Send one to your friends. Six assorted for Twenty-five cents, postpaid. THE SAVOY, Oshawa, Ontario.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co., Queen Street, Montreal.

FARMS WANTED—We are now preparing to issue Farm Catalogue No. 4. If you wish to sell write us at once, our terms will surprise you. ALFRED BURLEY & CO., Farm Specialists, 46 Princess St., John, New Brunswick.

FOR SALE—Complete gasoline power outfit for stock barn. 3 horse Stickney engine. 60 ft. 2 in. steel shafting. Cummings straw and corn cutter, pulleys and belts. Cheap. S. B. HATHEWAY, Fredericton.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shediac, N. B,, during the week ending April 20th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, Sussex, N. B.

MACHINERY—We offer for sale the Machinery used by the New Glasgow Creamery Company. This machinery will be sold at scrap price as we require the room taken up by same. One Stoddard two-door power churn $15 for quick sale. This churn is as good as new and is complete with bearings, etc., all ready for power. The STEEL FURNISHING CO., New Glasgow, N. S.

Sea View Stock Farm

offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs this year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

Sgd. J. D. IRVING,
Buctouche, N. B.

Variation of Cows Milk.

The Irish Homestead publishes the following: Some carefully conducted expetiments in connection with the variation of the composition of cow's milk with the advance of lactation have been conducted at the Garforth farm of the University of Leeds. The records extend for three years and include 70 completed periods of lactation (34 cows), of which 57, each extending over six months or more. The following is the summary arrived at:

With regard to the rate at which the milk yield falls with advance of lactation our records indicate that after the first two or three months this is much more rapid in the case of cows calving in the months March to June than in the case of cows calving at other times of the year. The greatest average yield for the whole period of lactation was obtained with cows calving in January and February.

With regard to changes in the composition of milk our tests have brought out very clearly the fact that the variations in the composition of milk with advance of lactation may differ greatly in the case of the different cows, so that no precise generalization on the subject can be formulated.

Roughly speaking, however, the milk is richest in total solids, fat and albuminoids in the earliest and latest stages of lactation and poorest about the second or third mobth. The sugar content tends to decrease steadily with advance of lactation after the first month or so, but the proportion of ash remain approximately constant.

Maple Green Farm Holsteins

Offers for sale at reasonable prices a number of bull calves from record of performance dams and grandams with large records. I expect to be to Amherst Dairy test with the dams of these calves where they and their performance can be seen. For particulars write,

R. L. HICKS, Dalhousie Jct., N.B.

Mammoth Bronze Turkeys

From Canada's famous Breeder's Stock (Bells, Ont) (Tom 38 lbs.) young Toms $16.00, hens $5.00. Apply,

D. S. NOBLE,
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CORNING TURNIP SEED
FOR SALE

About 1000 of the famous Gr. Top "Corning" Turnip Seed, crop 1912, grown from selected roots. Price 50c., postpaid 55c.

S. P. GOUDEY, Yarmouth, N. S.

Guernsey Bull For Sale

We have a choice 25 months old bull for sale. also a choice Jersey bull 25 months old. We also have a number of cockerels of Barred Plymouth Rock, White Wyanndotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Apply to

Walter McMonagle & Sons,
Sussex Corner, N. B.

Ayrshires For Sale

One bull seven months old, two bull calves, one month old; six young cows due to freshen shortly, the sire of these calves, the bull and the cows are bred to is one of the richest bred imported cows in this province, One Shropshire ram lamb at a snap, prices most reasonable Satisfaction guaranteed.

T. J. Hawkins,
Larder, Col. Co., N. S.

Farmer Ads. will Bring Results.

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Maritime Winter Fair

Amherst, N. S.

December 2nd, 3rd, 4th & 5th, 1912

BIGGER AND BETTER THAN EVER

Increased Prize List Increased Accomodations

Milking Machine in Operation by Electricity

LOW FARES ON ALL LINES

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Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

Isaac Chipman & Son, Chipmans Corner, Kings Co., N. S.

Oxford Down.

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J. W. Callbeck & Sons, Box 386, Summerside, P.E.I.
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Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son, Sussex, N. B.
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Champions in the show ring dairy tests, and winners of the Silver Tea Service over all dairy breeds. Animals all ages and both sexes for sale.

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Raspberry Plants

Set them, and other Bush Fruits this fall. We have the leading varieties of Yellow, Red, Brown and Black Raspberries, Blackberries, Currants and Gooseberries.

Special prices for Fall delivery

Orders booked now for Strawberry Plants Fruit trees and other Nursery stock, for Spring Delivery. Let us quote you on Home Grown Plants.

E. L. COLPITTS,
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Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

Big Poultry Show

Prize Lists Ready--Send For One

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Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

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Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

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Ayrshires of choicest strains; imported and home-bred. Won in 1911 first for herd at Chatham and Fredericton; also Male Champion at Halifax and Chatham, and female Champion at Fredericton One Bull seventeen months old, FOR SALE.

PRESCOTT BLANCHARD, Prop.
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Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

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Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months. A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
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FOR SALE

Several yearling Guernsey Bulls, sired by "Golden Opinion" and "Prince of Willow." All prize winners at the Maritime Shows and Ottawa.

ROPER BROS., Charlottetown, P. E. I.

Pure Bred Ayrshire Stock For Sale

Come and see them or write for illustrated price list.

Allandale Farm, Hampton, N.B.
E. ALLAN SCHOFIELD, PROP.
Long Distance 'Phone 9—Stables near Station

FOR SALE

Six pure bred Jersey bulls, from one month to two years old, sired by Pogis 40th, of Hood Farm and Fohallk St. John O'Dreamwold.

JOSSELYN & YOUNG.

Lawndale Stock Farm

OFFERS FOR SALE

The following Pure bred Shorthorns

A few yearling heifers and bull calves bred in the purple. Also a few aged cows in calf to our herd bull Pontiac 82710. Prices reasonable. Call or write.

Lawndale Stock Farm, I. M. Lovett, M. D., Prop.
YARMOUTH, N. S.

Maple Grove Ayrshires

For immediate sale several young Bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N. B.

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

"HOLSTEINS"

We are now offering seven good grade cows and heifers due to calve in Nov. & Dec. bred to our herd bull, also some excellent purebred heifers now being bred to one of the best bulls in Canada.

LEA & CLARK, Victoria, P. E. I.

Cobequid Farm Holsteins

We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

BELLEVIEW STOCK FARM

Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

C. A. ARCHIBALD, - Truro, N. S.

SUNNY SIDE STOCK FARM

Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

In Chester White Swine I am booking orders for young pigs.

J. F. ROACH, 'Phone 111 **SUSSEX, N. B.**

BARGAINS!

To make room for our young stock we are offering for sale B. P. Rock Hens, (yearlings) which will be most suitable for breeding next season.

CRAIG BROS., Amherst, N. S.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
Canard, N. S.

RASPBERRIES

We can supply plants of the best hardy varieties Red Raspberries for fall setting, including "Herbert" the great yielder which at Ezperimental Farm, Ottawa, produced at the rate of 220 bushels per acre, also King (the best early) Hiram, Cuthbert, Eaton, etc. Guaranteed to live or replaced free.

ORCHARD HILL FARM, Brown's Flats, N. B.

HOMESTEAD FARM
Spring Offering

We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.

LOGAN BROTHERS,
Amherst, R. R. No, 1, N. S.

KERRY CATTLE

Breeders of Kerry Cattle are invited to forward their names and addresses to THE MARITIME FARMER. A subscriber wishes to get in touch with them.

EVERYHING you want in the line of Poultry Feed Remedies or Supplies. Send for catalogue.

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Money Makers on the Farm

Turkeys next to geese will make you more money than anything else on the farm. Get my book and raise turkey easily, no more trouble than chickens. Book free for a stamp. Indian Runner ducks and splendid Sicillian Buttercups.

Sarah E. Moses Smith,
Woodward's Cove, Grand Manan

FOR SALE

My Harness Business in the town of Shubenacadie doing a good business. Also my Farm consisting of six acres in good cultivation, only 200 yards from depot and school. Good house and barn, wood house; all in good repair. For further particulars apply to

W. H. HENRY,
Shubenacadie, N. S.

Successful Lessons in Poultry Raising

Twenty complete Lessons. The successful Poultry Book a simple and comprehensive treatise in the care and culture of domestic fowls. This book is sent free on request.

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Sole Agent for the Des Mones Incubator, P. O. Box, 2363, Montreal, P. Q.

Farm Bookkeeping.

Farmersj Bulletin 511, of the U. S. department of agriculture, contains some interesting facts and recommendations in connection with bookkeeping on the farm. "That there are over six million farms in the country which utilize land, labor, and capital as means of income making" gives the author, the opportunity to discuss the subject of the value of the farmer keeping an accurate and systematic account of his farm management the same as the business man or the railroad magnate.

This bulletin is not an attempt to outline a system of bookkeeping for the farmer. It is rather a discussion of the principles which are applicable to accounts on the farm. It is believed that any farmer who studies this bulletin sufficiently to grasp these principles will be able to devise a system suited to his needs.

Two important points must be considered in an attempt at farm bookkeeping. What does it cost to produce farm products? By selling at market prices, what profit is made on them?

"The problem of the farmer is to meet conditions on his own farm in a way which will give him the greatest net returns for his labor and the use of his capital. He should receive interest on his capital as well as wages for his labor, but owing to the lack of proper records few farmers know what wages they actually receive. There is reason to believe that the majority of farmers are really living on the interests of their investments rather than on the profits of their farm."

These suggestions are offered.

(1) Consider as one unit all that may be termed real estate, as land, farm buildings, fences, ditches, etc., whether the farm is rented or owned by the operator.

(2) Do not consider that the farmer or his family receive anything for their labor unless they are paid in cash the same as hired labor. If there is a surplus at the end of the year, it is their compensation. In this way the accounts will not be confused with items not strictly cash.

(3) Farm products used by the household should not be credited to the farm in the cash account along with the products sold, but should be taken care of separately.

Working up a Private Trade.

We had always sold to the stores at unsatisfactory prices, so I decided to try a scheme that I was sure would work. I had printed 1000 slips like this, 2½ by 5½ inches in size, and put

HOME CREAMERY
Made of
SEPARATED JERSEY CREAM
by
Mrs. W. W. SHEPHERD, Holtville, Cal.

one on each pound of butter and took it to the store as usual for three or four weeks. Then we changed to another store and the fun commenced, as the users called for our butter. They were told that none had come in this week. Another lot of families got to try it from the other store.

Then as we went to town we were hailed by friends and strangers to know if they could arrange to get butter each week from us. Of course we were only too glad to say yes, and when they asked the price we told them it would be the same as they would have to pay for "creamery" from the store. They have always been willing to pay the price and glad to get the butter.

You may be paid $50 in Cash for improving your walk like this

108 Canadian farmers will receive cash prizes (twelve in each Province) in our big

1912 FARMERS' PRIZE CONTEST

WE held a contest last year in which 36 prizes were offered. This year there will be three times as many prizes (108) and therefore three times as many chances for you to win one of them. You do not have to use a large quantity of cement to win a prize. Many of last year's prize-winners used comparatively little cement.

THE contest is divided into three classes and in only one of these (Class "A") does the amount of cement used count in deciding prize winners. Class "B" is for doing the *best* concrete work (the size makes no difference). Class "C" is for sending in the best and clearest *description* of how any piece of concrete work was done.

THERE will be four prizes (First, $50; Second, $25; Third, $15; Fourth, $10) in each class in each Province. Thus you have only to compete with other farmers in your own Province, and not with those in all parts of Canada. This gives you the best possible chance to win a $50 prize.

IT COSTS NOTHING TO ENTER—There are absolutely no "strings" to this offer. There is no entry fee or red tape to bother with. You cannot lose, because the improvements you make of concrete in competing for the prizes will be more than worth their cost. We have a book, *"What the Farmer Can Do With Concrete,"* that will give you all the information about the use of concrete you can need. It will be sent to you free when you ask us for complete particulars of the Prize Contest. Ask for particulars to-day. Just say "Send me, free, your book and full particulars of the 1912 Prize Contest," on a post card and mail it *to-day*. Address Publicity Manager,

PORTLAND CANADA CEMENT — CANADA CEMENT COMPANY LIMITED — MONTREAL

Canada Cement Company Limited, 503-561 Herald Bldg., Montreal

Bulls at Large.

It has always been my experience that bulls that are regarded as quiet are most often the ones that do damage. I know, as doubtless do all in the country who are among cattle, many wno have been injured by bulls and have known of several being gored to death. In a case which happened in my knowledge recently, there had never been any trouble with the bull, and he was always regarded as a very quiet animal, which is one more proof of the fallacy of the idea that quiet bulls are safe and can be trusted; they cannot, although they are regarded as safe and are trusted in their quietness and docility by a great many stock-keepers. These quiet and docile animals are just the ones that do most damage and the reason is because they are trusted and have their liberty, and when one makes up his mind to attack, or when he suddenly becomes vicious, man is usually defenceless. We know that there are many quiet bulls driven about which never cause trouble to anyone. We know, too, that given their liberty, vicious bulls would do far more damage than quiet ones, but these vicious ones are never given the chance to attack anyone, while the quiet ones are, and they are liable to turn vicious at any minute. Wherever bulls are at liberty persons driving them should be well prepared for defence, and farmers know that a hay fork is one of the most effective means of driving or taming a vicious bull, and something of the sort should always be used when bulls are being driven about.—M.

Uniformity in Candian Dairy Products

A few months ago there was held at Ottawa a conference of dairy experts and officials from all parts of the Dominion. The meeting was called by the Honourable, the Minister of Agriculture, for the purpose of endeavoring to perpetuate the uniformity in quality and character of Canadian cheese and butter that has been responsible for the success of Canadian dairying. As pointed out by the Dairy and Cold Storage Commissioner, who presided over the Conference, many things come up in the practice of dairying over which slight difference of opinion may arise so that it seems desirable to bring together from time to time those in charge of dairy schools, and the chief instructors, in the various provinces, to discuss methods and practices, in order to arrive at some agreement of dairy advisors. The Conference lasted two days during which time many matters of importance were taken up and freely discussed. Some of these were the pasteurization of whey, factory hogs, testing and grading cream at cream gathering creameries, whey, refuse in relation to tuberculosis in butter, methods of paying patrons of cheese factories and other subjects relating to the production of butter and cheese. For the information of buttermakers and cheesemakers, and others interested in dairying, there has been printed in verbatum report of the proceedings of this Conference. Copies may be procured by applying to the Publications Branch of the Department of Agriculture, at Ottawa.

Superiority of Aged Brood Sows.

The keeping of old sows as breeders is a debateable question. Many farmers claim that it does not pay to keep sows over, that gilts are just as good and that the feeding of old sows from June until December merely to raise a litter is not profitable. It does cost something to feed the old sows, but by allowing them the run of good pasture very little grain is required. They are far superior to gilts and I have had experience with both.

An aged sow's litter is worth as much as those of two gilts, when raised. The gilts have more or less trouble in farrowing. They will bring forth a dead pig and a couple of weak ones that may probably survive, but never amount to anything. An aged sow rarely has any trouble, and produces more pigs and stronger ones.

With aged sows an aged boar may be used, which is not possible with gilts, unless a breeding crate is provided. By using more mature breeding animals, stronger offspring will be the result. Stronger pigs mean that a larger per cent. will be raised, fewer runts and larger profits.—J. E. Connell in Breeders' Gazette.

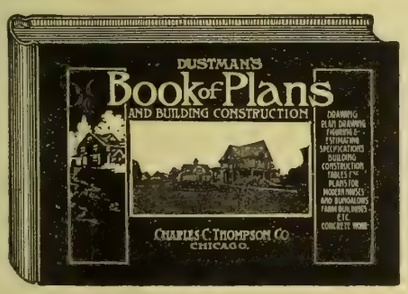
"It is a pleasure to tell you that Chamberlain's Cough Remedy is the best cough medicine I have ever used," writes Mrs. Hugh Campbell, of Lavonia, Ga. "I have used it with all my children and the results have been highly satisfactory." For sale by all dealers.

Peep again in your oven.
See those loaves, those *pleasing* loaves you've made.
How *fat—rounded—substantial.*
No, they *wont* fall when colder.
Because the *Manitoba strength* that is in FIVE ROSES will hold them up till eaten.
This sturdy *elastic* gluten has kept them from dropping *flat* in the oven.
No unsightly holes 'twixt crust and crumb—*never.*
All risen *evenly*—to *stay* risen.
Never heavy—sodden—soggy—indigestible.
Yours are the FIVE ROSES loaves—
Crinkly and *appetizing* of crust.
Golden brown and tender.
Snowy of crumb—*light* as thistledown.
FIVE ROSES helps a lot.
Try it *soon.*

Five Roses Flour

Not Bleached — LAKE OF THE WOODS MILLING COMPANY KEEWATIN — Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED MONTREAL



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By U. M. DUSTMAN, (*Licensed Architect*)

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Here's a different book from those upon the market. It contains information not generally known outside the building trades; just such information which the building public want. The author has written a book in which he has embodied the cream of over thirty years successful experience. He is widely known as a practical and expert architect and is an authority on the construction of medium priced homes.

Everyone interested directly or indirectly in building should have this book. 250 pages; oblong size, 9x13 inches; bound in blue cloth; white hand stamping—150 plans for modern houses, bungalows, barns, farm buildings, store fronts, store buildings, garages, etc., etc.

CONTENTS : General Construction Plans—Arrangement of Rooms—Things to be Considered in Laying out a building—Heating Facilities—How to Estimate Cost—Figuring Amount of Material Required—Time Saving Tables—Mechanical Drawing and How it is Applied in Construction of a Building—Plans with Estimated Cost of 150 Houses, Bungalows Barns, in Frame, Concrete or Brick Construction—Country Houses—General Barns, Cattle and Horse Stables—Dairy Barns—Poultry Houses and Silos—Hints as to Best Style of Structure—Details of Interior Construction and Finish—Window and Door Framing—Stairways—Store Fronts—Roof Construction—General Directions For Mixing and Placing Concrete—Proportions—Sand and Gravel—Itamized List of Material Costs—Writing of Specifications.

This book will be sent, together with a year's subscription to THE MARITIME FARMER to any person upon receipt of $2.00. That is if you are already a subscriber and will send us two dollars we will send you the book and give you credit for one year's subscription. If you are not already a subscriber and want the book, you may obtain it and THE MARITIME FARMER for $2.00 These books cannot be purchased anywhere for less than $2.00 each and they are a bargain at the price.

THE MARITIME FARMER, SUSSEX, N. B.

"It Took Me Fifty Years to Know How to Give You Better Roofs than any other Man"

"I tell you, every farmer in Canada should realize the big share a good roof has in making a good barn. That is my life-work—making roofs. I have been making my roof better and better for more than fifty years. What I have done for farm roofs is one of the biggest things ever done for people who farm."

"You ask me why a barn roof is so important. I will tell you. You build a barn and expect the roof to protect it many years. You put thousands of dollars' worth of produce under that roof while it lasts. Every pound of this produce costs you hard work. If a poor roof lets it get spoiled by wet, you lose money year after year. This lost money is many times the roof cost. Some roofs will last for several years. Some roofs will last if they are kept painted. But a roof is mighty hard to get at. It is not too safe to work on anyhow. Once a roof starts to leak, it is often left as it is. The result is the things you have in your barn spoil. This is lost money, and soon amounts to more than the cost of a good roof."

A Roof for Any Man

See What a Good Roof Can Do!

"I have spent my life making a low-cost roof that any man or his tinsmith could lay right. This roof of mine saves the stuff stored under it. It saves the barn framing and beams. It saves the foundation. This roof of mine doesn't need special roof timbering at all."

Good for 100 Years

"The big point about my roof is that it cannot develop leaks after you have had it up a year or two. It is a real roof from the first year it is on your barn to the last year. And do you know when that 'last year' will be? You will use that barn, and your son will use that barn, and your grandson will use that barn before that 'last year' comes. I want to pound the fact home to you that when you get a roof from me, you get a roof that is good for one hundred years. Think of getting a roof that makes your barn good for a hundred years. And that at about the price of an ordinary roof."

"That is why I say, 'I have helped the farmer more than any man ever did.' My roof will protect a good $100,000 of produce in your barn in 100 years. A roof that will do that is worth going after a good long ways."

Stands the Arctics

"This roof is so good that the Canadian Government Bernier Arctic Expedition used it for the Arctic regions. Here is immense cold and sweeping winds and ice and poor foundations to stand up under. The North-West Mounted Police use it. The Canadian Government has found no better roof for them. My roof is a good roof for the Arctic Circle. It is a still better roof for milder climates elsewhere."

Stands the Tropics

"But that is not all. My roof is used in the West Indies. Here is a temperature of 135 degrees at Porus, Jamaica. My roof stands it. In Jamaica during rainy season at Montego Bay, rain falls 10 inches in a single day. My roof stands it. In Ontario rain falls 30 inches in a whole year. My roof in Jamaica stands in 24 hours the rainfall it has easily 4 months for in Ontario. Is that a good roof? Is a roof that stands the severe conditions in both Arctics and Tropics good enough for you? You get exactly the same article, made on the same machines."

Used All Over the World

"Not only that, go down to South Africa. Go to the farms there. Go around Port Elizabeth, or Durban, or up in the Transvaal. You'll see my roof there. People will go around the world for my roof, because it is the best roof in the world. It will last 100 years. People use my roof in Japan—an earthquake country. They get it from me. They have searched the world for a roof that would stand earthquake straining. My roof will."

This Took 50 Years

"You are beginning to see something of the big work I have done. I have made a low-cost roof that stands terrific cold and heat, that stands tremendous rains, that stands ice, that stands earthquakes. In fifty years, I have made Pedlar roof better and better by little points added every year. It has world sales to-day, just because it is the best roof in the world at its very moderate price."

MY LATEST TRIUMPH

"Then, a few years ago, I put my finishing touch that made my roof wonderful. I had been troubled, not by my roof design, but by the metal in it. It seemed impossible to get a metal which would not rust. I had to take the best metal I could get. The design was all right. I had been making that design better for fifty years. At last I struck a clew in Europe."

"You know they have cathedrals there that are hundreds of years old. Yet the iron hinges on the doors are as good as ever to-day, though they were hammered out hundreds of years ago. I said to myself, 'Why not make up my roof in this peculiar kind of iron, so my roof will last like those door hinges?' Well, sir, that was a hard job. It was hard to get that iron duplicated. I worked for a long time and my chemists worked with me to get it. I stuck to it just as carefully as I had stuck to bettering my roof. And I got it at last. That's the metal I use to-day."

You Get the Benefit

"My roof is the only roof in the world with this kind of non-rusting iron in it. I am the only man a farmer can come to and say, 'I want a hundred-year roof at about the price I would pay for cedar shingle.' I am the only man that can deliver that kind of goods.

"My roof will not rust to the leaking point within 100 years. It saves the barn and its product from the weather. It saves the barn from thaw-water and lodged ice, because the seams cannot be gouged apart. It saves the barn from fire, because sparks cannot burn it. A burning stick on the roof will not harm it, or harm the barn under it. Lightning cannot burn a barn with my roof on it. My roof is a perfect conductor of electricity. My roof has 'give' in it to defy heat and frost, and protects in winter and summer. It protects even though the rafters sag. Wind cannot blow my roof off a barn. This is because it is a ventilated roof. It keeps your barn ventilated and stands the heaviest winds safely."

Get My Barn Book

"I want to send you my book, 'ROOFING RIGHT.' This lets you dig into more facts about the Pedlar roof. You will see how clean it is. It gives the best cistern water you can gather, as it is self-cleaning. This book shows scores of good barn designs—the best barns in Canada. Every one has my roof on it. You will get big help from my book, and I will send it free for a post-card, because you can plan your barn from it, whether you use my 100-year roof or not."

326

"I am the best friend the farmer has, because I have given him one of the best roofs in the world at a very low cost. I want to send out more of my barn books, because I want to see good barns built. I send a book free to you, if you will ask for it. Write me to-day."

G. K. Pedlar

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OUR SPECIAL CHRISTMAS AND The MARITIME WINTER FAIR NUMBER

MARITIME FARMER

AND CO-OPERATIVE DAIRYMAN

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Published Twice-a-month in the Interests of the [illegible] the Maritime Provinces of Canada.

Vol. 18. SUSSEX, N. B., DECEMBER 10, 1912 No. 5

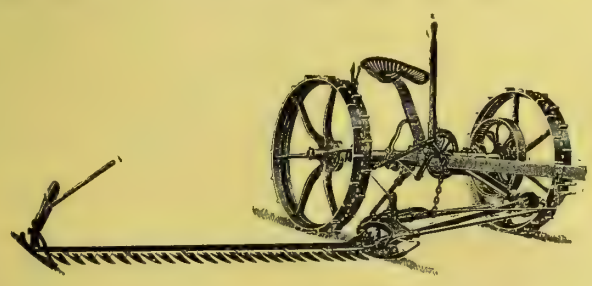
Remember "Frost & Wood." It Means "Quality"

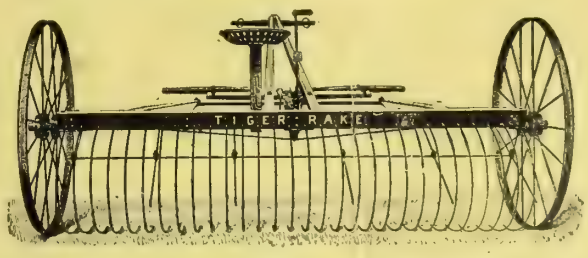
"QUALITY"—that's the word to apply to the kind of implements and machinery that save worry and trouble on the farm. Remember, a pretty machine may not have quality. A machine with a lot of "wrinkles" may not have qualjty. The material and actual working design may be so poor it is forever breaking down.

To buy right, you have to work from the reputation of the maker. The Frost & Wood industry has 70 years of experience, 70 years of "quality" construction 70 years of good-will and good reputation behind it.

Every Frost & Wood product is made with a view to maintaining that generation old confidence. These mowers and rakes are among the very best of their kind. With them you get things "done" on time and swiftly.

Send for Frost & Wood catalogues. Put thinking and judgment into your Spring buying by a Winter of careful consideration.





THE MOWER THAT ALWAYS IS READY FOR BUSINESS

THE "Frost & Wood" Mower has a long pitman, driven by an inside pinion working on an inside rack on the main wheel. The pinion has 3 teeth meshed with two rack teeth. The wear is divided and reduced. An outside rack and pinion would have one rack tooth grinding on one pinion tooth at a time, with great wear. See what you save?

You can't clog a F. & W. Mower. The knife moves instantly. Result, combined with the long pitman is swift, easy cutting for years and years of service like a new mower.

Roller bearings? Yes. Foot-lift for cutter bar? Yes. Easy levers? Yes. Easy oiling? Yes. Every modern convenience is in the F. & W. —and a 70-year reputation behind it. Send for catalogue of sizes.

THE RAKE THAT REALLY LASTS A LIFETIME

THE "Tiger" Rake is simple and strong, with steel wheels and superior non-breaking steel teeth that slip over the ground. The trip is easy, with a high lift, and undercleaners. The tooth-bar is steel, with a truss on the larger sizes. It handles timothy clean. Windrows of timothy may be easily bunched without dragging or clogging of the rake. We have made this rake as well as all our skill and facilities and experience can attain. It is weather proof, proof against hard usage, always ready for hard service and good work. Send for catalogue.

Write us or see our agent for any farm implement you need. Plan in Winter for Spring buying, instead of buying in haste and paying by years of dissatisfaction

Head Office & Works: SMITH'S FALLS, Ontario.

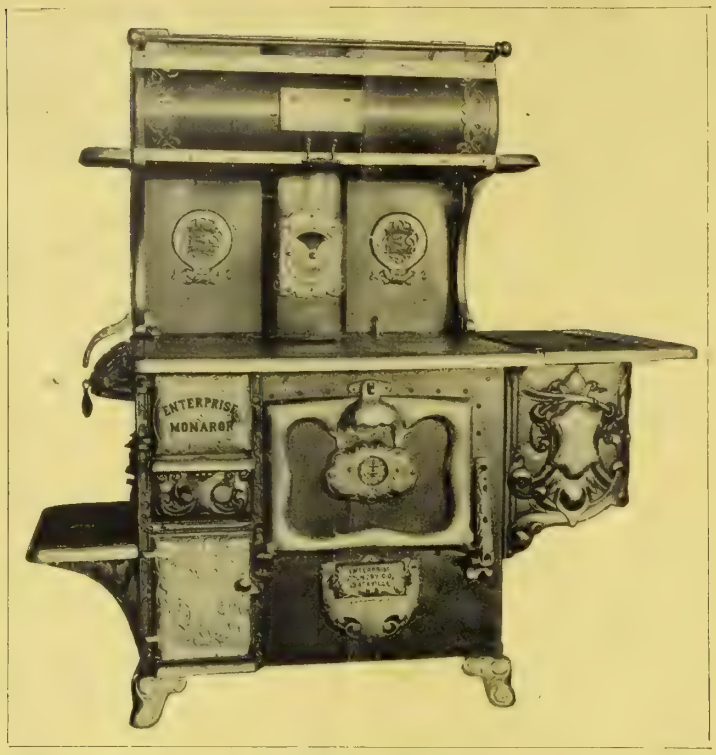
THE FROST & WOOD CO. Ltd.

SAINT JOHN, -- NEW BRUNSWICK.

Branches at Montreal, Que., Truro, N. S., Charlottetown, P. E. I.

CANADA'S FINEST STEEL RANGE

The ENTERPRISE MONARCH



--Just the thing for the Farm House--

It is no light "mail order" Stove, but a substantially built, high grade one that will stand the wear and tear of years of use.

It can be relied upon to bake perfectly at all times. It is easy to operate—there are no complicated dampers. For wood burning, it has a very large fire box that will hold the fire many hours.

A Copper reservoir that beats anything on the market, as it is very large (holds 9 Imperial gallons) and cannot burn out.

No need for new fire box linings. They are especially heavy and well ventilated and will last a long time.

Then the **MONARCH** is moderate in price, costing no more than many inferior ranges. **A WRITTEN GUARANTEE WITH EACH ONE SOLD.** You run no risk.

There are so many features of interest to careful house-keepers that it is impossible to describe them in this limited space; but we have an eight page circular, which will explain them fully.

Drop us a card to-day for this, and it will go to you promptly. We know you will be interested, whether you are ready to buy now or later.

The ENTERPRISE FOUNDRY CO., SACKVILLE, N. B.

MANUFACTURERS

Canada's Leading Stock Men Strongly Recommend The Use Of

Dr. WILSON'S DERBY CONDITION POWDERS

for Horses, Cattle, Sheep and Pigs

The names of the successful Stock Breeders whose testimonials appear in this advertisement, are household words in the Maritime Provinces. They are some of the leaders who are setting the ideal to which progressive fellow farmers aspire. They are authorities on the care and management of Live stock.

Read what they they say about Dr. Wilson's Derby Condition Powders, the best Live stock conditioner on the market as it purifies tne blood and improves the general apppearance of every animal to which it is administered.

Amherst, N. S., July 10, 1910.
The Brayley Drug Co., Ltd.
St. John, N. B.

Gentlemen,—It affords us great pleasure to let you know of the great success we have attained by the use of your Condition Powders. We have been feeding them for some time back and are satisfied that they are as good as you claim them to be and in our estimation there is no better in these parts.

Wishing you continued success, we are,

Yours truly, LOGAN BROS.

Breeders Holstein Cattle and Clydesdale Horses.

Truro, N. S., Jau. 12, 1910.
The Brayley Drug Co., Ltd.
St. John, N. B.

Gentlemen,—It affords us great pleasure to recommend Dr. Wilson's Derby Condition Powders to anyone looking for genuine Powders. We think they are a very good medium for fattening cattle and improving their appearance. We would not be without them as their cost is not to be considered with the vast amount of good they do. Yours truly,

RETSON BROS.

Buctouche, N. B., June 10, 1910
The Brayley Drug Co., Ltd.
St. John, N. B,

Gentlemen,—I believe I have been using Dr. Wilson's Derby Condition Powders since they were first introduced in New Brunswick. I am well satisfied that they have done my cattle a power of good. I have used no other in four years despite many inducements offered.

Yours truly, J. D. IRVING.
Seaview Farm.

Breeder Holstein Cattle and Clydesdale Horses.

Truro, N. S., April 19, 1910
The Brayley Drug Co., Ltd.
St. John, N. B.

Dear Sirs,—I will be needing some more of your Condition Powders pretty soon. When will your agent be in Truro?

I might take this means of congratulating you on your manufacturing such an excellent powder. I have recommended Dr. Wilson's to many of my friends who breed cattle as I feel sure they will be as well satisfied as I am. Yours very truly,

C. A. ARCHIBALD.

Silver Falls, St. John Co., N. B., Sept. 10, 1909
The Brayley Drug Co., Ltd.
St. John, N. B.

Dear Sirs,—Dr. Wilson's Derby Condiiion Powders were recommended to us and we decidad to give them a trial. We feel sure they have proved their worth to us in many ways. We feed them regularly and we feel safe in proclaiming them the best Condition Powders we have ever used. Yours touly,

JOSELYN & YOUNG.

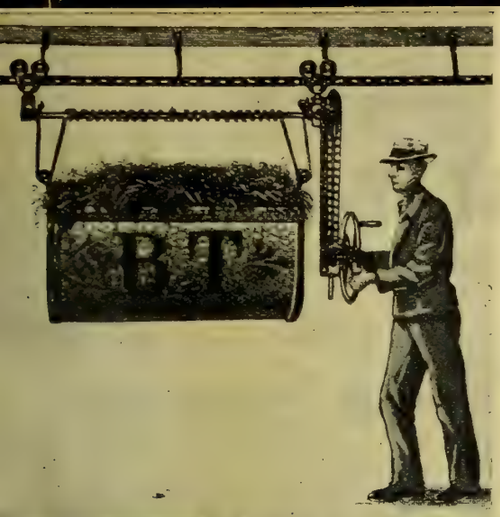
Burnside Farm, Howick. P. Q., March 21, 1910
The Brayley Drug Co., Ltd.
P. O. Box, 301, St. John, N. B.

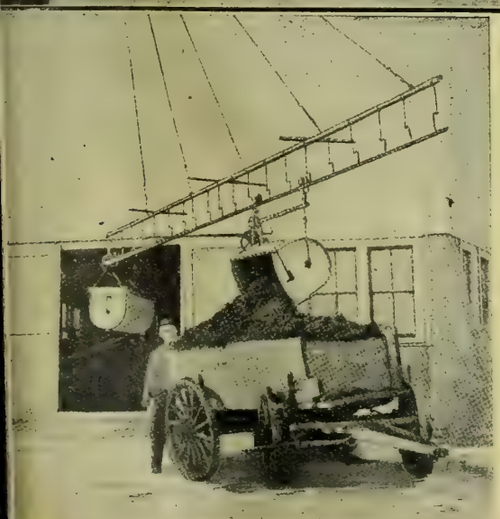
Gentlemen,—You will no doubt be pleased to hear what I have to say. I want to say a word in favor of your Dr. Wilson's Condition Powders. They were recommended to me at a Dominion Exhibition in Halifax, N. S., and I decided to try them. I have used many Condition Powders before but never with such remarked success as with yours. I think I have as nice a stock of Ayrshire cattle as can be be found anywhere and can give your Dr. Wilson's Condition Powders a share of the credit. Ever wishing you success, believe me,

Dear Sirs, yours very truly, R. R. NESS.

Dr. Wilson's Derby Condition Powders may be purchased in every town in the Maritime Provinces and is manufactured by the

BRAYLEY DRUG COMPANY, LIMITED ***St. JOHN, New Brunswick***





Mail Coupon Now for Catalogue

BEATTY BROS., Limited, 418 HILL ST. FERGUS, Ont.

Please send me your Catalogue of BT Manure Carriers, and quote me a price on a complete Manure Carrier Outfit.

I will need about ..... feet of track.

Name .....

P. O. .....

Province .....

BARN CLEANING Made Almost Automatic---Read The Proof Here NOW

You can lower the BT Manure Carrier right down to the gutter, and easily pitch half-a-ton of manure into the big wide-mouthed bucket---an easy shove sends this big load away out from the barn and you can dump it into the sleigh or wagon, or on the pile, in a minute.

Isn't it easy---there's no hard work about it at all---it's a snap even for your boy. Get him a BT Manure Carrier, and he'll be glad to do all the stable work. He'll like to do it, where your strong man hated it before.

And the best of it is, your manure carrier makes a far cleaner job. There you have a big wide-mouthed bucket, lowered close to the floor, behind the stalls. It's easy to fill it with the liquid as well as the solid manure---the galvanized water-tight tub, keeps all this until you reach the pile rods from the barn---there's no dripping or slopping along the passage way at all.

If you could read the hundreds of letters we receive in praise of the BT Manure Carrier, you would agree with us that it makes your barn cleaning automatic---and you'd be glad to write for our Catalogue and read all the facts about the BT Carrier.

The BT MANURE CARRIER

The BT Carrier means so much to you that you cannot afford to ignore the facts. Think ! In one big load it cleans your stable—the whole thing is done in a minute—only one trip out into the yard. That's worth something when it's bitter, icy, cold. And then you get the manure a good distance from the barn, where it can't rot the sides of your barn, or injure the health of your stock by the fumes given off.

Write for our Catalogue—we want you to read of the value and superiority of the BT Carrier. Know why it is the choice of the best farmers and dairymen all over Canada. Know why it is used exclusively on all the big Government Farms. Read about the BT Hand Wheel Windlass, the Friction Brake, the Latch, and Latch Trip, the Track and Hangers—Investigate all the superior qualities that make it years ahead of other styles.

Mail Coupon Now For Catalogue

This is the best time of the year to install your Manure Carrier—right now, while the work is slack. Our Catalogue gives you complete instructions, so that you can go ahead and quickly put up your Outfit. Don't delay. Be ready for the heavy stable work, in the January and February months. You ought to have our Catalogue. It proves to you that a BT Manure Carrier is the best investment you can make and pays for itself, before the winter's over, in all the dirty, disagreeable, tedious work it saves.

Send us the coupon NOW, and get our Catalogue by return mail.

Beatty Bros. LIMITED

418 Hill St., Fergus, Ont.

We also make Steel Stalls and Stanchions, Feed Carriers, Water Bowls, etc. When writing please ask for Catalogue.

NEXT SHORT COURSES

AT THE

Agricultural College, Truro, Nova Scotia

JANUARY 7th to 17th, 1913

Special courses for MEN and for LADIES open FREE to all students from the Maritime Provinces. In the past, these courses have been attended by people of all ages from sixteen to over seventy.

In the men's Short Course instruction will be given in Judging, Feeding, and Management of Live Stock of all kinds, Soil Cultivation, Crops, Seeds, Horticulture, Dairying, Veterinary Practice, Poultry and, if requested, classes will be provided in Entomology, Botany, Chemistry, etc.

A special feature of these courses will be Instruction in Road Making. The best practical experts available have been secured for this course.

The LADIES COURSE will include Dairying, (especially Butter and Soft Cheese making) Poultry Gardening, Floriculture, and Domestic Science.

All railways in the Maritime Provinces will give single fare on Standard Certificate Plan.

Write for full particulars to

M. CUMMING, Principal, - - Truro, Nova Scotia

Improves Quality

Increases Quantity

POTASH

Promotes Maturity

Produces Profits

Experiment conducted on Potatoes by

CHAS. WAYE, St. PETERS, P. E. I.

Plot 1.	Plot 2. lbs. per acre		Plot 3. lbs. per acre
Unfertilized	180	Sulphate of Potash	...
	360	Acid Phosphate	360
Yield	150	Nitrate of Soda	150
per acre 270 bus.	450 bus.		330 bus.

All progressive farmers, market gardeners and orchardists recognise the need and value of POTASH for their soils. This is apparent by the ever-increasing consumption of POTASH in all branches of agriculture.

This essential plant food can be obtained from all reliable fertilizer dealers and seedsmen in the highly concentrated forms of

Muriate of Potash and Sulphate of Potash

Educative and illustrated bulletins are forwarded FREE on application and information and expert advice on the economic purchase and use of fertilizers in general is readily given. Our publications include:---

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"The Potato Crop in Canada"
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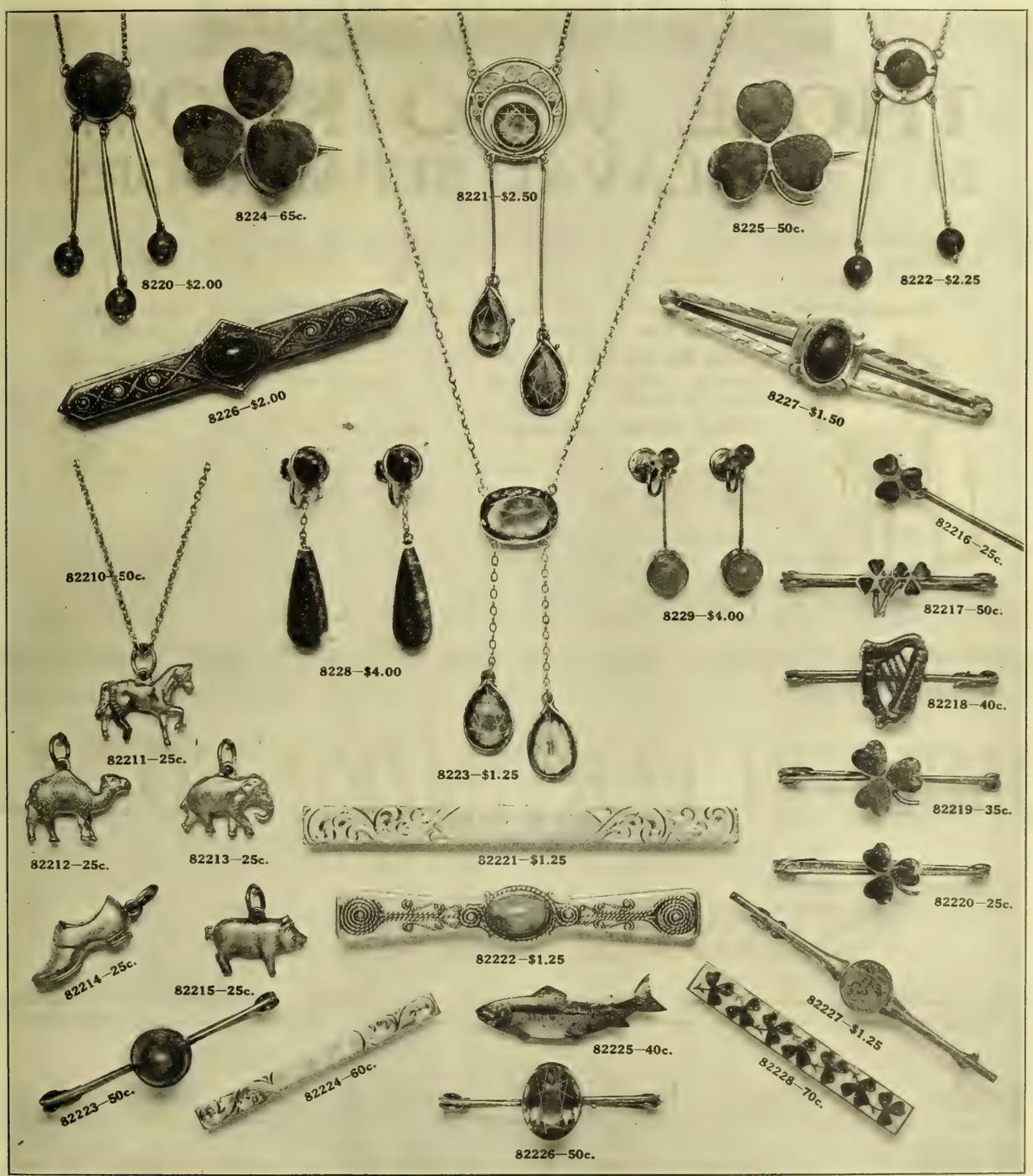

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Volume 18. **SUSSEX, NEW BRUNSWICK, DECEMBER 10, 1912.** **Number 5.**

A Business Man With a Business Herd

Business Methods in the Management of J. D. Irving's Sea View Farm, Bouctouche, N. B.

ABOUT 38 miles from the railway city of Moncton at the eastern terminus of the Moncton and Buctouche Railway is situated the thriving, pretty village of Buctouche, made famous the world over by the quality and quantity of the Buctouche Bar oysters, which are annually shipped from its extensive beds.

As soon as Jack Frost bridges the river, its surface presents an animated scene as a harvest of thousands of dollars are annually reaped from its smelt fisheries.

At other seasons of the year lobster, mackerel and other fisheries bring handsome incomes to the toilers of the deep.

The lumber interests also afford vast fields for the employment of labor and during the winter months, the lumberman's axe rings out a merry tune as the giants of the forests are being felled and made ready for floating to the busy mills at tidewater, in the village, where a large number of hands are employed in preparing the various grades of sawn and round timber for foreign markets.

Lumbering and fishing do not, however, comprise all of Buctouche's natural resources for the charming village is located in the very heart of one of the most promising agricultural districts in Eastern Canada. There are miles and miles of level or gently undulating land, which is entirely free from stone and which is easily worked. The creeks and rivers have a wealth of mussel mud which can be easily dredged and which is now being extensively used as a fertilizing element for the various farm crops.

There are few, if any sections of the Maritime Provinces where wheat is so extensively grown as in the county of Kent, where no fewer than five large, modern grist mills are to be found busily grinding the golden grain.

The rapidly growing city of Moncton affords a good market for all kinds of farm produce. The citizens of Kent County can truthfully exclaim "verily our lot has been cast in pleasant surroundings."

A BUSINESS MAN'S BUSINESS METHODS.

We would not be amiss in saying that the most industrious and energetic citizen of the delightful village is Mr. J. D. Irving, who when quite a young man recognized the merits of that portion of Kent County and who having seen behind the veil has been largely instrumental in developing its natural resources.

Of good old Scotch descent Mr. Irving was born and spent the early part of his life at Galloway, about eight miles from Buctouche, where his father carried on farming operations on a large scale.

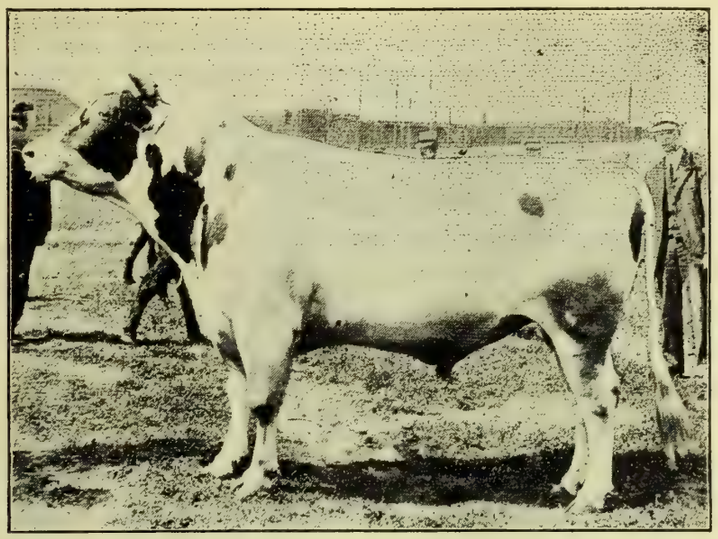
Mr. Irving's grandfather, a brother to the Irvings who built the famous Annandale dykes in Scotland, emigrated from that country and first settled near the headwaters of the Richibucto River. The Mr. Irving of our sketch came to Buctouche about thirty-two years ago, where he established a general mercantile business in the conducting of which he met with a goodly share of success. Today his stores are the most complete and up-to-date in the village.

The establishing of a mercantile business led on to trading in lumber and finally to conducting extensive lumbering operations, until the Irving saw mills became the largest and best equipped in Buctouche and furnish employment for a large number of men.

The products of the deep also engaged Mr. Irving's attention and in the course of time he has established a large cold storage plant and an export trade of no small dimensions.

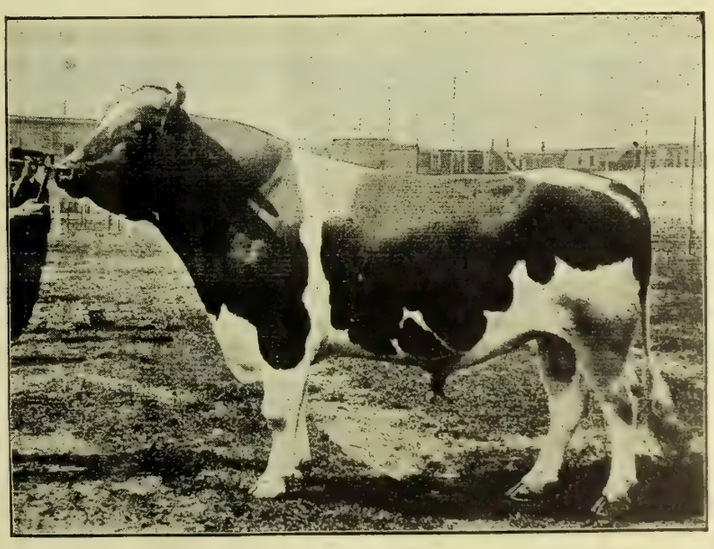
We have already stated that a considerable quantity of wheat is grown in the vicinity of Buctouche, to cater to the producers of which the Irving Mills were established about 14 years ago. They have a modern equipment and upwards of 50,000 bushels of home-grown wheat are annually converted into flour of the best quality, which is eagerly bought by the residents of the district in preference to any other brand.

Irving's carding mills are also a great convenience to the sheep-raisers of the surrounding district and to the industrious housewives, who have not forgotten the art of home manufacturing cloths and knitted goods of various kinds.



Count Tensen A.

Champion Holstein Bull at the 1912 St. John and Halifax Exhibitions. Owned and exhibited by J. D. Irving, Sea View Farm, Buctouche, N. B.



Lord Seaview Rooker

Reserve Champion Holstein bull at the 1912 St. John and Halifax Exhibitions. Lord Sea View Roker, has recently been sold to the North Sydney Agricultural Society. Bred, owned and exhibited by J. D. Irving, Buctouche, N. B.

A BUSINESS MAN'S FARMING OPERATIONS.

There is, however, no line of business in which Mr. Irving is more interested than in farming and to this occupation he has applied the same business methods that he applies to his other industries.

From the beginning of his career in Buctouche, Mr. Irving has been carrying on farming operations. His residence and barns are located on Sea View Farm, a gently sloping block of sixty acres of clay loam. Another block of fifty acres is near by while across the river there is still another block of sixty-five acres.

The various blocks are laid out in nice, large fields and a systematic rotation of crops is followed. The pastures are all located on the home block.

The refuse burned at the mills af-

fords enough ashes to cover about twenty-five acres each year. A large quantity of oyster and clam shells are also burned among the mill refuse and are thus made available for fertilizing purposes. Some 400 to 500 loads of mussel mud are yearly dredged from the river and spread as a topdressing on the fields at the rate of about twenty loads per acre. The afore mentioned materials coupled with good crops of clover supplement the manure from a large herd of pure bred Holstein cattle, seven horses, about fifteen Yorkshire hogs and a large flock of Barred Plymouth Rock and Rhode Island Red poultry in the upkeep of the Sea View Farm acreage.

A long row of stalls, to accomodate the horses of the public who patronize the stores and mills, have been built by Mr. Irving and he finds that the amount of extra manure thus collected in the course of a year gives a handsome income on the money invested in the sheds.

A thrifty young orchard is fast coming into bearing on Sea View Farm; which, coupled with a well kept kitchen garden afford many delicacies for the table, which are not so frequently found in our rural homes as they might be.

The residence, which is prettily located amid surroundings of well kept lawns, trees, shrubs and flowers enclosed by an artistic fence, is heated by the exhaust steam from the grist mill, which is located about 500 feet distant.

The steam is also conducted to the barns and is used for sterilizing the milking utensils, separator, calf feeding pails, etc Mr. Irving is now installing a large steam chest in which he purposes to steam cut straw for the cattle. The cut straw and short feed for the morning meal will be steamed at night and vice versa.

THE SEA VIEW FARM ROTATION

is as follows:—

Sod lands are ploughed in the Fall and topdressed in the Winter or Spring with mussel mud or barnyard manure and the first crop is oats.

The oat stubble is again topdressed the following Spring and wheat is sown. Timothy and clover seed is sown with the wheat at the rate of fifteen pounds per acre. In some cases, the timothy and clover is omitted and, in such cases the wheat stubble is topdressed in the Fall and in the following Spring the land is again topdressed and a crop of corn or roots follows.

The roots and corn are followed by wheat seeded with timothy and clover at the rate already mentioned. The land is then devoted to growing hay for two or three years after which it is again broken for oats and the rotation is again repeated.

At the time of our visit to Sea View Farm the root cellars were filled to overflowing with turnips and mangolds. We saw a well filled silo, which was built last summer to take care of a good crop of corn.

In years gone by the corn was fed green from the field but now, being preserved as ensilage it will be used alternately with the roots and to bridge over the season between the time the roots are used up in the Spring and the season when soiling crops are ready for use in Summer.

The lumbering operations call for a large number of heavy horses and to cater to this trade a pure bred Clydesdale mare has been imported from Scotland and will be used as the foundation for a suitable class of horses for this purpose.

Mr. Irving has been particularly successful in his choice of men to head the various industries in which he is interested. As a proof that the men are well used one has only to look over the long service records of the various foremen in his employ. David Evans, the efficient and trusty farm foreman, has been in Mr. Irving's employ for upwards of fourteen years. John McClintick, the herdsman, has been in charge of the herd for less than a year. He came to Sea View Farm after serving a long apprenticeship in the Dominion Experimental Station barns at Nappan, N. S., the Nova Scotia Agricultural College stables, Truro, N. S. and with Logan Bros., Amherst Point, N. S. Mr. McClintick's experience with the latter firm in caring for and fitting their large herd of Holsteins makes him a valuable asset in the upbuilding and maintenance of

THE SEA VIEW FARM HOLSTEINS

From a beginning with a herd of grade dairy cows and the trying out of the relative merits of several of the pure breeds Mr. Irving's choice finally fell on the Holsteins.

About seven years ago he bought the pure bred yearling bull, Togo Rooker, from Logan Bros. At the time this purchase was made there were three bulls in the same pen. Togo Rooker was the smallest one of the trio and naturally Mr. Irving was inclined to choose one of the larger bulls but as Mr. Logan recommended the smallest bull as being the most promising one in the bunch he followed the advice of the experienced breeder and never had cause for regret. At the Dominion Exhibition, in Halifax, three years ago, Togo Rooker, in strong competition, captured the male championship of his class.

Shortly after the purchase of Togo Rooker, the Homestead herd was again visited and the prize winning cow, Sijbrandij Rooker and a promising young heifer were added to the Sea View herd. Two prize winning young heifers, Lola Queen and Minnie Burke, from the herd of Neil Sangster, Ormstrong, Que. were next added to the herd.

Two years ago the Homestead herd was visited and once again the Sea View herd was strengthened by the purchase of the prize winning heifer, Jacoba Emiline.

Last summer the five year old cow, Rose of Bonheur Beauty, a Toronto prize winner, bred by W. Smith & Co., of Ontario was purchased from Logan Bros. In the Irving herd this cow captured the female championship at St. John, in 1912. The two-year-old heifer, Dorindo Vale, was also purchased from Logan Bros. last summer. Dorindo Vale was the first prize senior yearling heifer at Halifax in 1911 and in her two-year-old form was successful in capturing the female championship at Halifax having gone a notch higher than at St. John where she was reserve champion. Dorindo Vale is by Mercena Vale, the champion Holstein male at the Toronto exhibition.

The original herd header, Togo Rooker, having met an untimely death about two years ago, another herd header, Count Tensen A. was purchased for the Sea View herd by Mr. R. S. Stevenson, the popular Holstein judge, of Ancaster, Ont. from the herd of A. Hulet, Norwich, Ont. Count Tensen A. has made good and carried off the male championships at both St. John and Halifax Exhibitions in 1912. The reserve honors in the same class at both fairs went to the Sea View bred bull, Lord Sea View Rooker, shown in the Sea View herd.

The Sea View herd now numbers about forty head of typical pure bred Holsteins. The herd is managed in a business-like way—the milk from each cow is weighed every night and morning and is frequently tested for butter fat content. In this way a close watch is kept on the performance of each cow. When an intending purchaser visits the Sea View stables, he can refer to the performance records of the various cows in the herd and so if he is a discerning buyer will see that he is buying something that comes of a producing family. Buyers of pure bred stock are getting schooled up to be more and more discriminating as years go by, so like Mr. Irving the wise breeder will keep an accurate record of the performance of the various cows in the herd. We had an opportunity to look over the record sheets in the Sea View stables and noticed that the herd, as a whole, are doing good work at the pail and that the average test is somewhat better than 3 per cent. Several cows show butter fat tests of 4 per cent. or better.

A very promising young cow is the three-year-old Sadie Rooker whose dam is Lady Mary Rooker, champion in the New Westminster milking test in 1911. Sadie Rooker has a record of 63 pounds 3.8 per cent as her best achievement in one day during her first lactation period.

FEEDING SYSTEM.

At five o'clock in the morning a quantity of hay is fed and then the stables are cleaned. Milking is commenced at 5:30. After the milk is separated turnips and grain are fed.

(Continued on page 187)

A Birds Eye View of J. D. Irving's Homestead, Sea View Farm Bouctouche, N. B.

The Newfoundland Poultry Show

Specially Reported by one of the Staff

THE first poultry show ever held in Newfoundland, Britain's oldest colony, was held under the auspices of the Newfoundland Poultry Association in Arcade Hall, St. John's on November 20th, 21st and 22nd.

A Maritime Farmer representative visited the show and was highly impressed with the spirit of enthusiasm that prevails amongst the Newfoundland poultrymen. They are a lot of live wires and the rapid strides they have already made in the introduction and breeding of pure-bred poultry in the ancient colony as exemplified by the magnificent display at their first snow is an omen that spells s-u-c-c-e-s-s.

The officers of the Newfoundland Poultry Association are: President—Hon. Mr. Justice Emerson; Vice Presidents—Hon. W. C. Job and Hon. Geo. Knowling; Treasurer—Geo. W. Gushue; Secretary—W. Barker; Directors—Percie Johnson, A. McKeen, Howard Parsons, Walter Reid, and Otto Rusch.

The aim and object of the association is to foster and develop the poultry industry and arrest the enormous importation of poultry products. With the various officers of the association the work of looking after the details incidental to the carrying on of a first-class poultry show, is a labor of love for the various officers are willing to spend and be spent for the good of the cause which they have so whole heartedly espoused.

A great deal of the success already attained is due to Mr. Percie Johnson, that enthusiast of enthusiasts, who repeatedly visits the Maritime Winter Fair ever ready to glean ideas that may be applicable to Newfoundland conditions. He and his associates have worked nobly and well. Last year they induced Professor J. P. Landry, of the Nova Scotia Agricultural College, to visit St. John's and on his advice they have gone forward with the work of organizing a poultry exhibition and their labors have been crowned with success, far in excess of their most sanguine expectation and to the delight of the thousands of visitors who visited the show.

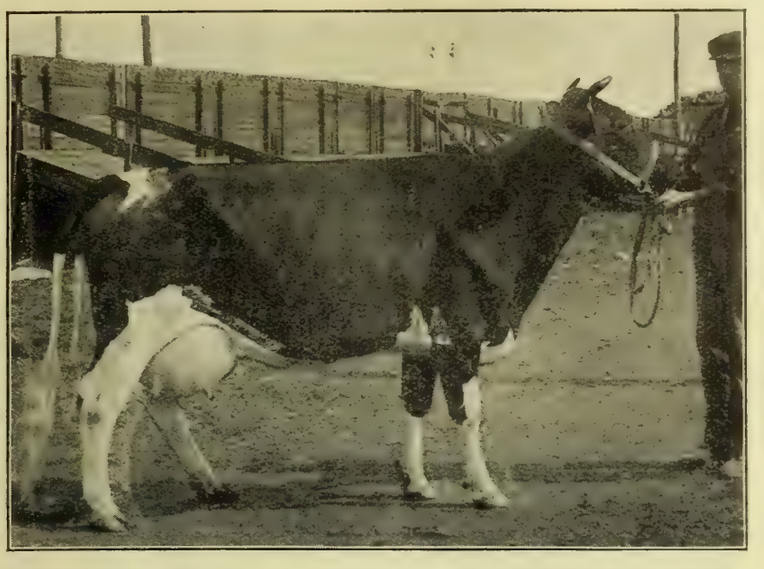
The result is, that numerous persons residing in St. John's and the various outports who had not hereto-fore taken any interest in poultry, were enthused by the display of birds and Professor Landry's illustrated lecture are already inquiring for eggs and birds and undoubtedly a year hence will see the poultry status in Newfoundland increased over 100 per cent.

Sir Edward Morris, the Premier of the Colony and the various members of the Board of Agriculture and other influential parties did all in their power to help make the show a success, viz: by giving a grant of $400.00 an array of silver trophies and many useful special prizes and also by being present and taking part in the proceedings at the opening and closing exercises.

Prof. J. P. Landry satisfactorily placed the awards in his usual pains taking manner and in so doing explained to interested onlookers the why and wherefore for every award.

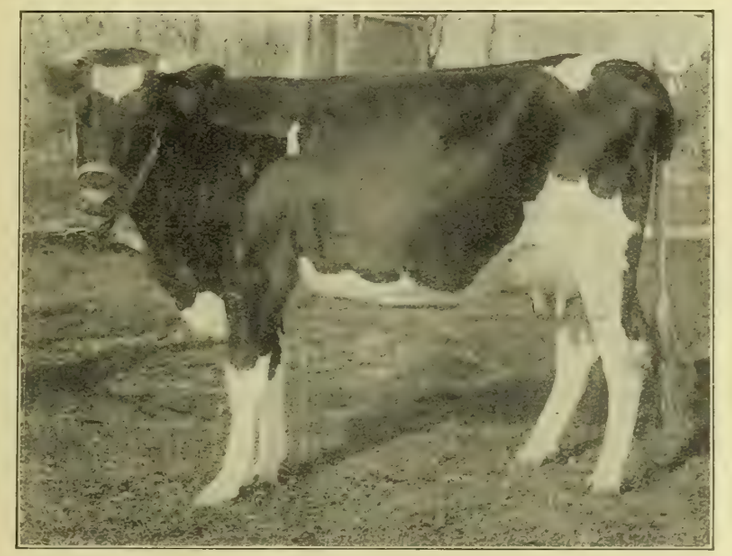
There were nearly 400 birds in the show, and attractively cooped as they were in up-to-date metal, wire fronted coops they reflected a great deal of credit on their owners and on the progressiveness of the various committees in charge.

Neat catalogues were distributed and every arrangement was in such a ship shape condition that strangers naturally supposed that the show had been an annual event for many years; great was their surprise when they were told that the 1912 show was the initial attempt.



Rose of Bonheur Beauty

Champion Holstein Cow at the 1912 St. John Exhibition and Reserve Champion at the Halifax Exhibition. Owned and exhibited by J. D. Irving, Buctouche, N. B.



Dorinda Vale

Reserve Champion Holstein Female at the 1912 St. John Exhibition and Champion at the Halifax exhibition. Owned and exhibited by J. D. Irving, Buctouche, N. B.

In response to the cry "Come over to Harbor Grace and help us" the poultry Association, at the close of the show induced Prof. Landry to remain in the colony a day or two longer and deliver a lecture in Harbor Grace, where he was welcomed by a large and appreciative audience who are becoming very much interested in the subject of more and better poultry.

With the exception of one or two entries the various birds in the show were well up to the standard. There were some birds in the respective sections that would be hard to beat in heavier competition. Some of them have been winners at some of the mainland shows but the great majority were home bred birds the progeny of stock and eggs imported from some of the most noted and successful breeders on opposite sides of the Atlantic.

Rhode Island Reds led the way in point of numbers with a total entry of 62 birds. White Wyandottes came next with an entry of 51 birds. Barred and White Rocks each had entries of 23; Black Orpingtons, 21; Buff Orpingtons, 19; White Leghorns, 19; White Orpingtons, 15; Silver Wyandottes and S. C. B. Black Minorcas, each, 14; Anconas, 11; Light Brahmas, 8; Brown Leghorns, 6; Bantams, 6; R. C. Black Minorcas, 5; Buff Leghorns, 4; A. O. V., 4; Columbian Wyandottes, 2; Guineas, 2; Bronze and Black Turkeys, 9; Tolouse Geese, 2 and a good aggregation of Pekin, Rouen, Indian Runner, Muscovey and Buff Orpington Ducks, of exceptionally high merit.

We were pleased to note that the majority of the exhibitors are close students of the Standard of Perfection and of the various Canadian and American poultry periodicals.

The competition was very close in some sections. The winning reds were red to the skin, the whites were pure white and the barred were barred. We predict that next year the Association must seek more commodious quarters to accomodate a larger number of entries. We compliment them on what they have already attained and wish them every deserved success in future years.

Following is a list of the awards;—

Prize Winners at the Newfoundland Poultry Show.

Light Brahma hen—1 and 2, Rev. J. J. Coady, Manuels.

Light Brahma cockerel—1 and 2, Frank Parsons, 54 Fresh Water Road, City.

Light Brahma pullet—1, Mrs. J. E. Rendell, Military Road, City.

White Orpington cock—1, Hon. Geo. Knowling, Waterford Bridge Road; 2, J. E. Dempster, Waterford Bridge Road.

White Orpington hen—1 and 2, J. E. Dempster.

White Orpington Cockerel—1, W. Campbell, Waterford Bridge Road; 2, Hon. Geo. Knowling.

White Orpington pullet—1, Stanley White, 8 Fresh Water Road, City; 2, J. E. Dempster; 3, W. Campbell.

Buff Orpington cock—1, Hon. Geo. Knowling.

Buff Orpington hen—1, Helen Parsons, Bellvue Farm, Old Placentia Road, City; 2, Hon. Geo. Knowling.

Buff Orpington cockerel—1, W. Barker, LeMarchant Road, City; 2 and 3, Heber Parsons.

Buff Orpington pullet—1, Heber Parsons; 2, W. Barker; 3, J. E. Dempster.

Black Orpington cock—1, Hon. Geo. Knowling; 2, Percie Johnson, St. John's; 3, J. E. Dempster.

Black Orpington hen—1, Stanley White; 2, J. E. Dempster; 3, Mrs. Tryphena Wyatt, 13 Monroe St., City

Black Orpington cockerel—1, J. E. Dempster; 2, Hon Geo. Knowling.

Black Orpington pullet— 1, J. E. Dempster; 2, Hon. Geo. Knowling; 3, A. G. Carter, 157 Water St., St. John's.

Barred Plymouth Rock Cock—1, Rev. J. J. Coady; 2, W. Barker.

Barred Plymouth Rock hen—1, Frank Bennett, 166 Duckworth St. City; 2, Rev. J. J. Coady; 3, W. Barker.

Larred Plymouth Rock cockerel—1 and 2, W. Barker.

Barred Plymouth Rock pullet—1 and 2, W. Barker.

White Plymouth Rock cock—1, W. Reid, Pleasant St. City; 2, John Duff, Carbonear; 3, Mrs. M. F. Smythe, Robinson's Hill, City.

White Plymouth Rock hen—1, 2 and 3, W. Reid.

White Plymouth Rock cockerel—1, W. Reid; 2, Mrs. M. F. Smythe; 3, Harris Thomas Jr., Carpasian Road.

White Plymouth pullet—1, Harris Thomas; 2, W. Reid; 3, Mrs. M. F. Smythe.

Partridge Wyandotte cock—1, H. W. F. Blackall, 23 Forest Road.

Partridge Wyandotte cockerel—1, H. W. F. Blackall.

Partridge Wyandotte pullet—1, H. W. F. Blackall.

Silver Wyandotte cock—1, Hector McNeil, 163 LeMarchant Road.

Silver Wyandotte hen—1, Hector McNeil.

Silver Wyandotte cockerel—1 and 2, Hector McNeil.

Silver Wyandotte pullet—1, 2 and 3, Hector McNeil.

Columbian Wyandotte cock—1, Stanley White, 8 Freshwater Road.

Columbian Wyandotte cockerel—1, H. McDonald, 174 Pleasant St. City.

White Wyandotte cock—1, M. McLeod, St. John's; 2, G. W. Gushue; 3, P. H. Hudson, Pennewell Road, St. John's.

(Continued on page 179)

Willow Glen Farm, the Home of Good Shorthorns

Produces Fruit in Abundance

WE had the pleasure not long ago of paying a flying visit to Willow Glen Farm, New Minas, N. S. New Minas is in Kings County and Willow Glen Farm is the steading of A. N. Griffin a prominent fruit grower and the breeder and exhibitor of the champion Shorthorn female at Halifax in 1912.

Mr. Griffin, from his earliest boyhood, had a liking for good horses and cattle and as a rule he keeps a trappy Standard-bred driver.

He began showing Shorthorns in the olden days when the shows were moved around alternately to Halifax, Truro and Kentville. On one occasion he exhibited a carload at Truro and succeeded in winning a prize on every animal in his herd.

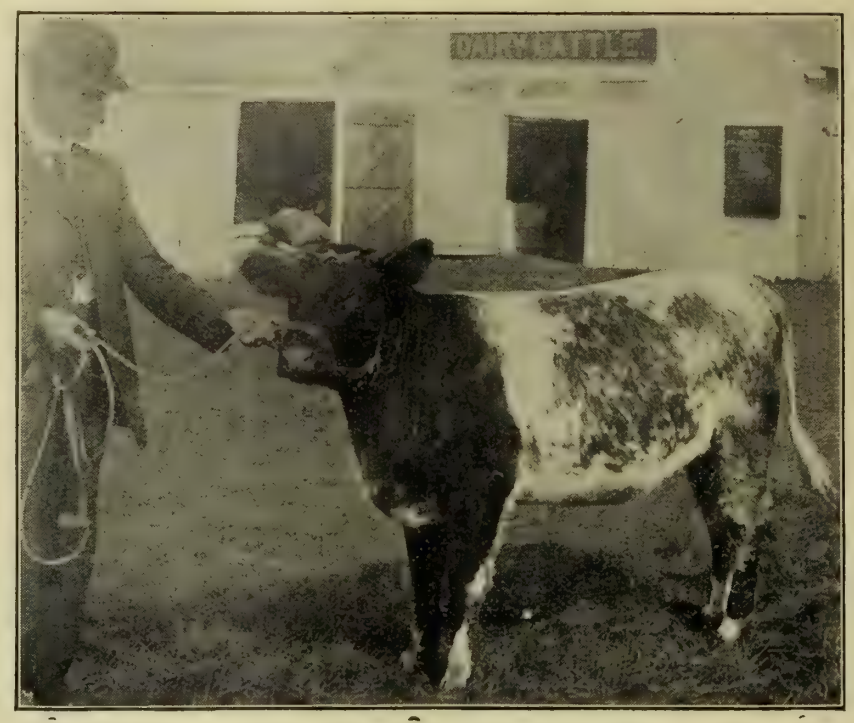
Mr. Griffin made several trips to Ontario for the express purpose of purchasing cattle for himself and others and also for his Agricultural Society. In 1903 he visited the Toronto exhibition, but did not purpose buying any stock at that time. However, Mr. J. M. Guardhouse invited him to visit his farm and look over his stock with the result that he purchased two cows and two heifer calves. He swapped off one of the calves for one of a different strain, a low, thick set calf about one month old which has proved to be a grand breeder.

Her name was Emma's Lass—55904—dam Emma's Lady by Nonpareil (imp) grand dam, Lady Emma (imp) a Marr Emma of the best Scotch breeding. The first calf produced by Emma's Lass was a male that in his calfhood carried off the first prize at the exhibition. This year she proproduced Emily of Willow Glen, the 1912 champion Shorthorn female at Halifax.

The other cow purchased with Emma's Lass was a Strathallan and the following year she produced the heifer, Rose of Willow Glen, which took third prize as a calf at the provincial exhibition that year and made a grand breeder. She dropped three bull calves on Willow Glen Farm and this year as a member of the Lawndale herd she won second prize in her class in strong competition at Halifax.

The calf purchased with the other cow won second prize as a five year old at the Halifax show after which she was sold to the Nova Scotia Agricultural College, Truro.

At the present time the Willow Glen herd contains three heifers, sired by Sensational—78480—the sire of the champion heifer, the first prize bull calf and of the first prize winning trio, get of one sire at a leading Western show last season.



Mr. A. N. Griffin and his Emma of Willow Glen
Champion Shorthorn Female at the Halifax Exhibition.

Sensational was sired by Hillsburg Tom—26756—a bull bought for the New Minas Agricultural Society from Mr. W. B. Watt, of Toronto. The year he was purchased he had won second prize at Toronto and London. He sired a lot of prize winners including the renowned show cow, Olga Stamford, dam of the Ohio, Indiana and Michigan state fairs, junior champion of last year.

At the time of our visit we also saw a cow by Deeside chief (imp) and one by Willow Glen Boy—75584—dam Willow Glen Lass—87702—grand dam Emma's Lass—55904. Emma's Lass had a nice heifer calf, a few days old by her side.

Another promising young heifer in the Willow Glen herd is Vangey—99970—sired by Lord Cornwallis, a bull whose dam won second prize at Halifax this year. On her dam's side Vangey traces back to Young Abbotsburn, a World's Fair champion at Chicago and also to Brampton Hero a champion and sire of champions.

Victor—84774—the bull used to head the Willow Glen herd this year was purchased last winter from Mr. John Miller, of Thistle Ha, Ont. Victor's sire was Woodfield Prince—75238—by Trout Creek Wonder—56167—by Prince Sunbeam (imp) a champion at Toronto and other shows, dam by Royal Prince (imp). Victor was sold recently to Mr. Isaac Chipman.

Another promising young cow, Willow Glen Lass, was recently sold to Mr. Lewis Chipman. Willow Glen Hero—86837—first prize bull calf at Halifax, a nice growthy youngster whose dam is Willow Glen Lass—87702—is offered for sale and should prove a valuable herd header.

Mr. Griffin again visited the Toronto exhibition, but did not purpose buying any stock at that time. However, Mr. J. M. Guardhouse invited him to visit his farm and look over his stock with the result that he purchased two cows and two heifer calves. He swapped off one of the calves for one of a different strain, a low, thick set calf about one month old which has proved to be a grand breeder.

Her name was Emma's Lass—55904—dam Emma's Lady by Nonpareil (imp) grand dam, Lady Emma (imp) a Marr Emma of the best Scotch breeding. The first calf produced by Emma's Lass was a male that in his calfhood carried off the first prize at the exhibition. This year she proproduced Emily of Willow Glen, the 1912 champion Shorthorn female at Halifax.

The other cow purchased with Emma's Lass was a Strathallan and the following year she produced the heifer, Rose of Willow Glen, which took third prize as a calf at the provincial exhibition that year and made a grand breeder. She dropped three bull calves on Willow Glen Farm and this year as a member of the Lawndale herd she won second prize in her class in strong competition at Halifax.

The calf purchased with the other cow won second prize as a five year old at the Halifax show after which she was sold to the Nova Scotia Agricultural College, Truro.

At the present time the Willow Glen herd contains three heifers, sired by Sensational—78480—the sire of the champion heifer, the first prize bull calf and of the first prize winning trio, get of one sire at a leading Western show last season

The Boswalls, a Family of Sheep Breeders

READERS of the Maritime Farmer who follow our reports of the various Maritime inter-provincial Exhibitions and Fairs are familiar with the names of Albert Boswall, Sr., Pownal, P. E. I.; S. L. Boswall, Pownal; A. H. Boswall, Marshfield; Albert Boswall, Jr., French Fort; Geo. L. Boswall, French Fort and Almon D. Boswall, Dunnstaffnage as breeders and exhibitors of various breeds of pure bred sheep. As successful shepherds the Boswalls have been prominently before the public for many years.

Albert Boswall Sr., emmigrated from Somersetshire, England, when four years of age with his father the late Dr. Boswall, of Prince Edward Island. About fifty years ago Mr. Boswall started in the business of sheep breeding with Leicesters, the breed of his choice which he has zealously followed for half a century.

His first exhibiting experience was at the county show where he exhibited one lamb. He kept on increasing his flock from year to year by the natural increase and by stock imported by the Prince Edward Island Stock Farm. In this way he soon fitted a flock of Leicesters that was hard to beat at any show. He exhibited at the great Dominion Exhibition held at Montreal and from there carried off a great many of the most coveted prizes and diplomas.

Shortly after the Montreal Dominion Exhibition Mr. Boswall purchased some Shropshire Downs and in a few short years he was able to show a flock of the breed at Charlottetown and was successful in carrying off a goodly share of the prizes.

Mr. Boswall Sr. has nearly always imported his stock rams from Ontario and occasionally from England and Scotland from the best and most reliable breeders such as John Kelly, A. W. Smith, J. M. Guardhouse, John Dryden, John Campbell and others.

About twenty years ago when St. John, N. B. threw its exhibition open to the Maritime Provinces, Mr. Boswall was for some years the only exhibitor of live stock from Prince Edward Island who took advantage of the opportunities thus afforded. He was quite successful from the very beginning in competing against some of the best Quebec and Ontario flocks. He made his first showing in Halifax in 1896 and has ever since been annually showing there with most gratifying success.

As the years rolled by and his sons grew up to manhood one after another decided to follow in their father's footsteps and engage in the sheep raising industry.

A. H. the eldest son, removed to Marshfield where he purchased Tulloch Farm from Senator Ferguson where he is now engaged in the breeding of Oxford Down sheep and Clydesdale horses.

S. L. remains with his father on the Pownal Farm where they still breed their prize winning Leicesters and Shorthorn cattle. Albert Boswall Jr. purchased "Harbor View Farm," French Fort, where he breeds Lincolns and Suffolks. The foundation of his Lincoln flock was a pair of ewes purchased from G. F. Bovyer. He then bought a first class ram from J. T. Gibson, Denfield, Ont. He has worked carefully and well until he now has the satisfaction of owing the champion ram, any breed in Maritime Canada.

The foundation for his suffolk flock was purchased in England at fancy prices.

Alfred Jr. is also a successful breeder of Bronze and White turkeys, White Embden and African Geese, Mammoth Pekin Ducks and White Plymouth Rock fowl.

Geo. L. Boswall, settled on Blackadder Farm, French Fort, and there he specializes in the breeding of Shropshire Downs and Horned Dorsets. He has built up his flock by the introduction of new blood from such noted breeders as John Campbell, W. Dryden, R. H. Harding and others. He too has been a successful exhibitor at the leading Maritime shows.

Almon D. Boswall the youngest son purchased Riverdale Farm at Dunnstaffnage about a year ago. He keeps a few nice Leicesters and Lincolns and his aim is to build up two good flocks. He also has a fine stud of Hackney horses on which he won three of the first prizes, a second prize and championship on carriage mares at the recent Cnarlottetown exhibition. He purposes exhibiting a stronger class next year.

The various members of the Boswall family are thorough shepherds. They find sheep breeding is a most profitable industry. They grow the hay, roots and grains required for the maintenance of their flocks on their respective farms. Their farms are free from weeds and the soil fertility is not being depleted as is too often the case where raw products are shipped from the farm. The Maritime Provinces as a sheep raising country is second to none. There are thousands of acres awaiting the touch of development that our young men could give if, like the Boswal, boys, they settle at home and systematically engage in some special line of agricultural industry.

Geo. L. Boswall's Prize Winning Shropshires at the leading 1912 Fall Fairs

Liecoln Ram

Winner of the Canadian Bank of Commerce Gold Medal Special Prize for the best ram, any breed, at the 1912 St. John Exhibition. Owned and exhibited by Albert Boswall Jr., French Fort, P. E. I.

Albert Boswall's Leicesters, Prize Winners at the Leading 1912 Fall Shows

Progressive Dairy Farming and Stock Raising

An Example of Energy and Progressiveness on McIntyre Bros. Spring Brook Farm

SPRING Brook Farm, McIntyre Bros'. steading and the home of the largest herd of pure bred Ayrshires in the Maritime Provinces is located about three miles from Sussex, the birthplace and home of The Maritime Farmer.

The Spring Brook is not only the largest Ayrshire herd in the Maritime Provinces but their show records for many years have so prominently brought them before the public, that strangers who come to Sussex inquire about the herd as one of the many attractions in the vicinity of the town and almost invariably arrange to see the herd in home quarters.

It is useless to say that visitors are always heartily welcomed at the McIntyre homestead, and a visit to the stables is a source of revelation, instruction and delight to the visitor.

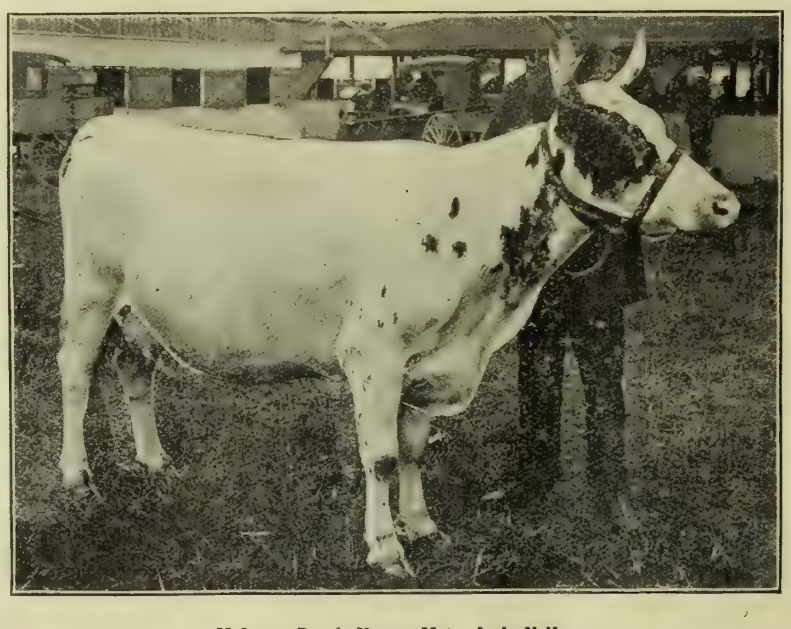
Spring Brook Farm comprises about 600 acres of which 300 acres are cleared and cultivated. The balance is woodland. The soil is a clay loam and is no better than the average soil in the locality only as its fertility has been conserved by judicious farming.

McIntyre Bros. follow a general plan of rotation, which is not, however, inflexible as they change it some-what to suit conditions of soil and season peculiarities. As much plowing as possible is done during the summer and fall, a portion of which is manured and planted with roots and corn, while the remainder is devoted to the growing of oats or buckwheat. The land intended for the hoed crops is manured in the fall and after it is plowed it is harrowed smoothly, in which condition it remains throughout the winter. In the spring it is disced up thoroughly for the planted crop. Sometimes the hoed crops follow oats, and good results are experienced by following both methods. After the hoed crops, wheat or oats is sown and the land seeded. The seeded hay fields are left down for two years, sometimes longer, in case there is a particularly good stand after which they are pastured for a year before repeating the rotation.

The farm is largely upland, though there is a moderate proportion of intervale. About half the land is usually devoted to hay and the other half to grain and hoe-crops. The average yield of turnips per acre is from 1000 to 1250 bushels. A considerable quantity of corn is grown and ensilaged and is fed alternately with the turnips during the winter and spring months. While the season is usually short and the crop gets nipped with frost in some years, McIntyre Bros. persist in growing this succulent crop and find it a great asset in the manufacture of milk and in the maintainance of the herd in a healthy, vigorous condition.

Grange Kelly—30841

Sweepstakes Ayrshire Bull at the St. John and Halifax Exhibitions, also first with three of his get at St. John. Owned and exhibited by McIntyre Bros.



McIntyre Bros'. Norton Mains Lady Nelly

Grand Champion Ayrshire Cow at the 1912 St. John and Halifax Exhibitions.

All the crops produced on the farm are fed in the stables and the necessary supplementary feeds are bought direct in car lots as required.

McIntyre Bros. pay a great deal of attention to the quality of the seeds they sow. They follow a vigorous system of selection with their seeds as they do with their stock and are usually in the list of prize winners at prominent Maritime Seed Fairs. This system of seed selection also stands them in good stead in the Annual Field Crops Growing Competition. In the 1912 competition open to any farmer in the County of Kings, they were successful in carrying off the highest awards in wheat, oats and turnips. This triumph was largely due to careful preparation and after-tillage of the soil well fertilized and the use of selected seed.

A few years ago they won the $100 in gold offered by the Bug Death Chemical Co. for the best six barrels of potatoes, a cut of which is depicted in this issue.

As the name Spring Brook implies every section of the farm is well watered by sparkling springs, very essentail and valuable features on a large stock farm.

McIntyre Bros. cut about 200 tons of hay and grow about 1200 bushels of grain—oats, wheat and buckwheat. They also grow about 60 tons ensilage corn and upwards of 5000 bushels of turnips, a fair quantity of potatoes and in their garden the various vegetables that make for a well supplied farmer's table. A small orchard is also well looked after where a sufficient quantity of apples and small fruits are grown for home use.

The Spring Brook Farm Ayrshires number nearly one hundred head of the strongest type and have, as already stated, been prominent prize winners in the various Maritime show rings for a number of years.

The herd is at present headed by the imported bull, Grange Kelly, grand champion of 1912 at the St. John and Halifax exhibitions. The 1912 Halifax and St. John grand champion female of the Ayrshire class, Morton Main's Lady Nellie, imported from Scotland, was shown in the Spring Brook herd. The first prize on senior and on breeders' junior herds, as well as the coveted diplomas for cow and two of her offspring and bull and three of his get was captured by McIntyre Bros.

The most coveted and, therefore, most valued prize offered in the dairy

McIntyre Bros'. Homestead, Spring Brook Farm, Sussex, N. B.

McIntyre Bros'. Ayrshires

Winners of the Gold Watch special prize for best herd of nine, all breeds competing at the 1912 Halifax Exhibition. In 1911 the special prize given in this section was a silver tes service which also went to the McIntyre herd.

classes at our Maritime exhibitions is the Sweepstakes trophy, offered by M. S. Brown & Co., Halifax, N. S. for the best herd of nine individuals including one bull and eight females—2 aged cows, 2 three-year-olds, 2 two-year-olds and 2 yearlings—Ayrshires, Holsteins, Jerseys and Guernseys competing. This trophy represented in 1911 by a silver tea service and in 1912 by a gold watch was captured on both occasions, in strong competition, by McIntyre Bros'. Ayrshires.

As might be expected the closest regularity is observed in feeding and milking. Five A. M. and four P. M. are the milking hours, which are as closely adhered to as possible. After the morning milking, comes a feed of clover hay. Then after breakfast a feed of pulped roots and mill feeds—crushed oats, which are grown on the farm, bran, middlings and oil cake—is given in quantities varying according to the requirements of the various individuals in the herd.

On fine days the herd is turned out into the yard where there is a large watering trough to drink, exercise a little and expand their lungs with fresh air, after which they are returned to the clean and comfortable stables where they rest in peace and quietness on beds of straw, making milk to their utmost capacity until Charlie comes around about three o'clock in the afternoon when they are watered from a continuous trough in their mangers after which they are dealt their evening ration of roots and grain. After the evening milking which is completed about five o'clock they get all the clover hay they can eat up clean and then about six o'clock, the chores having been all completed, the stables are closed for the night and are left as undisturbed as possible.

A windmill saves a great deal of work in pumping water and slicing roots. A pipe extends under ground three hundred and seventy-five feet to a spring from whence a supply is pumped to a tank in the barn from which it is conducted through pipes to the house and to the manger troughs in the various stables.

The farm has come from father to sons. Mr. McIntyre, the father, manufactured butter at home first and then established a milk trade in St. John. Later this was stopped and the milk was sold to the cheese factory. Some fifteen years ago the sons again began selling milk in St. John and are steadily prosecuting the business. The present milking herd numbers 45, all told, the balance of the herd being young stock and cows nearing the freshening stage. The cattle freshen at all seasons but as many of them as possible are bred to milk during the winter months. It is planned to give the cows a holiday of nearly two months between milking periods. The owners believe that such a rest enables the cow to milk better and last longer than when she is milked right up to the point of calving. A good deal of difficulty is experienced in drying them off at times, and it is of little wonder seeing how they are fed and cared for. The cows appreciate their daily grooming and when it comes to the milk pail they excel themselves.

We can remember when the Spring Brook herd consisted mainly of Ayrshire grades headed for a long number of years by pure bred males of the same breed. As years went on an occasional purebred female was added to the herd. The natural increase and the further purchase of imported and Canadian bred males and females went on until the grades are now in the minority and pure breds constitute the majority, the quality of which can receive no higher testimony from us than that awarded them at the various exhibitions already mentioned in this sketch.

E. O. McIntyre **H. H. McIntyre**

And McIntyre Bros. Prize Winning Six Barrels of Potatoes. Winners of the Bug Death Chemical Company's $100.00 in Gold.

Animals from the Spring Brook herd have been sold in all parts of Canada and some in the United States. They have given universal satisfaction and not a few of them have won laurels at Toronto and other pretentious exhibitions. A great many bull calves, bulls ready for service, heifer calves and cows and heifers bred or ready to breed are annually sold at reasonable prices quality considered.

A nice flock of Barred Plymouth Rocks, of good laying strain, are kept on the Spring Brook Farm.

The Spring Brook horses number about nine—two teams for farm work and the remainder brood mares raising foals for work on the farm and general use. The sale of an occasional colt adds to the revenue of the farm.

McIntyre Bros. are five in number and each and every one of them is full of faith in their work.

Will is not directly connected with the farm work as he is engaged in commercial interests in another part of the Province.

George, who represents manufacturing interests, takes a deep interest in everything about the farm and is conversant with every detail.

Edward O. has the general supervision of the farming operations such as growing and harvesting the crops and thus represents the producer.

Charles L. has charge of the stables and herds and manufactures the raw products into milk. There is not a more careful feeder or stock man in Canada. He represents the manufacturer.

Harry H. represents commercial interests by marketing the finished produce.

For a harmonious working combination of business like farmers it would be difficult to find another like the McIntyre Bros. They are business like in their dealings both at home and abroad. A general neatness and order prevail in their every day line of work. They work as one man and stick to it. Therein lies the inspitation for others, as their stock is an ideal to which other industrious young men may attain. Each for all and all for each is a good brotherly motto.

McIntyre Bros'. Young Ayrshire Herd

First in their class at the 1912 Halifax and St. John, Exhibitions.

Care, Feeding and Management of a Flock of Sheep

Preparing Wool For Market

By Jas. A. Telfer, Dominion Sheep Expert for the Maritime Provinces.

WHY do not the farmers of the Maritime Provinces raise more and better sheep? Nowhere in Canada has the farmer greater opportunities for sheep rearing than in the Maritime Provinces. Here we have combination of soil and climate, which under ordinary circumstances and a fair share of attention to proper cultural methods, will yield the very qest quality of swede turnips, hay and oats' the three most essential crops for sheep feeding.

It should also be the aim of farmers in the Maritime Provinces as well as elsewhere to rotate his crops and keep a class of live stock that will maintain and increase the fertility of their farms, that will again bring into fruitful bearing at the least possible expense, farms that may perchance be infested with weeds and run down through bad systems of farming.

With this end in view, and possibly that of lifting a mortgage or increasing his bank account, the aver. age farmer can make no mistake by establishing a nice flock of ewes or adding a few more to those which he already has in his possession.

The one great and most serious drawback to sheep raising is the dog nuisance; but this surely cannot be a strong objection for dogs are no more difficult to control, or to kill, here in the Maritime Provinces than they are in other countries, where sheep are successfully raised.

I find that good dog-laws are on the statutes of our provinces and it should be the duty of our farmers to see that these laws are strictly enced.

With the steady inctease of population and the constantly expanding home market, as well as the markets of Western Canada, to which we annually ship many carloads of mutton and lamb, our markets of the middle West, Montreal and Toronto and the great British market ever within easy access, our farmers have at their disposal the very best markets in the world. All that is lacking to cater to the offered trade is a greater number of well-bred and well fed lambs placed on the market in a finished condition and not in the unfinished state in which they are now too commonly se?n.

The most important item to a beginner in sheep-husbandry is the foundation flock. Let us for a moment study the nature or condition of the beginner's farm with a view to selecting a breed of sheep best adapted to his particular conditions of soil and climate. If the land be high or hilly and the flocks would have to roam over an extensive territory in order to secure a living, I would strongly recommend some breed of hill sheep.

Hill sheep are more active and hardy and do not require so much extra care aad feed as do the heavier breeds, which in order to do their best, should be reared on well cultivated land, where rape or some such succulent feed may be grown and on which they may be folded when it is found necessary to supplement the pasturage.

Having selected the flock or ram of breed deemed most suitable to ones surroundings the next most important step is

THE CARE AND MANAGEMEET OF THE FLOCK.

The shepherd must start in the early fall and prepare to put his flock through the winter in the best possible form. To do so it is necessary that all the lambs be weaned not later than the first of September. When this is done he must see that he has in readiness a fine patch of rape or turnips, where he can turn his lambs after weaning for a few hours each day. It will not do to keep the lambs on the rape all the time as they like change or a variety of food.

He must not neglect the ewe flock but must try and have a new pasture ready for them after they have weaned their lambs so that they may flesh up and be in good form for the breeding season that the lambs may come fine and strong.

Not later than October 15th, the sheep owner must make sure that his flock is free from vermin, ticks and lice, and the only sure way will be to have them properly dipped in some good poisonous dip. Dipping not only rids the sheep of vermin but it also promotes the growth of wool. Dipping also make a great saving in the feed bill as a sheep infested with ticks or lice is always hungry and is never in a good healthy condition.

HOUSING THE FLOCK.

The winter house or shelter for sheep need not be very expensive, where early lambs are not expected; but three things are very essential—freedom from draughts, a dry location and plenty of light. Sheep will not do well in a wet pen or yard and furthermore, there is grave danger of developing foot-rot in such quarters.

The feeding racks should be so constructed that the best possible amount of foreign matter will get in the wool, for the fleeces, in order to bring the highest prices must be kept clean. In feeding be careful that any hay or litter does not fall on their backs.

After the breeding season is over take the ram gway from the ewe flock and keep him in a nice roomy, pen by himself, where he can get plenty of excercise. ...

It will be found that this is a safe plan to follow for rams sometimes become somewhat cross and at feeding time will want a great deal of their own way and if they do not get it they draw back and strike and not infrequently in-lamb ewes are injured to the extent of causing abortion or a dead lamb at birth.

The in-lamb ewes should have plenty of exercise throughout the winter season. If the weather is stormy the sheep should not be exposed to it but when fine weather prevails carry out a bundle of hay to some distance from the sheds and make them travel out for it.

In winter feeding do not feed the turnips first thing in the morning as they are too cold but rather feed them the hay first. In any case do not feed pregnant ewes with roots. About a month before lambing time feed a little grain once a day. Keep salt and water always within their easy reach.

As soon as the lambs are from seven days to two weeks old the grade males should be castrated and both males and females should be docked.

Now we are approaching shearing time and a few words regarding the proper handling of the fleece may not be amiss. Wool in the Maritime Provinces is being marketed, as is well known, in a very deplorable condition and in order that we may in future take our proper place and compete with wool from other countries, we must give greater attention to the care and handling of the fleeces.

The proper handling of wool may be done with a great deal less labor than the tub-washing method which is the practice of the present time. The tub-washing system should have been dispenced with years ago, as tub washed wool is not wanted on the European markets. In order to compete successfully for the best markets our wool must be put up in proper form. This is a simple matter. When clipping the sheep be very careful that the fleece does not become broken so that when the shearing is completed the fleece may be rolled properly. To fold a fleece properly lay it on a clean place with the clipped side down, clip away all tags and then turn in the sides to the centre and then starting at breach end roll up firmly until the shoulder is reached when the neck wool is twisted to form a band around the rolled fleece. The firm of the band is slipped under another portion of the band and then the fleece is ready to pack for market.

Some readers may say "there is more money in selling our wool, tub-washed." Let us for a moment consider this question. Tub-washed wool will shrink from 40 to 60 per cent. so we are told by wool experts and if this fact be true and I believe it is, let us take examples of selling tub-washed and unwashed wool at prices, which were general in the Maritime Provinces last year. ...

A certain fleece weighs 10 pounds and for easy figuring we will say the unwashed price is 15 cents per pound or a gross receipt for the fleece of $1.50.

If the wool is tub-washed and as already stated it looses 50 per cent. in weight we would only have 5 pounds of washed wool from the ten pounds fleece which ordinarily sells at about 22 cents per pound and nets the seller for the whole fleece the sum of $1.10.

This is forty cents less than what the unwashed fleece would have brought and the farmer had the additional trouble of washing the fleece. It seems to me that the farmer who tubwashes his wool comes out on the wrong side of the ledger and I trust this illustration will at least make some one take notice and try the better and simpler method. I would like to dwell longer on the question of preparing wool for market, but I do not wish to take up too much of your valuable space. I trust the few ideas I have set forth may be the means of encouraging some farmers found new stocks or increase their present flocks and that their proper feeding and care may not be neglected but become one of the farmers' chief studies.

Burder Goodwin's prize winning Oxford Downs at the leading 1912 Fall fairs

Great is the Power of Example of Faith in One's Farm

Intensified Farming Exemplified on Dicksie Land Farm, Truro, N. S.

DICKSIE Land Farm at Board Landing Bridge, near Truro, N. S., is not only the home of one of the most promising herds of Guernseys in the Maritime Provinces, but also the home of Mr. Hugh A. Dickson, one of our most enthusiastic and successful young farmers.

Mr. Dickson comes from a family of successful farmers. His father and grand father were pioneers in underdraining and clover-growing in their district. Long before the advent of the Agricultural College they had their farms underdrained with a thorough system, which reached every square

Hugh A. Dickson

Proprietor Dicksie Land Farm, Truro, N. S.

rod of their uplands, at a cost of $50.00 per acre. Mr. Dickson says that he has often heard his father tell of some of their first lessons on the real value of underdrainage, gleaned by observing the results of their own experiments.

Mr. Dickson is a young farmer who is full of faith and enthusiasm in the highest calling open to man. He is full of faith in the future of his province and of the opportunities which it presents. He is full of faith in his farm and the Guernsey cow.

Most people would call such faith as Mr. Dickson evidences a spirit of optimism. Call it what you will. He's got it.

When Mr. Dickson was fifteen years of age his father died, and as he was the oldest boy he left school, which he had been regularly attending up to that time, and ever since he has been carrying on farming operations, largely under the guidance of his mother for the first few years.

At the age of nineteen or twenty, partly under the spur of having a very productive farm and partly the ambition to do things right he began to branch out and soon worked into a very intensive system of farming, raising ten to twelve thousand bushels of vegetables yearly, keeping about thirty-five milch cows and retailing the milk in the neighboring town of Truro. He carried on the retail milk business for the five years previous to the first of last January, when he sold the milk route. He now wholesales the milk to the man who bought his route. The retail trade was somewhat the more profitable but there was so much more detail to look after in connection with accounts, collecting, etc., and as he had to depend on hired help to deliver it he decided to sell the route.

The breeding of pure bred stock and exhibiting at the exhibitions and fairs made it harder to watch the details of all departments.

Dicksie Land Farm comprises 129 acres under cultivation, 45 of which is marsh land. The marsh is all high and dry and produces the best quality of English hay and a splendid crop of after grass on which the herd thrives for three or four weeks every fall.

The marsh has all been turned over during the last six years, a crop of grain has been grown on every part of it and it has been reseeded with timothy and clover, and fertilized by the application of 7 or 8 cwt. of basic slag per acre. The result is that this year it produced an average crop of nearly three tons of hay to the acre.

Mr. Dickson and his father before him have always followed a systematic rotation of crops on their uplands. The rotation has been: roots, grain, clover hay and pasture, sometimes varied a little by taking two crops of roots off the same land such as small vegetables following potato crop or allowing it to go two years in pasture.

Mr. Dickson finds two years of incessive pasturing will kill any couch grass which may have gotten into the land. This year the returns from the Dicksie Land Farm garden vegetables amount to about $1800.00, F. O. B. besides the large quantities of mangels, turnips, etc. used for feeding purposes. The sales of vegetables are as follows:

Turnips	$550.00
Parsnips	400.00
Carrots	175.00
Cabbage	300.00
Potatoes	160.00
Garden Truck	200.00
Total	1785.00

The Dicksie Land vegetables find a ready market in Truro and they hold it on their merit and they prove to be one of the farmer's main sources of revenue.

We hear a great deal now-a-days about farmers raising their own feed instead of sending so much money out of the country for mill feeds. Mr. Dickson's contention is that this is all right in sections of the Maritime Provinces where it is impossible to market very much farm produce and where land is cheap; but in sections of the country where land is worth from $100.00 to $300.00 per acre he considers a man would be foolish to raise, say fifty bushels of fifty cent oats to the acre, netting him perhaps $25.00 per acre when he could net from $100.00 to $200.00 per acre by growing vegetables.

Grain growing on Dicksie Land Farm is used as a means to an end viz:—for the purpose of seeding down.

Mr. Dickson says "Let the West raise our mill feeds where land is worth but $20.00 per acre. For my part I prefer to follow an intensive system of farming on high priced land."

If a man can grow strawberries on his farm cheaper than he can grow grain, let him sell strawberries at $600.00 per acre and buy his mill feed.

Mr. Dickson also considers that the use of hoed crops in the rotation is the only sure way of keeping the farm clean, while grain growing is especially conducive to the seeding of noxious weeds and consequently weedy farms result.

As all grain grown on Dicksie Land Farm is fed on the farm, Mr. Dickson prefers to grow mixed grains as they give a larger yield per acre and stand up much better thus allowing the clover to make a better start.

His seeding mixture consists of 10 pounds of common red clover, 2 pounds alsike and 8 pounds timothy. He finds the common red clover is much more preferable than the mammoth red as the stalks are not so coarse and the common red produces an aftermath while the mammoth red does not.

Mr. Dickson has been experimenting with alfalfa and we would judge that he is on the high road to success in the undertaking. He has one and one-quarter acres, started in 1911, without inoculation, from which four and one-half tons of hay were harvested in 1912, from two cuttings and there is a strong growth left for winter covering.

The Dicksie Land herds consist of 35 milch cows and a number of young stock, which is turned to hay field pastures (as there are no rough pastures on the farm) about the first of June.

The farm rotation is so planned that sufficient hay fields are let out to pasture to carry three head per acre. As the grass has had a good start before the stock is turned out they get all they want to eat throughout the month of June or longer if good showery weather prevails. As soon as the pastures begin to fail, Mr. Dickson commences the feeding of soiling crops to make up the deficiency. The soiling crops consist of clover or alfalfa first, then a mixture of green oats, peas and vetches which had been sown at different periods so as to be ready for soiling about every two weeks. This green feed carries the stock along until the earliest soft turnips will be ready for feeding—the Greystone and Aberdeen Yellow make excellent crops for summer feeding and are very easily harvested. A man can take a cart into the field and pulling tops and all load up in a very short time. As these turnips have only a very small top-root they are generally perfectly clean and may be fed whole, right in the manger. By the time the soft turnips have been exhausted the first clover aftermath will be ready and it makes an abundance of milk-producing food. After this comes the marsh aftergrass which keeps the cows doing their level best until they are housed in the fall.

Turnip pulling starts on Dicksie Land Farm about the 20th of October and the turnip leaves from six to seven acres yield a great lot of succulent, milk producing food.

In regard to harvesting turnips, Mr. Dickson says "I have never tried the system of harrowing out our turnips after the tops have been cut off with a sharp hoe and raked up as advocated by a writer recently in the columns of the Maritime Farmer, perhaps for the reason that so many of our turnips have to be dressed for market."

He can get his cut and topped ready for market for an average of about $4.50 per acre, which is in the end about as cheap a way as any as the tops and turnips are easily gathered and the turnips go into the cellar free from mud and roots and so keep much better than when they are harvested by the helter skelter system.

One of the Dicksie Land Guernseys

Gipsy of Willow—392—as a two-year-old, has won many first prizes at different ages Highest scoring three-year-old Guernsey cow at the 1912 Maritime Winter Fair.

While a great many authorities object strongly to the feeding of turnips and leaves to the milch cows, Mr. Dickson finds that when they are fed at the proper time—immediately after milking the milk will not be tainted.

During the winter season the cows get all the clover hay they will eat up clean. Sliced roots—turnips in the morning and mangels in the afternoon—at the rate of about twenty pounds per cow are fed twice daily. Meals of various kinds are sprinkled over the turnips at the rate of from 3 to 8 pounds per cow, according to the amount of milk produced by the individual animal. The cows are given a small handful of salt every day and are turned out to water as there are no basins in the barn although the water is supplied from a well by a windmill pump.

The Dicksie Land stables are well ventilated and are kept scrupulously clean. The main herd consists of grade cows of all breeds which have been largely bought up around the country. Mr. Dickson considers that any cow, of any breed, which gives indications of a good milk flow of good quality answers the dairyman's

Drilling and sowing the turnip rows. Corner of a fifteen acre field of vegetables on Dicksie Land Farm, Truro, N. S.

Hoeing parsnips between showers in haying time on Dicksie Land Farm, Truro, N. S

A Portion of the aged Holstein Cow Class at the 1912 Halifax Exhibition

purposes very well. He has found that there are good cows in all breeds but he has a special preference for Guernseys and his reasons are:—

1. Their quiet, gentle disposition as Mr Dickson puts it "A man needs to have handled them in order to appreciate these traits". It is seldom that one finds a cross Guernsey bull and the cows and calves are so quiet and kind that they do not seem to have no fear of man.

2. Guernseys all have nice teats and are easily milked. Small teated or hard milking Guernseys are very rare.

3. Guernseys give a large flow of highly colored milk. Guernsey milk is famed for its natural color. When a bottle of Guernsey milk is allowed to set for a while the rich color is found from the top through to the bottom.

4. He believes that Guernseys excell as economical producers as many of their public tests have proved that they produce milk and butter fat much cheaper than any other breed. The main drawback to the breed, Mr. Dickson considers, is its lack of uniformity. This weak point is, however, being rapidly overcome and true to type individuals also hold high producing records.

THE DICKSIE LAND GUERNSEYS.

Mr. Dickson made his first start in the breeding of pure-bred Guernseys about two years ago by purchasing the bull calf, "Conqueror of Willow" from Roper Bros., Charlottetown. This typical young bull's dam was Dolly of the Villet, an Island of Guernsey bred cow, that has for over half a dozen years carried off the female sweepstakes at our exhibitions and which is also a good producer. "Conqueror of Willow" has developed into a very deep, strong bodied bull, of ideal markings, and a sure stock getter.

A year ago, Mr. Dickson made his first purchase of pure-bred females by purchasing a two-year-old and a three year-old in calf from Roper Bros., for which he paid $200.00 each. Mr. Dickson says that at first he thought this a big price for a cow but after he had the heifers in his barn a few months he decided that they were not expensive at all and he is well pleased with his bargain.

The heifers dropped two splendid heifer calves and in 1911 made good records at the Maritime Winter Fair, being third from the highest in total points and first in butter fat. Mr. Dickson considers that the first crop of calves were worth half the cost price of the cows so that in reality they did not cost him much more than he would have had to pay for good grade cows.

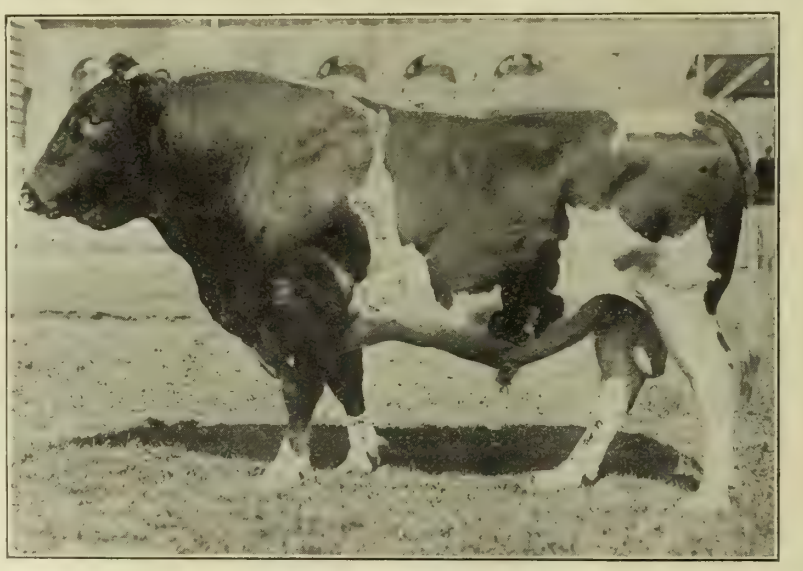
This fall, Mr. Dickson increased his herd of pure-breds by the purchase of three heifers and their calves, each one of them being a splendid individual with good breeding behind them. One of the heifers is out of Jennie's May, the cow which came within an ace of capturing the cup at Amherst in 1911.

While attending the Nova Scotia Farmers' Association at Yarmouth last winter, Mr. Dickson purchased from H. W. Corning, M. P. P. a Dairymaid of Hillside heifer. It will be remembered that Dairymaid of Hillside made an official record as a two-year-old, of 530 pounds butter in one year. Her bull calf was sold last winter, when but a few hours old for the sum of $150.00 to head the Guernsey herd on the Dominion Experimental Farm, Ottawa.

Mr. Dickson believes that the reason why more young men do not purchase pure-bred stock is the seeming high prices, but his own experience has gone to show that once a person gets properly started matters begin to come his way. If a person gets value for his money, the higher prices paid the higher prices he can get for his stock providing he is a breeder of stock for which there is an active demand.

Sir Mercena Faforit Lad

Champion Holstein Bull at Fredericton in 1911, and first with three of his get at St. John and Halifax 1912 exhibitions. Owned by Harding Bros.



Schuling Sir Posch---3707

Grand Champion Holstein Bull at Toronto in 1909 and 1910. Now head of Harding Bros., Wish-Ton-Wish herd, Welsford, N. B.

Mr. Dickson sees a bright future for the Guernsey breed as well as for the farmers who will engage in the breeding.

There are at present six cows and heifers in the Dicksie Land Guernsey herd that cost $200.00 each and although these prices are low compared with some of the prices realized by some of the United States breeders Mr. Dickson claims that he knows of no better investment for a sum equal to the total price of the six cows than the purchase of a bull with high producing and constitutionally strong ancestry. The calves from a bull of this kind would easily be worth $100. more than the calves from a cheaper bull. The secret of the whole transaction being that farmers are commencing to see the benefit of breeding to high producing stock and are willing to pay the price.

All the work on Dicksie Land Farm is done by hired help and no difficulty is experienced in retaining the men. There is a cottage on the farm for a married man. There is work for two men the year round and an extra man who lumbers during the winter season is hired during the summer.

Mr. Dickson believes that a good horseman does not want to tend cows and a good cowman does not want to tend horses so each man on the farm has his own particular work to attend to and consequently everything goes along decently and in order.

Mr. Dickson considers that the chief essentials for successful dairying are: Sufficient quantities of food to keep the cows full at all times. The keeping of good cows that will give a handsome profit on the feed they consume. Have a cottage for the hired help and hire him by the year. Feed lots of short feed on the farm and in this way increase the fertility of the soil rather than by the purchase of commercial fertilizers. Have a large hoed crop in the rotation, either for feed or for the market, raising the crop which is the most profitable and with the proceeds, purchase concentrated feeds to return the fertility to the soil. Keep a strict record of the performance of the individual cows in the herd and keep a bull of the very best producing strain.

Although Mr. Dickson is a busy, practical young man who is doing exceptionally well on his farm he realizes that he can very materially advance his own interests by taking advantage of the opportunities for acquiring an agricultural education such as is offered by the Nova Scotia Agricultural College, which is within driving distance from his farm. He attended the regular courses at the college last year and this year he will complete the second year's work.

We know of no better type of citizen in the Maritime Provinces than that which is exemplified by Mr. Hugh A. Dickson. His example in promoting intensive farming should stimulate many more of our young men to put forth practical efforts for the upbuilding of their home farms.

Best five Clydesdales at the Halifax Exhibition. Owned and exhibited by R. A. Snowball, Chatham, N. B.

Diversified Farming on a N. S. Fruit Belt Farm

Father and Sons Exemplify the Strength of Unity

AT Windsor Forks, about five miles from the town of Windsor, N. S., on the banks of the Aron, is located the farm of Wm. O'Brien & Sons. The firm name, Wm. O'Brien & Sons is not new to our readers, as for many years they have been taking a leading part in the agricultural development of the Province of Nova Scotia and their horses and cattle are always high up in the list of prize winners at our leading exhibitions.

Mr. Wm. O'Brien was born of Irish and Scotch parentage on a farm near Windsor and about twenty years ago he purchased the farm which he now occupies. At that time the farm was well known to be very much run down in fertility by bad systems or non systems of farming and it was practically without buildings of any kind. By untiring efforts and careful management Mr. O'Brien and his sons have built up from a regular chaos what is today considered to be one of the best farms in Nova Scotia.

A firm believer in the fruit growing possibilities of his district, Mr. O'Brien at the very beginning of his farming career at Windsor Forks set out a number of apple trees. He has been steadily increasing the number year by year until he now has upwards of twenty-five acres under orchard containing the leading export varieties.

The O'Briens ship their fruit by the carload on consignment to some of the leading fruit dealers in Great Britain. They grow good fruit by following modern methods of cultivation and spraying. They are careful to pack their fruit in such a way that they seldom or never receive a complaint and, consequently, they are not afraid to let the consumer know who grew the fruit by means of stencilling their name and address on each barrel. A clean, honest pack brings its reward from foreign as well as from home markets, in the way of repeat orders and fifteen years of regular dealing with the same customers.

The O'Briens plan to grow hoed crops in their young orchards for the first four or five years, and vetches constitute the main cover crop.

Realizing the importance of following a system of mixed farming Messrs. O'Brien have from the beginning of their farming career paid a great deal of attention to the raising of live stock. A fine stud of pure-bred Clydesdales, a herd of pure-bred Herefords and their grades, a flock of Leicester sheep, and turkeys, ducks and geese of quality all find a place in their system and each class fill their place in augmenting the revenues of the farm.

The keeping of live stock furnishes a large quantity of barnyard manure, which has played a very important part in the upbuilding of the farm and in maintaining the fruitfulness of the orchard.

The meadows on the O'Brien farms are second to none in the Maritime Provinces, and on them large quantities of hay are raised every year.

One of Wm. O'Brien & Sons' Farm Teams

A Bunch of Grade Hereford Steers and Heifers at Pasture

Scene on Wm. O'Brien & Sons' Farm, Windsor Forks, N. S.

Feeding the Pullets

Being particularly interested in beef raising Messrs. O'Brien have made the Herefords their chosen breed as they mature early and are economic producers of excellent beef. They find that it is not necessary to purchase large quantities of expensive mill feed but raise all the hay, mixed grain and roots on their own farm. They find that in order to be successful in the beef raising business under Maritime Province conditions that the chief essential is large growthy cows, that weigh from ten to thirteen hundred pounds, not of the extreme beef type because the cows must produce enough milk to feed their calves and also give a good return in the shape of butter. Such cows mated to a Hereford bull produce short-legged calves with good loins and backs.

The O'Briens plan to feed their cows as follows: All the hay they will eat up clean three times per day; half a bushel of turnips divided into two feeds and four quarts of mixed feed. By this system of feeding the cows give a liberal supply of milk, sufficient to keep the calf growing and some to spare for butter making.

The calves are dropped in the fall or early winter and are allowed to nurse, to suckle their dams until they are about three weeks old, when they are taken from the cow and as soon as they learn to drink skim milk, and a little flaxseed jelly gradually takes the place of the whole milk. Should a calf show a tendency to scour then add a little wheat flour to his diet. Within easy reach of the calves is a box containing a few whole oats and also some light clover hay. The O'Briens follow this system of feeding until the calves are about five or six months old, and to evade the torture of heat and flies they are kept in the barn during the summer.

The males are castrated as soon as they are sufficiently developed. The calves are dehorned as soon as the embryo horn can be felt under the skin, by clipping the hair and applying caustic potash. Dehorning makes the calves quieter among themselves when loose in box stalls where they are usually kept until they are about eighteen months old.

During the second winter the steers are fed on rough hay and straw, supplemented by pulped turnips and sufficient grain to keep them thriving.

When it is deemed advisable to market the steers at twenty months of age they have good pasture until such times as they are sold, or if it is intended to carry them over another winter they go on rough pasture during the summer and have a run on the aftergrass in the autumn and are thus put in good condition to finish off during the next winter. The O'Briens pay particular attention to the comfort of their steers. They keep them well bedded to induce them to lie down as they believe they make their best gains when comfortaby, reposing.

The results accomplished by the O'Briens in beef raising have been most gratifying. The beeves are sold in the Halifax market where a fraction over the highest current prices are readily procured for a well finished article.

Mr. O'Brien always thought that a farm was not complete without a flock of sheep and, consequently, the farm boasts a flock of about twenty-five pure-bred Leicester breeding ewes. The sheep are a valuable asset on the O'Brien farm. They keep down the weeds and turn a great deal of roughage into available cash. They have particularly good success with their lambs, some of which are sold for breeders. The wool goes to the harvest cloth mills, and on the whole Messrs. O'Brien reap a handsome profit from their flock.

CLYDESDALES.

With the necessity for heavy farm machinery came the demand for heavy horses. To cater to this demand the O'Briens started breeding Clydesdales over fifteen years ago and have persisted in the good work unno fewer than twelve pure-bred mares til their stables, at present, contain and the three stallions—Norseman, Petruchio's Heir and a two-year-old. The latter is a horse of great promise, light footed and true gaited. The mares include; Lady Flashwood, Kate Claxton, Peggy Primrose Francis, Jennie Windsor, Nelly Flashwood and a number of youngsters.

The first pair of pure-bred Clyde mares owned by the College Farm, Truro, Duchess of Fife and Belle of Avon were purchased by Mr. F. L. Fuller from the O'Briens. The mares in question raised a lot of stallion colts that sold all over the Maritime Provinces and were conducive of improving the draft horse quality very materially.

One stallion sold by the O'Briens is at present doing stud purposes on an Alberta ranch.

It pays to keep a good draft team as, with their use and that of improved farm machinery the heavier farming operations and trucking to and from town may be done in less time and cheaper than when a lighter class of horses is employed.

Mr. Wm. O'Brien's ideas on "horses for the farmer and how to breed and raise them" was published in Prof. Cumming's report on agriculture a year or two ago, for the benefit of our readers we reproduce them in another page of this issue.

(Continued on page 176.)

Picking Raspberries

On Wm. O'Brien & Sons' farm, Windsor Forks, N. S.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said :—"I saw" your adv. in the MARITIME FARMER.

RATES FOR CASUAL ADVERTISEMENTS.

1 inch—First insertion 75 cents 2 inches—First insertion $1.50; 3 inches—First insertion $2.25.

Contract rates on application.

Address letters and make all checks, money orders, postal notes, etc., payable to

THE MARITIME FARMER, or
R. D. Robinson Publishing Co., Limited
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

DECEMBER 10, 1912.

DATES OF ISSUE.

December 24
January 16-30

YOU ARE LOSING MONEY

THERE are two classes of stock breeders in the Maritime Provinces—those who advertise their stock and those who do not. The former class lets the world know what they have to offer and consequently are making good sales which rid their herds of surplus stock. These stock breeders keep their wares constantly before the public and not infrequently some of their young stock is placed before they see the light of day. A visitor to their stables will not be met with a tale of woe. "I have sold every hoof with which I dare part," is the story they tell. You do not find any where from one to twenty young bulls, as is commonly remarked, "eating their heads off."

Stock men of the other class do not advertise or if they do, their efforts along this line are very transitory. A visit to their stables will find that they have all kinds of young stock for sale but none of it seems to be moving—the persons who would buy such stock do not know that such a herd or flock exists.

We venture to say that the man who spends a fair amount in advertising and keeps before the public, raises his stock to a marketable stage better and cheaper than the man who seldom or never advertises. If we were going to buy young stock, or any stock for that matter, we would patronize the breeder who advertises regularly for our observation has been that he who advertises has fewer stunted, ill cared for stock to offer. His herds are kept down to a minimum and consequently there is an abundance of feed and comfortable quarters, coupled with good care for the stock.

Across the way we find the reverse, the herd or flock has increased in such numbers that it is almost impossible for the breeder to give his stock the room, feed and attention they require and as a consequence stunted animals may be seen at every hand.

A stunted animal is a poor buy at any price and the discerning buyer will shun it.

While canvassing some breeders for advertising early last summer, we met with the remark in several cases, "I do not need to advertise as I can get all the publicity I require from your published list of prize winners at the Maritime Winter Fair and Provincial Exhibitions." This set us a-thinking that we were losing money by following the practices of giving addresses of prize winners at the various Maritime exhibitions. This fall we decided not to publish any addresses and the result has been most surprising to us. Almost every mail we receive an inquiry for the address of such and such a breeder. We have not yet received an inquiry re the address of any of our advertisers Mr. So or So won such and such a prize at such and such exhibitions. Interested readers look over our columns and if he advertises there they find his address. If he does not advertise with us they aks us for his address. We will not furnish addresses of breeders who do not advertise in our columns.

If a breeder wishes the public to know his address, through the columns of the Maritime Farmer the very least he can do is to place his name in the Breeders'Directory which will cost him only $1.00 per line per year.

Our display ad. rates are also exceedingly low to breeders.

The Maritime Farmer's policy has always been to help the breeders and farmers. We look for reciprocity in this matter for by helping us by giving us increased patronage the breeder is thus helping himself to make sales that might otherwise pass him by.

CO-OPERATION

THE Farmers' Dairy & Produce Co. Limited, which was organized to operate in St. John in July last, has been making considerable progress.They started with some sixty members, composed principally of farmers along the line of the I. C. R. from Penobsquis to Jubilee. Each member took one share in the Company, consisting of $100. Everyone started in the same position, so far as their interest is concerned, that is, one party can only hold one share of stock.

This was used for organization purposes, and for purchasing the outfit and plant, to enable them to open business, which they did on July 1st, at 680 Main St., in the city of St. John. Here they established a butter plant and an office, for the sale of farm products, principally composed of milk, cream and dairy products. At the start, they purchased the business and good will of Thos. Robinson, who had been running a milk route in the city, for many years. This enabled them to make a start, from which they have gradually grown to the present business, which amounts to nearly three times what they started with in July.

Since that, the Company has also grown to include at the present time, nearly seventy-five members, and as their charter enables them to extend this to ninety-nine in all, it leaves room for a few more good dairymen to secure a share of this stock. The Company now have a full equipment for making butter, as well as handling fresh milk and fresh cream, and as they are also able to reach a sale for the bye-products, in the way of buttermilk and skim milk, it enables them to have an income from this source, which is not always possible at some of the creameries operating at the country points.

This has enabled the Company to pay a higher rate for their butter fat among its butter patrons, than is possible under almost any other method.

Besides handling the dairy products, the Company are in a position to assist their patrons in the sale of almost any other products that they may have, in the way of produce of all kinds. In fact, they have already made shipments of potatoes to the West Indian and Cuban markets, on behalf of their patrons, and as they have a floor space of 60x62 in a frost proof warehouse, they are also able to carry potatoes and other produce at this point, available for shipment after the winter closes in, and prevents shipping from outside points.

The Company is a regularly organized Joint Stock Company, under the New Brunswick Joint Stock Company Act, and yet is co-operative as well, the method being, to keep account of the returns from each and every product throughout the month, and then after deducting the running expenses, to divide the total net return among the different shippers, for the payment of each particular class of goods, so that the farmer can feel assured that he is getting all that the market can afford to pay, and in this way, he can keep on increasing his production at home, feeling satisfied that the products will be sold to the best advantage. The plant is situated in the N. B. Cold Storage building, which is particularly adapted for a business of this kind. They have a cold room, which is connected with their cold storage plant, and which enables all dairy products to be kept in good shape, and it also enables them to use the cold storage plant, when necessary, in the event of a glut in the market of pork or poultry produce, which the company are also handling to a considerable extent.

At the present time, the Company are anxious for all the fresh cream they can possibly get, and are at present, buying from members outside their own company as well, though to those who are members of the Company, there is a little better return, than where they purchase the stock outright but as there is still room for a few more members to join, it would pay almost anyone who is producing any quantity of cream, to get in touch with the Company, while there are still shares available.

In addition to their sale department, the Company are also making some progress in buying feed for the members of their Company, and have already delivered several carloads of mill feeds, at some considerable saving to their members.

Any good dairyman who wishes to ship cream, can secure one share by applying to the Company, who will inspect the stock and stables of the applicant, and if acceptable to the Company's local director at the nearest shipping station, the name is brought before the next meeting of Directors, and action taken.

The organization papers of the Company at present, permits of 99 names, but if the work continues successfully, it is intended to enlarge, and take in all farmers who wish to join, and are prepared to take a little extra pains with their stock, and produce a good article, as it is by this method, the Company hope for a share of the consuming market in St. John, which we are glad to say, is on the increase.

"The best the farm can produce direct from the producer" is the slogan of the Farmers' Dairy & Produce Co., Limited.

THE PLUG

DON'T make fun of the plug. He may be slow and awkward and never get to the stable until dark, but he is the fellow who in the end will bring home the coin, says Bert Walker. The plug horse that pulls the harvester all day in the field puts more money in the bank for the honest farmer than a race horse that goes out and turns a half in 0:50 flat and then loafs for two weeks waiting for another race to be matched. The old plug goes out in sunshine and storm and pulls in a few dollars every week, but the race horse waits for the day when the track is good and then generally loses more than he wins. The steady old plug keeps the wolf from the door, while the race horse causes the mortgage to be foreclosed. Jast so with the man. Pin your faith to the plug who keeps eternally at it; the fellow who gets up every morning and does so much and is ready to do it again next day. He lays up more shining dollars in the bank than the swift sport who lays around all summer waiting for luck to come along and turn a stream of silver into his pocket. One cackling Plymouth Rock hen is worth a dozen screaming eagles when it come to paying off the mortgage. The plug is the fellow who steadies the ship and acts as ballast when the boats begins to rock. The plug is the fellow who lives contentedly and long, and when he passes away the local papers say, "He leaves his family in comfortable circumstances."

CARE OF THE DAIRY COW

THE dairy cow is the hardest worker of all our domestic animals. Every year she gives from five to ten times her weight in milk, containing as much actual dry matter as do the bodies of two or three steers. When we consider that it requires approximately the same amount of energy to produce twenty pounds of milk as it does to plow one acre of land, we get a conception of the enormous amount of work the cow does.

To produce well the cow has to be carefully fed. The animal loss to dairymen and farmers resulting from feeding an insufficient or unsuitable ration is quite large. One common mistake is to neglect the cow late in lactation. The amount of feed at that time cannot be gaged by the milk flow. The cow should be turned dry six or eight weeks before freshening, but just because she is not giving milk is no sign that she does not need food.

A GOOD dairy herd, when properly cared for, produces revenue with which to improve the farm. One of the safest ways to make the farm afford a competence is to supply it with dairy animals. Dairy cows consume the coarse products raised on the farm and transform these into butterfat.

Profitable Dairy Herd Regularly Tested

Keeping Live Stock Increases Soil Fertility.

A FEW weeks ago while enroute from Summerside to Charlottetown we chanced to meet our young friend W. R. Clark, of the firm of Wm. Clark & Sons, Maple Grove Farm, North Wiltshire, P. E. I. who extended a cordial invitation to stop off at their station and spend the night at his home.

We gladly accepted the invitation as we were desirous of seeing their magnificent herds and flocks of Jerseys, Yorkshires, Leicesters and Plymouth Rocks on the home farm. We had seen them previously at several P. E. I. exhibitions and had between times heard a great deal of the good work that the Jerseys were accomplishing in the Test.

We arrived at Maple Grove Farm quite late at night and on the morrow we had the pleasure of accompanying Mr. Clark Sr. and his two industrious sons while they attended to the comforts of their herds and flocks. Each member has his own particular duties to attend to and in this way everything is done with a ship-shape regularity and persision that can never be in cases where everyman's job is nobody's job.

Maple Grove comprises about 200 acres of gently sloping, free from stone, well drained, clay loam, subdivided as follows:—Wood lot, 30 acres; rough pasturage, 30 acres and the balance cultivated under a five year rotation system:—Grain, 60 acres; clover and timothy hay, 50 acres; hoed crops consisting of potatoes, turnips, mangles and corn, 15 acres.

The five year rotation practiced is as follows:—First year, grain; second year, roots; third year, grain; fourth year, hay; fifth year, pasture.

Very special attention is given to the eradication of weeds and in so doing the splendid flock of pure bred Leicesters, in the breeding of which Messrs. Clark specialize, play a very important part. In regard to sheep Messrs. Clark say :—"We consider sheep an important item on the farm as they bring in a good yearly profit and also because they are especially valuable in clearing up the weeds, turning them into manure and thus enriching the pastures to a marked extent." We saw the Leicesters quietly grazing at pasture and were pleased to note the uniformity of the flock. There was not a weak one among them.

New blood is introduced into the flock as good breeding principles demand and in this way coupled with a liberal feeding system the standard of excellence is easily enhanced and maintained. A finely bred flock of Plymouth Rocks have their home on Maple Grove Farm and by systematic feeding and care they return a handsome profit to their owners.

The Maple Grove Jersey herd comprise about forty head and they are considered by persons, who are in a position to know, to be one of the best working Jersey herds in the Maritime Provinces. Their accomplishments at the pail and in the test are most gratifying to their owners and inspiring to the visitor who may take the trouble to look over their records. In yearly production the Maple Grove Jerseys range from 300 to 600 pounds of butter. The herd is headed by the milky looking bull, Dreadnought of St. Lambert.

It has been Messrs. Clark's breeding policy for many years to aim for size and capacity as well as quality in their cows. To accomplish this result they give their heifers plenty of time to develop and by so doing coupled with a system of liberal feeding they have succeeded in establishing a herd of Jerseys that in point of size and conformation are second to none.

While they have been able to increase the capacity of their cows for the consumption of food and the strength and robustness natural to large cows, Messrs. Clark have at the same time retained those very desirable qualities found in the well cared for Jersey, viz:—economic production and quality of product.

The policy on Maple Grove Farm is to raise all the feed used on the farm excepting some bran and oil cake and cotton seed meal. The greater portion of the meal ration is crushed oats, and they are found to be good food for the production of milk and, moreover, they can be grown in abundance on the farm, as testify the barns filled to overflowing and a large number of stacks of hay in the rick yard. Soiling crops and fodder corn are extensively grown and are used to tide over the season of short pasturage and in this way the cows are kept doing their best under ideal summer conditions for long periods. Turnips and mangles play an important past ia making up the succulency of the winter rations.

As a side line to dairying Messrs. Clark find that pigs fill the bill admirably. Several pure bred Yorkshires are always on hand and a dozen or more shoats are prepared for market each spring and fall. While the Island market for pork is not all that could be desired the pigs bring in a reasonable profit by converting into cash the by-products of the dairy which would otherwise be wasted.

Butter is manufactured on the farm and as it is a gilt edged quality attractively put up it finds a ready market in Charlottetown at the highest prevailing figures.

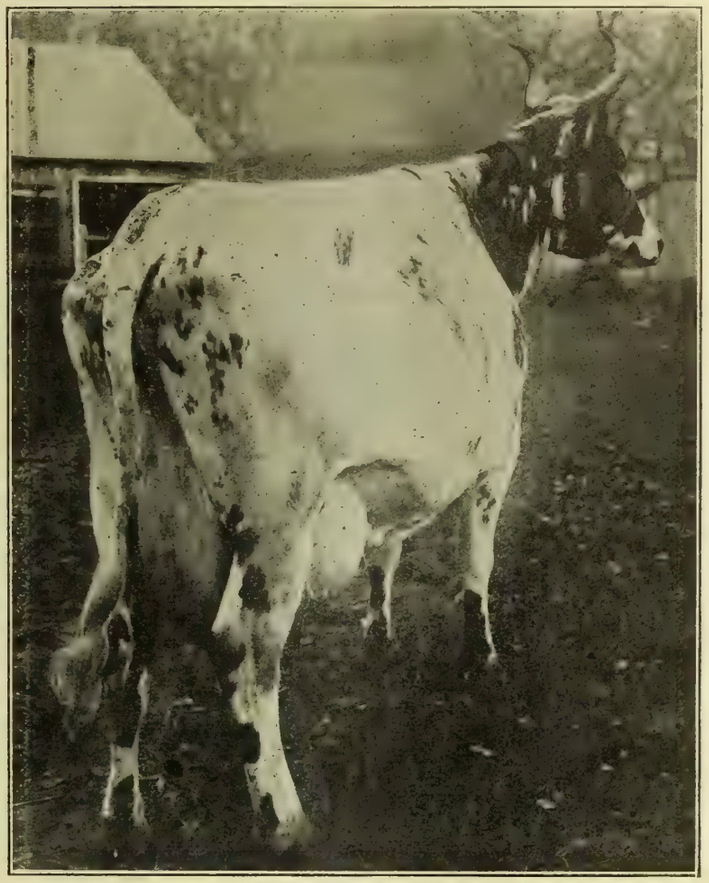
The farm, as already stated is on a gentle slope. The farm buildings are arranged in a hollow square and are neatly kept in good repair.

Mr. Clark Sr. is a hale aad hearty, jovial P. E. Islander of English descent. He belongs to that class of fathers who have the tact and business ability to work with their sons so that they have natural interests in the upkeep of the farm. The boys take a pride in their work worthy of emulation by many more of our young men. Would that we had hundreds more like them. The exodus from our rural communities would be greatly diminished and the whole country side would be brighter and better.

When the judges placed the awards in 1911 for the best kept farm in Queens County, P. E. I., Maple Grove Farm led all the rest. The reasons why—well arranged fields, a systematic rotation of crops, carefully planned systems of tillage, a general neatness about the premises, good stock well kept, the feeding of all farm grown crops on the home farm and nothing sold except as a finished product. What say you reader, are not these points worthy of your emulation?

The milk from each cow in the Maple Grove herd is weighed both night and morning and the individual cow is fed accordingly.

As a result of keeping a large number of live stock, Messrs. Clark have accomplished the gratifying result of seeing the fertility of their farm increasing, and a steady improvement in their crops. The increased humus content of the soil lessening the damage from droughts.



The Ayrshire Cow, Milkmaid 7th--27869

Sweepstakes cow in the 72 hour Dairy Test at the Maritime Winter Fair, Amherst, N. S. This cow for some months also held the world's Ayrshire 2-year-old record of highest production of milk and fat. having given 11,673.5 lbs. milk and 492.75 lbs. fat within the year. She has also won two sweepstakes in the show-ring thus she combines utility with good type. Owned by A. McRae & Sons, Charlottetown, P. E. I.

Instruction in Road Construction at the N. S. A. C. Short Courses.

Realizing the importance of good roads to all rural communities, the Nova Scotia Agricultural College will give at the short courses, during the first two weeks in January, under the direction of the Roads Division of the Department of Public Works and Mines a course of instruction in road construction.

The lectures will not treat of paved streets as are common in cities of Macadam roads such as can be constructed only for truck highways, but will be confined chiefly to dirt roads, such as are most common in rural districts. The lectures will include the following; Hon. E. H. Armstrong, Commissioner Public Works & Mines, Halifax, who will lecture upon the subject of "Present Highway Legislation in the Maritime Provinces."

B. W. MacKenzie, Chief Engineer of the I. C. R.

Dr. L. I. Hewes, of the Department of Public Roads, Washington, D. C., who will give two illustrated evening lectures on Jan. 14 and 15.

H. Donkin, Road Commissioner and Deputy Commissioner Public Works and Mines, Halifax, whose subject will be "Highway Location and Drainage".

R. McColl, Assistant Road Commissioner, Halifax, whose subject will be "Highway Bridges and Culverts."

Prof. J. W. Roland, of the Nova Scotia Technical College, whose subject will be "Road Materials and Road Building and Maintenance"

J. W. MacKenzie, Assistant Road Commissioner, Halifax, on "Road Machinery and its use."

No subject interests the farmer more than this question of road construction and the special course at the Agricultural College on this subject will, we believe be appreciated not only by the farmers but by every interested citizen of the Maritime Provinces who may have the opportunity of attending.

The classes in this subject will be arranged so as not to conflict with the classes in Agriculture, Horticulture, etc. and so that it will be possible for any student to either take this one course by itself or to attend the other more distinctively agricultural classes in addition.

Twelfth Annual Maritime Winter Fair

THE Twelfth Annual Maritime Winter Fair was held in the Fair Building, Amherst, N. S., on December 2nd to 5th inclusive.

The weather man scowled, and dealt out a variety of weather that was not favorable to the best interests of the fair.

Col. H. Montgomery-Campbell, President of the Maritime Stock Breeders' Association, F. L. Fuller, the Secretary-Manager, and their henchmen in the various departments of the fair worked with a will and all things went along decently and in order.

Considering weather conditions the attendance was good and showed that there are no signs of any waning intetest in the Fair.

Visitors, of the observing kind, were well repaid by the evidences of increased interest in live stock improvement that was in evidence at every hand.

BEEF CATTLE

The beef cattle were judged by Mr. John T. Gibson, Danfield, Ont. and gave entire satisfaction. He did his work with that rapidity which characterizes the trained experienced mind.

THE SHORTHORNS

were exhibited by C. H. Angus, Harold Etter, Chas. W. Forrest, Fred. T. Holmes, Geo. M. Holmes, Edwin Forrest, N. Curry, R. A. Snowball, Walter Patterson, J. McCully Pipes and Edward Anderson.

While there were some well fitted animals at the top in each section of the Shorthorn class the average quality of fitness for a fat stock show was not up to the usual high standard. The prize winners lower down in the scale of awards were not so well fitted as they might be and some thin, peaked, paunchy and extremely young stuff did not add to the enthusiasm of the spectators. This was particularly true in the grade classes and in two or three places the judge deemed it advisable to award the lowest prizes in the scale, which will no doubt have the desired effect of fewer unfinished animals for the 1913 Fair.

The two-year-old Shorthorn steer section had fine entries. Harold Etter's white steer and C. W. Forrest's roan, were a well-fleshed, even pair. Etter's steer captured the ribbon for best Shorthorn steer any age.

The senior yearling steers had three entries. The first prize went to Harold Etter's roan, a good, even steer, but with room for a little better fitting. Geo. M. Holmes' roan was a fairly good one but the third entry, shown by another party, was a disgrace to the show and had to take the gate minus the money.

The first and second prize junior yearling steers were a good pair but the other two entries in the class were paunchy and thin.

The first prize steer calf was a good specimen but the other two entries in the class were entirely too young to show to advantage.

Five aged cows appeared before the judge and each one was awarded a prize. The first prize cow was exceptionally good forward of the hook bones but back of the hook bones she did not put up as even an appearance as one could wish.

The champion Shorthorn animal, was Red Blossom, exhibited by R. A. Snowball in the two-year-old heifer class, a closely-built, well-fashioned, Shorthorn. The four entries in this section were all good ones. Red Blossom captured the M. J. O'Brien silver cup. This cup was won in 1909 and 1910 by C. A. Archibald and in 1911 by Harold Etter.

The senior yearling heifer section had only two entries and the junior yearling section,four entries.

One of the best sections of the Shorthorn class was the senior calf class in which Emma of Willow Glen, the champion female at Halifax Exhibition this year, was exhibited. Her three mates in this section were also very smooth, evenly fleshed youngsters.

There were four entries in the junior heifer calf section.

HEREFORDS, ABERDEEN AND POLLED ANGUS CATTLE

competed in the same sections. W. W. Black showed every steer in the class. His Herefords were, as usual, well fitted. The only Angus cattle in the show were a senior yearling heifer and a senior heifer calf exhibited by A. O. F. Gill, of Prince Edward Island.

The best animal, any age, in the class was Gill's senior yearling heifer. There were no discreditable animals in the class.

The W. W. Black, Silver Cup for the best grade animal, won in 1911 by E. P. Anderson, was won by Fowler Bros. with a smooth, evenly fleshed, two-year-old Shorthorn grade steer.

The Amherst Foundry prize for the second best grade animal, any age, was captured by Chas. W. Forrest.

The Massey Harris, sweepstakes, steel harrow for best beef animal, any grade or breed went to Snowball's Red Blossom.

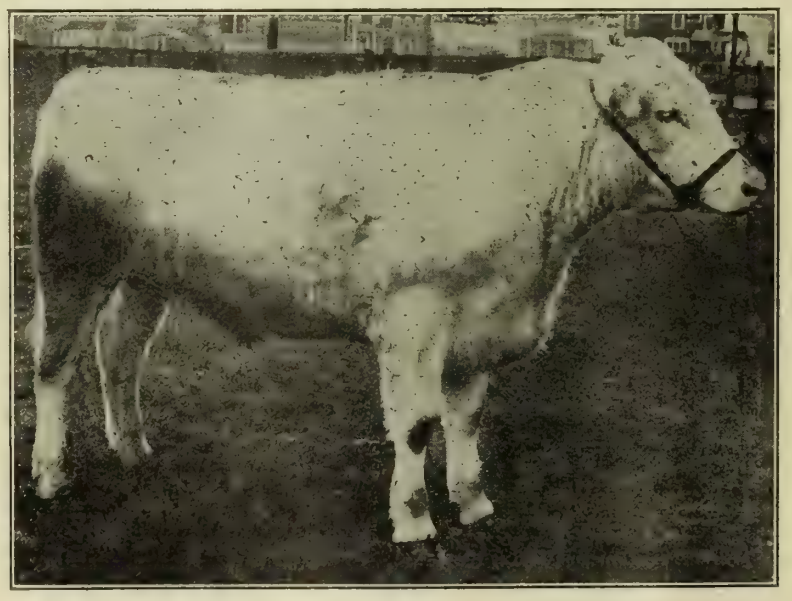
The Blatchford specials went to Thos. J. Etter and R. A. Snowball.

The dressed beef carcass prizes were awarded as follows;—

1. Fowler Bros. on 2nd. prize two-year-old Shorthorn grade steer.
2. Chas. W. Forrest on 2nd prize two-year-old Shortnorn steer.
3. Harold Etter on 1st prize two-year-old Shorthorn steer.
4. W. W. Black on 1st prize two-year-old Herefore grade steer.
5. Edwin Forrest on 1st prize two-year-old Shorthorn grade heifer.
6. R. A. Snowball on 2nd prize two-year--old Shorthorn heifer.

Red Blossom

Sweepstakes Shorthorn and Best Beef Animal, any age, at the 1912 Maritime Winter Fair. Owned by R. A. Snowball, Chatham. N. B.



Best Shorthorn Steer at the 1912, Maritime Winter Fair. Owned by Harold Etter, Westmorland Point, N. B.

DAIRY CATTLE

The most outstanding feature of the Maritime Winter Fair is the dairy cattle sections where this year no fewer than ninety head of Shorthorns, Ayrshires, Holsteins, Guernseys, Jerseys and Grades were entered in the seventy-two hour test.

The dairy tests were conducted by Messrs. Harvey Mitchell and W. A. McKay.

Following are the principal rules governing the test;—

The cows in the test shall be milked dry in the presence of the judges at 1 p. m., November 29 and the test will conclude at 1 p. m. on December 2nd, the percentage of fat in the milk will be determined by the Babcock milk tester and the percentage of solids not fat, by the use of the authorized formula for the purpose.

The standard of the respective cows will be computed on the following scale; 25 points for each pound of fat; 3 points for each pound of solids, not fat; 1 point for each ten days in milk after the first 30 days. Limits ten points.

No cow four years old or over, shall win first prize that does not produce at the rate of 10 pounds of butter per week, or a second or any other prize that does not produce at the rate of 8 pounds of butter per week. No three year old cow shall win a first prize that does not produce at the rate of 9 pounds of butter per week, or a second or any other prize that does not produce at the rate of 7 pounds of butter per week. No heifer two years shall win a first prize that does not produce at the rate of 8 pounds of butter per week, or a second or any other prize that does not produce at the rate of 6 pounds of butter per week. No heifer one year old shall win first prize that does not produce at the rate of 7 lbs. of butter per week, or second or any other prize that does not produre at the rate of 5 lbs. of butter per week.

On other pages of this issue will be found a full record of each cows performance. The reader can readily ascertain by a little study of the figures given, which individuals of the respective breeds and respective ages did the best. It will also be interesting to note the variations in quantity and quality of milk of the various milkings.

The T. Eaton Co. special prize for the best pure bred herd of milk cows —one aged cow, one three-year-old, and one two-year-old was won by Logan Bros.

The T. Eaton Co. special prize for the best grade breed of milk cows— one aged cow, one three-year-old cow and one two-year-old heifer went to T. W. Keilor's herd.

The Holstein-Freisian Association's Silver Cup for the champion cow in the grade class, providing she is sired by a Holstein-Freisian bull was captured by Fowler Bros.' aged cow, Mary, with 238.53 as a total number of points, also capturing the Amherst Trading Co's special prize for second highest scoring cow in the test.

F. S. Black's Neta was the highest scoring three-year-old with 206.18 as her total number of points thus winniag the Canadian Ayrshire Breeders Association $50.00. Mr. Black won this prize seven or eight years ago and since then it has gone by default as the highest scoring three-year-old in the test during the last few years has been a breed other than Ayrshire.

The king pin cow and chief attraction of the show was A. McRae & Sons, Milkmaid 7th which with a score of 240.12 led all her competitors, winning the Ayrshire Breeders' Association prize of $50.00 for the highest scoring aged cow, if she be an Ayrshire and also the Henry Birks & Sons' Silver Cup for the highest scoring cow, any breed or grade in the test. This cup was won in 1908 by W. W. Black, in 1909 by Logan Bros., in 1910 by T. W. Keilor and in 1911 by S. Dickey & Sons.

Milvmaid 7th at one time held the world's record as the highest producing two-year-old Ayrshire. ...

One of H. S. Pipes & Son's Jerseys, Blood's Choice, headed the two-year-old class with a score of 188.59 points.

The chief honor in the yearlings section was captured by Logan Bros.' Island Lassie with a score of 135.35.

SHEEP

The sheep classes were a uniform, well fitted lot. There was not a sheep in the building of which any of the owners had any reason to feel ashamed.

The full list of awards will be found on other pages of this issue. R. H. Harding, Thorndall, Ont., placed the awards.

The dressed carcasses numbered eighteen. Jas. I. Stewart led the way in the over one-year-old class with a grade Shropshire wether and in the under one-year class with a pure bred ewe lamb.

The Blatchford Calf Meal Factory special prize for the best wether lamb was captured by one of Albert Boswalls Sr.'s Leicesters.

The Robb Engineering Co's specials for the best four lambs, all one breed won by Boswall's Leicesters and Oliver C. Saunders' Southdowns.

The Bank of Montreal Special for the best Oxford, Hampshire or Suffolk ewe was won by J. E. Baker & Sons and the same firm's special for best Cotswold or Cheviot ewe was won by John Tweedie.

The Hewson specials for best flock of short wool sheep went to Jas. I. Stewart and Burder Goodwin.

The Canadian Bank of Commerce specials for the best three shearling wethers was captured by Jas. I. Stewart and S. C. Lane.

The New Brunswick Wire Fence Co., Amherst Hotel and Maritime Farmer's specials for best pen of four wether lambs were awarded to Oliver C. Saunders, Jas. I. Stewart, Geo. L. Boswall and J. E. Baker & Sons.

The Royal Bank of Canada specials for pen,1 ewe lamb, 1 yearling ewe, 1 ewe, 2 years old or over were awarded to J. E. Baker & Sons and Albert Boswall.

SWINE

were a uniformly good lot and were judged by Prof. L. Stevenson of the N. S. A. C. There was a lively competition in every class and the awards will be found elsewhere in this issue.

The Dominion Swine Breeders' Association prizes for:

Best sow 9 months and under 15 months.

Best sow 6 months and under 9 months.

Best sow under 6 months, in each of the three Maritime Provinces were won respectively as follows:—

In Nova Scotia—1, Fowler Bros.; 2, Jas. I. Stewart; 3, Fowler Bros.

In New Brunswick—1, T. J. Etter; 2, Edward Anderson; 3, Chas. Etter.

In Prince Edward Island—1, 2 and 3, Stewart Bros.

The Atlas Stock Food Co. Silver Cup for the best animal, any breed or grade, from a bacon standpoint, won in 1910 and 1911 by W. J. Gibson was this year captureed by one of J. W. Callbeck's Yorkshires.

The Percy P. Evans Silver Cup for the best pen of three, including sow under 6 months, sow, 6 months and under 1 year and sow, over 1 year, won in 1911 by A. A. McBeath went to Stewart Bros. on a pen of Yorkshires.

The dressed swine carcasses numbered sixty-eight.

The awards will be found elsewhere in this issue. Gibson's Tams. led the way and were followed down the list as follows:—

Yorkshires in 2nd, 3rd, 9th, 10th and 12th places.

Berkshires in 4th, 5th, and 11th places. A Berk. and Tam. in 6th position and grade Yorks in 7th place.

THE JUDGING COMPETITIONS.

which were conducted on Wednesday were well patronized by the N. S. A. C. students and also a number of non-students. The prize winners were as follows;—

Beef Class—1, Walter Shaw; 2, A. C. Starr; 3, J. W. Landells; 4, C. E. Boulden; 5, R. A. Weldon.

Dairy Cattle—1, G. C. Hanna; 2, A. O. F. Gill; 3, J. G. Archibald; 4, Gerald Hubbard; 5, Jas. Retson.

Sheep—1, A. O. F. Gill; 2, Walter Shaw; 3, H. C. Secord; 4, H. P. Munroe; 5, W. N. Keenan.

The Prof. M. Cumming cup for the person making the highest score in judging, dairy cattle, beef cattle and sheep went to A. O. F. Gill, York, P. E. I.

The M. S. B. A. cup for the person, not a regular student of the N. S. A. C. making the highest score judging in the foregoing mentioned classes was won by Jas. Retson, Truro, N. S.

THE POULTRY EXHIBIT

as usual was one of the chief attractions at the fair.

W. A. Brown, Ottawa, Geo. Robertson, Ottawa and J. Fred Watson, Nashua, N. H. placed the awards. J. P. Landry, of the N. S. A. C., had charge of the department. Over 2050 birds of the various popular breeds were exhibited in the open and utility sections.

The open sections were a particularly good lot. R. I. Reds, Barred Rocks, White Wyandottes, and White Leghorns predominated in point of numbers but all classes were well represented by birds which would be hard to beat in any competition. There were no walk-overs as far as prize winning was concerned.

The utility pairs and breeding pens were also a good lot. Barred Rocks and White Wyandottes led in point of numbers.

In mating pens there were eleven entries of Barred Rocks and three entries of Brown Leghorns.

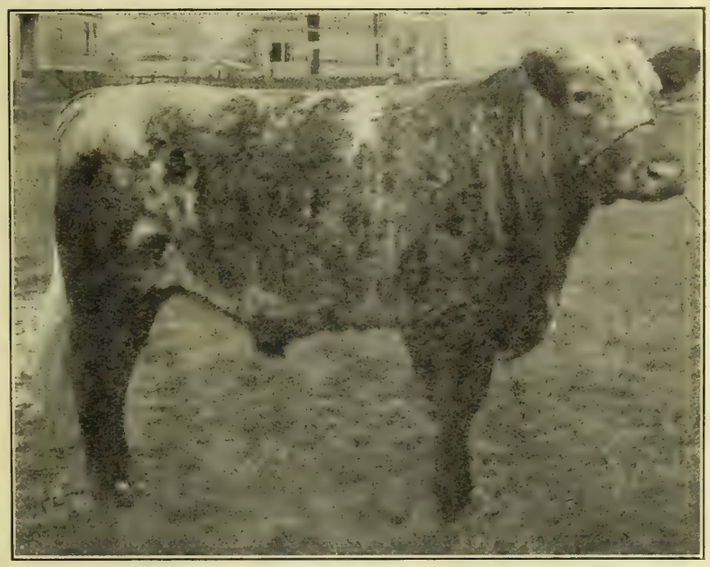
There was a goodly share of ornamental and pet stock.

TURKEYS, GEESE AND DUCKS

were out in large numbers and had lots of quality. L. H. D. Foster had the best cockerel and pull?t in the American variety, a pair of Barred Rocks. L. A. Haszard won the special for best cockerel and pullet in the English varieties on a pair of Buff Orpingtons.

Craig Bros. had the best cock, hen, cockerel and pullet in the Barred Rock class while Watson Lutz had the second best quartette.

The Maritime Poultry Association Silver Cup for the best exhibit of American breeds of poultry, won in 1910 by Seth Jones and in 1911 by Hartland Poultry yards was again captured by the latter firm.



Best Grade Steer at the 1912 Maritime Winter Fair. Dressed first prize carcass. Owned by Fowler Bros.. Amherst Point, N, S.

Best Hereford Steer at the 1912 Maritime Winter Fair. Owned by W. W. Black, Amherst, N. S.

The Percy Johnson cup for the best exhibit of poultry, including American breeds and Bantams, won in 1911 by Hartland Poultry yards is now held by Kingsdale Poultry & Supply Co.

The Silver Cup donated by the late Hon. W. T. Pipes for the best cock, hen, cockerel and pullet, won in 1908 by Craig Bros., in 1909 by Craig Bros., in 1909 by Hazard and Duchemin and in 1911 by A. C. Read was again captured by A. C. Read's White Wyandottes.

Craig Bros. won the Kingsdale Poultry & Supply Co's Silver Cup in the Utility classes.

THE DRESSED POULTRY EXHIBIT

was the best display ever made at the Maritime Winter Fair. The Maritime Poultry Association monies for the best 12 chickens packed in suitable box for export went to Jack Thompson, Fort Lawrence, and the Hartland Poultry yards.

T. J. Etter and Hartland Poultry yards had the first and second best exhibits of dressed poultry.

The best six dressed chickens, any variety, were shown by John R. Harrison.

LADIES JUDGING COMPETITION

prizes in the section open to ladies of the Amherst Hospital Aid Society, for the best judging of chickens, geese turkeys and ducks, were captured by Miss Helen Christie, and Miss Harding.

Miss Pipes, Mrs. Geo. Ripley and Mrs. R. Embree were the prize winners in the judging section open to farmers' wives and daughters, not members of the Amherst Hospital Aid.

POULTRY PLUCKING CONTEST

prizes in the section open to boys under 15 years were won by Frank Cooke, Geo. McWilliams, Fred Noiles and V. Doncaster.

C. J. Cock, T. C. Latham, F. D. McCurdy and E. C. Black won in their respecttive places in the poultry plucking contest for boys, over 15 years.

THE FRUIT EXHIBIT

was not up to the usual in point of quantity but there were some very fine samples in the display. Worthy of special mention were the displays made by W. B. Wallace of Hants Co., N. S. and S. L. Peters of Queens Co., N. B. In the latter display a plate of Bishop Pippons was considered by S. C. Parker, the judge, to be almost perfect.

Mr. Peter's collection was awarded the Spramotor Co's prize for best collection of fruit. The collection contained Wealthy, McIntosh Red, Gravenstein, King of Thompkins, Northern Spy, Fameuse, Alexander, Bishop Pippin and Golden Russet varieties.

THE SEED DEPARTMENT

was well filled with Wheat, Oats, Barley, Buckwheat, Peas, Beans and Potatoes. Ther was an exceptionally good showing of Timothy seed.

One particularly interesting feature of the seed exhibition is the section filled by members of the Canadian Seed Growers' Association. This year the members excelled themselves and a goodly number of new beginners had entries in this section.

The best exhibit of seed grain was made by E. J. Vessey and consequently he won the silver cup donated by Wm. Ewing, Seedsman, Montreal. This cup was won in 1910 by A. E. McLean, P. E. I., and in 1911 by Ernest W. Bulman, Rusticoville, P. E. I.

W. H. McGregor, P. E. I. won the Steel Briggs Seed Co. Silver Cup for the most creditable showing of not more than three varieties of selected seed. This cup was won in 1910 and 1911 by the late Robert McKay, Millsville, Pictou Co., N. S.

The D. J. Robertson Gold Medal to the boy or girl having the best exhibit of white oats was won by John A. Semple, Brule, N. S.

'r the auditorium on Monday, Tuesday and Wednesday evenings by men prominent in the public affairs of the Maritime Provinces and by Prof. H. S. Arkell, Prof. L. Stevenson, John T. Gibson, R. H. Harding, Prof. J. H. Grisdale, R. S. Stevenson, W. A Brown and others were attentively listened to by large audiences. Some of the subjects discussed were: "Increasing Live Stock Production in the Maritime Provinces", "The Breeder's Work," "Some Phases of the Beef Question," "Sheep Industry" "The Canadian Farmers' Laboratory, Dominion Experimental Farm", "Dairying" and "Poultry".

The special prizes were distributed on Thursday evening by Mr. A. D. Ross, Amherst.

Results of the 72 Hour Dairy Test at the 1912 Maritime Winter Fair.

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
	1	12.5	3.0	.37	8.2	1.02
	2	13.3	3.4	.45	8.3	1.10
Class 10—Sec. 1.	3	13.3	3.0	.39	8.2	1.09
Shorthorn.	4	14.0	2.4	.33	8.2	1.14
Miss Amherst.	5	15.0	2.5	.37	8.3	1.24
November 14, 1912.	6	15.0	2.9	.43	8.2	1.23
133.31.	7	13.0	2.8	.36	8.0	1.04
First	8	14.7	3.7	.54	7.9	1.16
Geo. M. Holmes.	9	17.0	5.0	.85	7.8	1.32
		127.8		4.09		10.34
	1	12.3	3.6	.44	7.5	.92
	2	12.1	3.2	.38	7.8	.94
Class 10—Sec. 1.	3	13.0	3.3	.42	7.8	1.01
Shorthorn.	4	12.9	3.3	.42	7.9	1.01
Pansy Lass.	5	10.6	3.4	.36	8.3	.87
October 22, 1922.	6	11.2	4.1	.45	8.3	.92
112.88.	7	10.3	3.0	.30	7.9	.81
Second.	8	11.3	2.9	.32	7.8	.88
Fred T. Holmes.	9	11.7	3.8	.44	7.3	.85
		105.4		3.53		8.21
	1	12.3	4.3	.52	8.0	.98
	2	12.4	4.0	.49	8.0	.99
Class 10—Sec. 2.	3	12.6	4.1	.51	7.9	.99
Shorthorn.	4	12.7	3.6	.45	7.9	1.00
Valiant Lassie.	5	12.6	3.4	.42	8.3	1.04
November 4, 1912.	6	12.0	2.7	.32	8.2	.98
142.16.	7	11.6	4.2	.48	8.0	.92
First.	9	13.4	5.7	.76	8.0	1.07
Geo. M. Holmes.	9	12.5	5.3	.66	8.0	1.00
		112.1		4.61		8.97
Class 10—Sec. 2.	1	10.5	4.3	.45	8.3	.87
	2	10.5	3.8	.39	8.7	.91
	3	10.6	4.4	.46	8.5	.90
Shorthorn.	4	11.2	3.8	.42	8.5	.95
Valiant Lassie 2nd.	5	10.0	4.2	.42	8.3	.83
November 16, 1912.	6	8.3	6.1	.50	8.6	.71
114.76.	7	9.1	4.0	.36	8.0	72
Second.	8	9.3	3.7	.34	7.9	.73
Fred T. Holmes.	9	10.	3.6	.36	8.0	.80
		89.5		3.70		7.42
	1	6.5	3.4	.22	8.5	.55
	2	6.7	3.5	.23	8.6	.57
Class 10—Sec. 3.	3	6.9	3.7	.25	8.3	.57
Shorthorn.	4	8.3	3.5	.29	8.3	.68
Miss Stanley.	5	7.8	4.0	.31	8.4	.67
August 16, 1912.	6	7.7	4.0	.30	8.2	.63
91.89.	7	9.4	4.1	.38	8.4	.81
Second.	8	9.5	4.4	.41	7.9	.75
Geo. M. Holmes.	9	8.0	3.8	.30	8.2	.65
		70.8		2.69		5.88
	1	6.0	4.4	.26	8.1	.48
	2	5.6	4.0	.22	8.3	.46
Class 10—Sec. 3.	3	6.0	4.3	.25	8.2	.49
Shortho[illegible]	4	5.8	4.0	.23	8.4	.48
Valian[illegible]assie 3rd.	5	5.2	4.1	.21	8.1	.42
Septem[illegible] 2, 1912.	6	6.1	4.6	.28	8.6	.52
71.52.	7	6.0	3.8	.22	8.1	.49
Third.	8	6.7	4.0	.26	8.1	.54
Fred T. Holmes.	9	5.8	3.7	.21	8.0	.46
		53.2		2.14		4.34
	1	8.4	3.9	.32	8.4	.70
	2	7.2	3.5	.25	8.3	.59
Class 10—Sec. 4.	3	8.2	4.1	.33	8.8	.72
Shorthorn.	4	9.8	3.6	.35	8.3	.81
Springdale Lass.	5	10.5	3.2	.33	8.1	.85
August 20, 1912.	6	10.4	2.9	.30	8.3	.86
102.46.	7	11.7	3.0	.35	8.2	.95
First.	8	11.1	3.7	.41	8.4	.93
Geo. M. Holmes.	9	10.5	4.4	.46	8.7	.91
		87.8		3.10		7.32
	1	6.0	3.7	.22	8.1	.48
	2	6.2	3.7	.22	8.3	.51
Class 10—Sec. 4.	3	6.3	4.1	.25	8.1	.51
Shorthorn.	4	6.5	3.6	.23	8.1	.52
Valiant Lassie.	5	6.5	3.7	.24	8.1	.52
September 28, 1912.	6	6.2	4.1	.25	8.0	.49
45.94.	7	5.4	2.8	.15	7.4	.39
Second.	8	5.2	2.9	.15	7.8	.40
Fred T. Holmes.	9	5.4	2.6	.14	7.6	.41
		53.7		1.85		4.23

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
	1	21.5	4.0	.86	8.3	1.78
	2	21.6	3.8	.82	8.5	1.83
Class 11—Sec. 1.	3	21.7	3.5	.75	7.8	1.69
Ayrshire.	4	21.5	4.0	.86	8.3	1.78
Milkmaid 7th.	5	21.6	3.6	.77	8.3	1.79
October 1, 1912.	6	20.0	3.3	.66	8.0	1.60
240.12.	7	21.4	4.8	1.12	7.9	1.69
First and Sweepstakes.	8	16.8	3.6	.60	8.2	1.39
A. McRae & Sons.	9	22.1	6.2	1.39	7.9	1.74
		188.2		7.73		15.29
	1	15.1	4.0	.60	8.0	1.20
	2	14.8	4.1	.60	8.1	1.19
Class 11—Sec. 1.	3	14.1	4.0	.56	8.4	1.18
Ayrshire.	4	15.8	4.4	.69	8.4	1.32
Alice.	5	16.3	4.3	.70	8.2	1.33
October 2, 1912.	6	15.5	4.4	.68	8.5	1.31
192.52.	7	16.5	4.5	.74	8.8	1.45
Second.	8	16.3	4.9	.79	7.8	1.27
Chas. Symes.	9	16.2	5.4	.87	8.3	1.34
		139.6		6.23		11.59
	1	17.3	2.7	.46	8.1	1.40
	2	18.1	3.0	.54	8.4	1.52
Class 11—Sec. 1.	3	18,	2.8	.50	8.0	1.44
Ayrshire.	4	19.4	3.1	.60	8.4	1.62
Peggy.	5	18.5	2.8	.51	8.2	1.51
November 20, 1912.	6	18.5	3.0	.55	8.0	1.48
160.34.	7	17.9	3.0	.53	8.3	1.48
Third.	8	18.5	3.0	.55	7.6	1.40
McIntyre Bros.	9	18.4	3.2	.58	7.8	1.43
		164.6		4.82		13.28
	1	16.6	3.6	.59	8.3	1.37
	2	16.5	3.0	.49	8.5	1.40
Class 11—Sec. 1.	3	18.3	3.5	.64	7.9	1.44
Ayrshire.	4	16.7	3.8	.63	8.2	1.36
Spicy Lucy.	5	16.1	3.0	.48	8.1	1.30
November 5, 1912.	6	17.5	3.1	.54	8.2	1.43
156.13.	7	21.4	4.8	1.02	7.9	1.69
Fourth.	8	16.2	2.6	.42	8.0	1.29
A. McRae & Sons.	9	15.1	2.3	.34	7.9	1.19
		150.5		4.90		12.21
	1	13.1	3.8	.49	8.3	1.08
	2	14.1	3.3	.46	8.3	1.17
Class 11—Sec. 1.	3	14.8	3.4	.50	8.2	1.21
Ayrshire.	4	14.5	3.2	.46	8.7	1.26
Mary of Spring Brook Farm.	5	15.7	3.5	.54	8.7	1.36
September 1, 1912.	6	15.0	4.0	.60	8.2	1.23
155.29.	7	15.0	3.6	.54	8.1	1.21
Fifth.	8	15.0	3.5	.52	8.1	1.21
A. McRae & Sons.	9	15.1	3.7	.55	8.0	1.20
		132.3		4.66		10.93
	1	16.5	2.9	.47	8.5	1.40
	2	16.7	3.0	.50	8.5	1.41
Class 11—Sec. 1.	3	16.7	3.2	.53	8.3	1.38
Ayrshire.	4	16.2	3.1	.50	8.6	1.39
Princess Bell.	5	16.1	2.8	.45	8.5	1.36
November 1912	6	16.4	2.8	.45	8.6	1.41
152.41.	7	16.5	2.7	.44	8.8	1.45
Sixth.	8	17.9	3.0	.53	8.1	1.44
John Retson.	9	17.5	4.0	.70	8.5	1.48
		150.5		4.57		12.72
	1	12.3	3.2	.39	7.8	.95
	2	12.5	3.2	.40	8.1	1.01
Class 11—Sec. 1.	3	12.4	3.1	.38	8.0	.99
Ayrshire.	4	12.5	3.3	.41	8.2	1.02
Flo's Jane.	5	12.5	3.1	.38	8.2	1.02
August 3, 1912.	6	13.0	3.4	.44	7.9	1.02
125.94.	7	12.4	3.2	.39	8.0	.99
Seventh.	8	12.4	3.2	.39	8.1	1.00
McIntyre Bros.	9	12.5	3.7	.46	7.9	.98
		112.5		3.64		8.98
	1	17.7	4.4	.77	8.3	1.46
	2	17.	4.3	.73	8.3	1.41
Class 11—Sec. 2.	3	17.3	4.2	.72	8.3	1.43
Ayrshire.	4	17.9	4.0	.71	8.4	1.50
Neta.	5	18.2	4.4	.80	8.1	1.47
November— 1912.	6	17.5	4.3	.75	8.5	1.48
206.18.	7	18.2	3.6	.65	8.2	1.49
First—Highest Scoring 3-yr.-old.	8	18.6	4.0	.74	8.4	1.56
F. S. Black.	9	18.7	4.2	.78	8.1	1.51
		161.1		6.65		13.31

Explanation of Terms :—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.

Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
1	13.8	4.4	.60	8.5	1.17
2	13.7	4.3	.58	8.5	1.16
3	14.0	4.5	.63	8.6	1.20
4	14.7	4.5	.66	9.0	1.32
5	13.6	3.8	.51	8.6	1.16
6	14.5	4.3	.62	8.5	1.23
7	15.5	4.2	.65	8.8	1.36
8	14.6	4.0	.58	8.3	1.21
9	16.7	4.2	.70	8.3	1.38
	131.1		5.53		11.19

Class 11—Sec. 2.
Ayrshire.
Belvidere Princess.
November 5, 1912.
171.82.
Second.
A McRae & Sons.

1	13.3	4.0	.53	8.5	1.13
2	13.5	3.9	.52	8.6	1.16
3	13.7	4.1	.56	8.4	1.15
4	13.7	4.0	.54	8.4	1.15
5	13.8	3.6	.49	8.3	1.14
6	13.9	4.0	.55	8.3	1.15
7	13.4	4.1	.54	8.3	1.11
8	13.9	3.8	.52	8.1	1.12
9	13.6	4.1	.55	8.2	1.11
	123.0		4.80		10.22

Class 11—Sec. 2.
Ayrshire.
Stylish Dewdrop.
September 15, 1912.
154.27.
Third.
McIntyre Bros.

1	13.5	3.5	.47	8.1	1.09
2	14.2	3.6	.51	8.2	1.16
3	14.4	3.5	.50	8.3	1.19
4	15.	3.5	.50	8.3	1.24
5	15.2	3.4	.51	8.2	1.24
6	15.7	3.6	.56	8.1	1.27
7	15.2	3.5	.53	8.0	1.21
8	15.4	3.4	.52	7.8	1.20
9	15.5	3.7	.57	8.1	1.25
	134.1		4.67		10.84

Class 11—Sec. 2.
Ayrshire.
Molly of Spring Brook Farm.
September 7, 1912.
154.66.
Fourth.
McIntyre Bros.

1	9.8	4.2	.41	8.4	.82
2	9.9	4.2	.41	8.7	.86
3	10.0	4.0	.40	8.3	.83
4	10.7	4.0	.42	8.8	.94
5	10.6	4.0	.42	8.4	.92
6	10.3	4.2	.43	8.9	.91
7	10.0	4.2	.42	8.9	.89
8	10.5	4.0	.42	8.5	.89
9	10.5	4.5	.47	8.6	.90
	92.3		3.80		7.96

Class 11—Sec. 2.
Ayrshire.
White Lady 2nd.
September 14, 1912.
122.88.
Fifth.
McIntyre Bros.

1	14.2	4.4	.62	8.9	1.26
2	14.1	4.0	.56	8.7	1.22
3	14.3	4.0	.57	8.6	1.22
4	14.7	4.5	.66	8.8	1.29
5	15.0	4.2	.63	8.1	1.21
6	14.5	4.3	.62	8.5	1.23
7	15.0	4.4	.66	8.6	1.29
8	13.2	4.3	.56	8.6	1.13
9	12.0	4.0	.48	8.5	1.02
	127.0		5.36		10.87

Class 11—Sec. 3.
Ayrshire.
Rosalind.
November 12, 1912.
166.61.
First.
F. S. Black.

1	8.9	3.7	.32	8.3	.73
2	9.2	3.9	.35	8.1	.74
3	9.3	4.2	.39	8.8	.81
4	9.6	4.3	.41	8.3	.79
5	8.8	3.7	.32	8.4	.73
6	9.4	4.0	.37	8.2	.77
7	9.8	4.3	.42	8.5	.83
8	10.	4.3	.43	7.8	.78
9	9.2	4.1	.37	8.1	.74
	84.2		3.38		6.92

Class 11—Sec. 3.
Ayrshire.
Emma of Spring Brook Farm.
October 10, 1912.
107.32.
Second.
A. McRae & Sons.

1	9.1	3.1	.28	8.3	.75
2	9.6	3.2	.30	8.5	.81
3	9.3	3.3	.30	8.5	.79
4	9.6	3.4	.32	8.5	.81
5	9.6	3.3	.31	8.8	.84
6	9.5	3.4	.32	8.6	81
7	10.3	3.7	.38	8.6	.88
8	10.5	3.6	.37	7.9	.82
9	10.0	3.4	.34	8.3	.83
	87.5		2.92		7.33

Class 11—Sec. 3.
Ayrshire.
Rose of Spring Brook Farm.
November 26, 1912.
94.99.
Third.
McIntyre Bros.

1	5.7	4.1	.23	8.3	.47
2	6.0	4.3	.25	8.7	.52
3	5.8	4.2	.24	8.4	.48
4	6.0	4.0	.24	8.9	.53
5	6.1	4.2	.25	8.6	.52
6	6.0	4.1	.24	8.3	.49
7	6.0	4.3	.25	8.7	.52
8	6.2	4.2	.26	8.1	.50
9	5.7	4.3	.24	8.0	.45
	53.5		2.20		4.48

Class 11—Sec. 3.
Ayrshire.
White Lady 3rd.
August 2, 1912.
77.44.
Fourth.
McIntyre Bros.

Explanation of Terms :—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.

Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
1	12.6	3.8	.47	8.6	1.08
2	12.2	3.8	.46	8.2	1.00
3	12.0	3.5	.42	8.4	1.00
4	12.2	3.4	.41	8.5	1.03
5	12.7	3.9	.49	8.1	1.02
6	12.9	3.7	.47	8.4	1.08
7	12.6	3.4	.42	8.5	1.07
8	13.1	4.0	.52	8.1	1.06
9	12.9	4.0	.51	8.2	1.05
	113.2		4.17		9.39

Class 11—Sec. 4.
Ayrshire.
Pinafore 4th.
October 16, 1912.
133.42.
First.
F. S. Black.

1	10.3	3.3	.33	8.1	.83
2	10.1	3.3	.33	8.1	.81
3	10.7	3.2	.34	7.8	.83
4	10.0	3.2	.32	8.2	.82
5	10.7	3.6	.38	8.3	.88
6	10.4	3.5	.36	7.8	81
7	11.1	3.6	.39	7.9	87
8	11.8	3.8	.44	7.8	92
9	10.6	3.6	.38	7.7	81
	95.7		3.27		7.58

Class 11—Sec. 4.
Ayrshire.
Emma 2nd.
October 4, 1912.
106.49.
Second.
McIntyre Bros.

1	24.0	3.1	.74	8.6	2.06
2	24.2	3.0	.72	8.5	2.05
3	25.5	3.3	.84	8.2	2.09
4	24.5	2.8	.68	8.3	2.03
5	25.0	3.1	.77	8.4	2.10
6	24.0	2.9	.69	8.1	1.94
7	25.8	3.3	.85	8.2	2.11
8	25.1	3.1	.77	7.9	1.98
9	25.0	3.3	.82	8.2	2.05
	223.1		6.88		18.41

Class 12—Sec. 1.
Holstein.
Artis Rosia.
November 18, 1912.
227.23.
First.
Samuel Dickie & Son.

1	23.7	3.6	.85	8.2	1.94
2	22.1	3.2	.70	8.4	1.85
3	24.2	3.1	.75	8.0	1.93
4	22.8	2.8	.63	8.2	1.86
5	25.4	2.9	.73	8.1	2.05
6	25.	3.1	.77	8.1	2.02
7	24.0	3.3	.79	8.3	1.99
8	24.0	3.0	.72	8.1	1.94
9	24.1	3.2	.77	8.0	1.92
	215.3		6.71		17.50

Class 12—Sec. 1.
Holstein.
Nellie 3rd.
October 6, 1912.
222.25.
Second.
Samuel Dickie & Son.

1	17.5	3.0	.52	7.7	1.34
2	18.3	3.2	.58	8.0	1.46
3	17.6	3.6	.63	7.9	1.39
4	17.9	3.4	.60	8.2	1.46
5	19.0	3.3	.62	8.2	1.55
6	20.2	4.7	.94	8.6	1.73
7	18.5	4.0	.74	8.2	1.51
8	19.1	3.7	.70	8.3	1.58
9	19.6	4.4	.86	8.3	1.62
	167.7		6.09		13.64

Class 12—Sec. 1.
Holstein.
Nellie M. Beauty.
August 7, 1912.
201.17.
Third.
Samuel Dickie & Son.

1	21.6	3.4	.73	7.3	1.57
2	20.8	3.4	.70	7.6	1.58
3	19.3	3.1	.59	7.7	1.48
4	19.6	3.2	.62	7.7	1.50
5	19.7	3.0	.59	7.8	1.53
6	22.3	4.8	1.07	7.4	1.65
7	18.3	3.2	.58	7.5	1.37
8	21.4	3.1	.66	7.2	1.54
9	22.7	3.2	.72	7.1	1.61
	185.7		6.26		13.83

Class 12—Sec. 1.
Holstein.
Maple Grove Bell 2nd.
October 20, 1912.
197.15.
Fifth.
R. L. Hicks.

1	19.4	3.4	.65	7.7	1.49
2	18.1	3.1	.56	7.9	1.42
3	19.9	3.2	.63	7.7	1.53
4	19.5	2.6	.50	7.7	1.50
5	21.7	2.6	.56	7.7	1.67
6	22.	3.3	.72	7.6	1.67
7	21.8	3.8	.82	8.1	1.76
8	22.4	3.6	.80	7.8	1.74
9	22.7	3.8	.86	7.8	1.77
	187.5		6.10		14.77

Class 12—Sec. 1.
Holstein.
Maple Grove Patty.
October 21, 1912.
187.76.
Sixth.
Logan Bros.

1	20.3	3.0	.61	7.4	1.50
2	19.3	2.8	.54	7.8	1.50
3	19.6	3.1	.60	7.7	1.50
4	19.3	3.2	.61	8.0	1.54
5	21.2	2.9	.61	7.8	1.65
6	22.0	3.4	.74	7.4	1.62
7	21.1	3.0	.63	7.5	1.58
8	22.1	3.1	.68	7.3	1.61
9	22.3	3.4	.75	7.5	1.67
	187.2		5.77		14.17

Explanation of Terms :—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
	1	20.	3.0	.60	7.7	1.54
	2	19.5	3.2	.62	7.7	1.50
Class 12—Sec. 1.	3	19.	3.0	.57	7.4	1.40
Holstein.	4	19.9	3.0	.59	7.6	1.51
Maple Grove Mercedes.	5	19.7	3.1	.61	7.9	1.55
October 21, 1912.	6	20.	3.3	.66	7.6	1.52
182.20.	7	20.4	2.8	.57	7.6	1.55
Seventh.	8	20.	3.4	.68	7.4	1.48
R. L. Hicks.	9	20.9	3.6	.75	7.7	1.60
		179.4		5.65		13.65
	1	19.6	3.2	.62	8.3	1.62
	2	19.2	3.5	.67	8.5	1.63
Class 12—Sec. 2.	3	17.6	3.3	.58	8.2	1.49
Holstein.	4	16.4	2.8	.45	8.4	1.37
C. Rooker La Honda.	5	19.8	3.3	.65	8.3	1.64
November 1, 1912.	6	18.8	3.6	.67	7.4	1.39
180.28.	7	19.4	3.6	.69	8.1	1.57
First.	8	19.4	3.1	.60	8.0	1.55
Samuel Dickie & Son.	9	18.6	3.4	.63	8.1	1.50
		168.8		5.56		13.76
	1	18.0	3.9	.70	7.8	1.40
	2	16.0	3.2	.51	7.8	1.24
Class 12—Sec. 2.	3	18.1	3.6	.65	7.5	1.35
Holstein.	4	17.0	3.6	.61	8.0...	1.36
Ida Rooker 3rd.	5	17.0	3.2	.54	8.1	1.37
October 12, 1912.	6	17.5	3.2	.56	7.7	1.34
177.20.	7	19.4	4.8	.93	7.7	1.49
Second.	8	16.3	3.2	.52	7.6	1.23
Logan Bros.	9	18.1	3.2	.57	7.6	1.37
		157.4		5.59		12.15
	1	15.5	3.3	.51	8.1	1.25
	2	15.5	3.1	.48	7.9	1.22
Class 12—Sec. 2.	3	16.5	3.5	.57	7.9	1.30
Holstein.	4	15.2	3.5	.53	8.1	1.23
Countess Henjeveld De Kol.	5	18.2	3.3	60	8.2	1.49
November 19, 1912.	6	16.5	3.3	.54	7.8	1.28
157.16.	7	15.6	3.1	.48	8.2	1.27
Third.	8	17.4	3.1	.53	7.7	1.33
Logan Bros.	9	17.1	3.8	.64	7.9	1.35
		147.5		4.88		11.72
	1	16.9	3.4	.57	8.2	1.38
	2	15.6	3.5	.54	8.6	1.34
Class 12—Sec. 2.	3	15.3	3.2	.48	8.0	1.22
Holstein.	4	16.	3.2	.51	8.2	1.31
Maple Grove Helen.	5	16.8	3.4	.57	8.3	1.39
November 3, 1912.	6	15.5	3.4	.52	8.2	1.27
156.46	7	16.6	3.2	.53	8.2	1.36
Four h.	8	15.7	3.4	.53	8.1	1.27
R. J. Hicks.	9	16.5	3.6	.59	7.8	1.28
		144.9		4.84		11.82
	1	13.5	3.8	.51	8.1	1.09
	2	13.1	3.3	.43	8.3	1.08
Class 12—Sec. 2.	3	13.4	3.6	.48	8.3	1.11
Holstein.	4	14.	3.6	.50	8.1	1.13
Pauline Ursena.	5	14.0	3.4	.47	8.2	1.14
November 1, 1912.	6	13.2	3.6	.47	8.4	1.10
138.72.	7	13.6	3.7	.50	8.2	1.11
Fifth.	8	13.5	3.2	.43	8.0	1.08
Logan Bros.	9	14.1	4.0	.56	8.2	1.15
		122.4		4.35		9.99
	1	17.5	3.1	.54	8.1	1.41
	2	17.7	3.4	.60	8.2	1.45
Class 12—Sec. 3.	3	16.8	3.5	.58	8.3	1.39
Holstein.	4	15.7	3.5	.54	8.7	1.36
Johanna Louise.	5	18.5	3.3	.61	8.3	1.51
November 4, 1912.	6	16.9	3.6	.60	8.4	1.41
172.17.	7	16.7	3.8	.63	8.5	1.41
First.	8	18.2	3.5	.63	8.1	1.47
Logan Bros.	9	18.1	3.4	.61	8.2	1.48
		156.1		5.34		12.89
	1	15.3	3.3	.50	8.5	1.30
	2	15.8	3.4	.53	8.5	1.34
Class 12—Sec. 3.	3	16.9	3.3	.55	8.3	1.40
Holstein.	4	17.3	2.8	.48	8.5	1.47
Korndyke Calamity.	5	17.6	2.9	.51	8.4	1.47
November 25, 1912.	6	17.1	2.7	.46	8.3	1.41
159.70.	7	17.4	3.3	.57	8.5	1.47
Second.	8	18.2	3.3	.60	8.3	1.51
Logan Bros.	9	19.	3.4	.64	8.1	1.53
		154.6		4.84		12.90

Explanation of Terms :—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
	1	18.7	2.8	.52	7.3	1.36
	2	17.7	2.8	.49	7.6	1.34
Class 12—Sec. 3.	3	18.6	2.6	.48	7.4	1.37
Holstein.	4	18.3	2.7	.49	7.4	1.35
C. J. Faforit.	5	19.2	2.4	.46	7.2	1.38
November 4, 1912.	6	19.9	2.6	.51	7.5	1.49
148.70.	7	18.8	2.8	.52	7.4	1.39
Third.	8	19.	2.6	.49	7.4	1.40
Samuel Dickie & Son.	9	18.2	2.8	.50	7.3	1.32
		168.4		4.46		12.40
	1	14.8	2.5	.37	6.9	1.02
	2	14.0	2.2	.30	7.4	1.03
Class 12—Sec. 3.	3	14.7	1.8	.26	6.9	1.01
Holstein.	4	15.1	2.2	.33	7.3	1.10
Bertje Wayne Concordia 2nd.	5	14.3	1.8	.25	7.4	1.05
October 4, 1912.	6	16.2	2.8	.45	7.2	1.16
121.17.	7	16.4	3,7	.60	7.6	1.24
Fourth.	8	16.1	3.5	.56	7.3	1.17
Logan Bros.	9	15.9	3.4	.54	7.0	1.11
		137.5		3.66		9.89
	1	12.5	3.0	.37	8.1	1.01
	2	12.3	2.8	.34	8.2	1.00
Class 12—Sec. 3.	3	12.6	3.0	.37	8.1	1.02
Holstein.	4	13.1	3.2	.41	8.2	1.07
Hazel Sadie Vale.	5	13.6	2.9	.39	8.0	1.08
October 21, 1912.	6	13.2	3.3	.43	8.2	1.08
116.35.	7	12.7	3.2	.40	8.3	1.05
Fifth.	8	13.1	2.8	.36	8.0	1.04
Logan Bros.	9	13.1	3.1	.41	8.4	1.10
		116.0		3.48		9.45
	1	12.3	3.9	.46	8.0	.98
	2	12.	3.7	.44	8.5	1.02
Class 12—Sec. 4.	3	12.5	3.9	.48	8.3	1.03
Holstein.	4	12.2	3.5	.42	8.7	1.06
Island Lassie.	5	12.6	3.7	.46	8.4	1.05
October 9, 1912.	6	12.6	4.1	.51	8.5	1.07
135.35.	7	12.2	4.0	.48	8.6	1.04
First—Highest Scoring 1-yr.-ald.	8	12.9	3.8	.48	8.4	1.08
Logan Bros.	9	13.3	4.1	.54	8.5	1.13
		112.6		4.28		9.45
	1	13.	3.2	.41	8.8	1.14
	2	13.	3.5	.45	8.7	1.13
Class 12—Sec. 4.	3	12.1	3.0	.36	7.7	.93
Holstein.	4	12.8	3.4	.43	8.3	1.06
Mercend Bell.	5	13.1	3.2	.41	8.2	1.07
November 2, 1912.	6	12.2	3.7	.45	8.2	1.00
124.08.	7	12.4	3.4	.42	8.5	1.05
Second.	8	13.	3.6	.46	7.7	1.00
R. L. Hicks.	9	12.5	3.6	.45	7.9	.98
		114.1		3.84		9.36
	1	13.6	3.1	.42	7.6	1.03
	2	14.1	2.8	.39	8.1	1.14
Class 12—Sec. 4.	3	14.2	3.0	.42	7.6	1.07
Holstein.	4	14.2	2.7	.38	7.8	1.10
C. R. Polly.	5	14.7	2.8	.41	7.9	1.16
November 7, 1912.	6	14.2	3.0	,42	8.2	1.16
121.03.	7	14.3	2.8	.40	8.1	1.15
Third.	8	14.4	2.8	.40	7.8	1.12
Samuel Dickie & Son.	9	14.3	2.8	.40	7.6	1.08
		128.0		3.64		10.01
	1	10.1	3.2	.32	7.8	.78
	2	11.0	3.2	.35	8.0	.89
Class 12—Sec. 4.	3	11.2	3.5	.39	7.7	.86
Holstein.	4	11.2	3.1	.34	8.0	.89
Nell's Canary.	5	11.4	3.0	.34	7.9	.90
October 1, 1912.	6	11.4	3.3	.37	7.5	.85
105.99.	7	11.4	3.2	.36	7.7	.87
Fourth.	8	11.1	3.0	.33	8.1	.89
W. S. Harding.	9	11.7	3.3	.38	7.7	.90
		100.5		3.18		7.83
	1	9.6	3.4	.32	8.2	.78
	2	10.	3.3	.32	8.2	.82
Holstein.	3	10.	3.4	.34	8.2	.82
Class 12—Sec. 4.	4	10.2	3.3	.33	8.3	.85
Lady Woodway.	5	10.7	3.2	.34	8.4	.89
September 25, 1912.	6	10.1	3.2	.32	8.0	.80
100.78.	7	10.1	3.2	.32	8.3	.83
Fifth.	8	10.6	3.2	.33	8.3	.87
Logan Bros.	9	10.2	3.8	.38	8.4	.85
		91.5		3.01		7.51

Explanation of Terms :—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
	1	15.9	5.8	.92	8.5	1.35
	2	15.8	4.5	.71	8.4	1.32
Class 13—Sec. 1.	3	18.1	5.8	1.04	8.2	1.48
Guernsey.	4	14.7	5.2	.76	8.6	1.26
Beauty's Bell.	5	16.0	4.8	.76	8.1	1.29
November 11, 1912.	6	16.0	5.0	.80	8.3	1.32
228.38.	7	17.2	5.2	.89	8.6	1.47
First.	8	15.8	4.6	.72	8.5	1.34
Hugh A, Dickson.	9	15.4	7.1	1.09	8.0	1.23
		144.9		7.69		12.06
	1	10.6	4.8	.50	8.4	.89
	2	11.0	3.6	.39	7.8	.85
Class 13—Sec. 1.	3	11.0	4.3	.47	8.1	.89
Guernsey.	4	10.5	4.8	.50	8.3	.87
Dolly of the Villet.	5	10.7	4.4	.47	8.1	.86
September 9, 1912.	6	10.0	4.3	.47	8.2	.90
132.45.	7	11.2	4.4	.49	8.7	.97
Third.	8	11.2	4.2	.47	8.2	.91
Roper Bros.	9	11.5	4.5	.51	8.5	.97
		98.7		4.27		8.11
	1	9.1	4.8	.43	8.7	.79
	2	9.8	4.0	.39	8.3	.83
Class 13—Sec. 2.	3	10.6	4.5	.47	8.7	.92
Guernsey.	4	10.	3.9	.39	9.0	.90
Gypsy of Willow.	5	10.3	4.4	.45	8.6	.88
November 15, 1912.	6	11.0	5.1	.56	8.6	.94
200.88.	7	10.0	4.0	.40	8.8	.88
First.	8	9.6	5.6	.53	8.5	.81
Hugh A, Dickson.	9	8.5	7.6	.64	8.3	.70
		88.9		4.26		7.65
	1	15.9	5.2	.82	9.2	1.46
	2	16.8	4.6	.77	8.6	1.44
Class 13—Sec. 1.	3	18.1	4.2	.76	8.6	1.55
Guernsey.	4	16.5	4.9	.80	8.6	1.41
Beauty of Eastview.	5	17.4	4.4	.76	8.2	1.42
September 27, 1912.	6	19.5	4.6	.89	8.4	1.63
136.08.	7	17.7	4.6	.81	8.6	1.52
Second.	8	11.5	4.0	.46	8.5	.97
Roper Bros.	9	7.3	7.3	.53	7.8	.56
		140.7		6.60		11.96
	1	12.5	4.8	.60	8.7	1.08
	2	12.7	4.3	.54	8.7	1.10
Class 13—Sec. 2.	3	12.9	5.0	.64	8.6	1.11
Guernsey.	4	13.	4.2	.54	8.6	1.11
Mira 2nd of Eastvie&.	5	14.0	4.8	.67	8.7	1.21
October 16, 1912.	6	14.0	5.0	.70	8.2	1.14
173.94.	7	13.1	5.4	.70	9.3	1.21
Second.	8	13.6	4.8	.65	8.6	1.16
Roper Bros.	9	13.1	5.0	.65	8.6	1.12
		118.9		5.69		10.23
	1	7.8	4.2	.32	8.5	.66
	2	7.1	3.6	.25	8.6	.61
Class 13—Sec. 3.	3	8.3	4.6	.38	8.7	.72
Guernsey.	4	8.7	5.0	.43	8.9	.77
Ritzie 2nd of Eastview.	5	8.0	4.8	.38	8.0	.64
October 1, 1912.	6	9.1	5.4	.49	8.4	.76
108.76.	7	8.5	4.4	.37	5.9	.75
First.	8	9.1	5.2	.47	8.4	.76
Roper Bros.	9	8.8	4.3	.37	8.6	.75
		75.4		3.46		6.42
	1	7.7	5.0	.38	8.9	.68
	2	7.8	5.0	.39	9.0	.70
Class 13—Sec. 3.	3	7.8	5.3	.41	8.7	.67
Guernsey.	4	7.2	5.1	.36	8.7	.62
Jennifer of Willow.	5	7.4	5.2	.38	8.3	.61
September 13, 1912.	6	6.5	5.4	.35	9.0	.58
108.29.	7	8.3	5.0	.41	8.7	.72
Second.	8	6.7	5.0	.33	8.7	.75
Hugh A, Dickson.	9	7.4	5.2	.38	8.7	.75
		66.8		3.39		6.18
	1	5.0	4.1	.20	9.3	.46
	2	6.2	4.3	.26	8.6	53
Class 13—Sec. 3.	3	5.6	4.8	.26	9.0	.50
Guernsey.	4	4.8	4.3	.20	9.4	.45
Jennie of Willow.	5	5.5	4.1	.22	9.0	.49
September 15, 1912.	6	5.0	4.1	.20	9.1	.45
77.06.	7	4.9	3.7	.18	8.9	.43
Third.	8	5.8	4.2	.24	8.3	.48
Hugh A, Dickson.	9	5.6	5.3	.29	8.6	.48
		48.4		2.05		7.27

Explanation of Terms :—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
	1	6.8	4.6	.31	9.4	.63
	2	7.3	4.4	.32	8.7	.63
Class 13—Sec. 4.	3	7.4	5.0	.37	8.9	.65
Guernsey.	4	7.0	5.0	.35	8.5	.59
Adail of Willow.	5	6.0	4.4	.26	8.4	.50
August 27, 1912.	6	6.1	3.6	.21	8.4	.51
88.68.	7	5.8	5.8	.33	9.2	.53
First.	8	6.1	4.6	.28	8.8	.53
Hugh A, Dickson.	9	5.7	4.9	.27	8.7	.49
		58.2		2.70		5.06
	1	11.5	5.0	.57	9.0	1.03
	2	10.9	4.2	.45	8.8	.95
Class 14—Sec. 1.	2	11.2	5.1	.57	9.3	1.04
Jersey.	4	11.6	4.6	.53	8.7	1.00
Ora.	5	11.5	4.0	.46	8.7	.94
October 18, 1912.	6	12.3	4.8	.59	9.1	1.11
158.68.	7	12.2	7.5	.91	9.4	1.14
First.	8	12.0	4.3	.51	8.8	1.05
H. S. Pipes & Son.	9	12.6	4.8	.60	8.6	1.08
		105.8		5.19		9.31
	1	13.9	5.0	.69	8.1	1.12
	2	12.3	4.6	.56	8.4	1.03
Class 14—Sec. 1.	3	12.8	4.6	.58	8.2	1.04
Jersey.	4	13.5	4.7	.63	8.4	1.12
Best the 2nd.	5	11.0	4.0	.44	8.1	.89
November 17, 1912.	6	11.9	5.4	.64	8.4	1.03
154.68.	7	12.3	4.0	.49	8.4	1.03
Second.	8	10.7	4.0	.42	8.5	.90
Jas. E. Baker & Sons.	9	13.8	4.5	.62	8.3	1.14
		112.2		5.07		9.31
	1	14.1	4.8	.67	8.4	1.18
	2	13.5	4.7	.63	8.9	1.20
Class 14—Sec. 1.	3	13.8	5.2	.71	8.7	1.20
Jersey.	4	13.1	4.1	.53	8.5	1.11
Pride.	5	13.9	4.4	.61	8.2	1.13
October 6, 1912.	6	12.8	4.3	.55	8.6	1.10
153.49.	7	13.8	5.2	.71	9.2	1.26
Third.	8	14.3	4.5	.64	8.6	1.22
Jas. E. Baker & Sons.	9	14.3	5.2	.74	8.3	1.18
		123.6		4.79		10.58
	1	12.3	4.6	.56	8.1	.99
	2	11.6	4.0	.46	7.9	.91
Class 14—Sec. 1.	3	11.	4.1	.45	8.4	.93
Jersey.	4	12.1	4.1	49	8.2	.99
Brilliant.	5	11.8	3.9	.46	7.8	.92
September 13, 1912.	6	11.5	3.9	.44	8.3	.95
138.83.	7	12.0	3.8	.45	8.1	.97
Fourth.	8	12.2	4.3	.52	8.1	.98
H. S. Pipes & Son.	9	11.7	4.2	.49	8.3	.97
		106.2		4.32		8.61
	1	9.5	5.1	.48	8.3	.78
	2	9.2	5.4	.49	8.1	.74
Class 14—Sec. 1.	3	7.4	5.0	.37	8.8	.65
Jersey.	4	9.6	5.3	.50	8.3	.79
Lady Blanche.	5	9.5	4.9	.46	8.3	78
July 20, 1912.	6	8.2	5.2	.43	8.7	.71
135.98.	7	10.0	5.8	.58	8.7	.87
Fifth.	8	9.7	4.7	.45	8.4	.81
H. S. Pipes & Son.	9	9.3	4.9	.45	8.4	.78
		82.4		4.21		6.91
	1	15.0	5.3	.79	8.8	1.32
	2	12.5	4.3	.53	8.3	1.03
Class 14—Sec. 2.	3	12.9	4.9	.63	9.2	1.18
Jersey.	4	15.6	5.3	.82	8.9	1.38
Bonnie Blue.	5	14.7	4.8	.70	8.4	1.23
November 7, 1912.	6	13.0	5.3	.68	9.4	1.22
194.20.	7	15.4	5.0	.77	9.1	1.40
First.	8	14.9	4.8	.71	8.7	1.29
H. S. Pipes & Son.	9	14.4	5.4	.77	9.4	1.35
		128.4		6.40		11.40
	1	11.8	4.7	.55	9.2	1.08
	2	12.1	5.7	.68	9.1	1.10
Class 14—Sec. 2.	3	10.	4.5	.45	9.2	.92
Jersey.	4	11.2	3.8	.42	9.3	1.04
	5	11.7	4.5	.52	8.6	1.00
	6	11.5	4.4	.50	8.6	.98
150.22.	7	11.8	3.9	.46	8.9	1.05
Second.	8	13.4	5.7	.76	8.5	1.13
W. E. Harding.	9	11.3	5.0	.56	8.4	.94
		104.8		4.90		9.24

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
	1	6.5	6.1	.39	8.7	.56
	2	6.1	5.5	.33	8.3	.50
Class 14—Sec. 2.	3	6.3	6.1	.38	9.1	.57
Jersey.	4	6.6	6.0	.39	8.6	.56
True Blue.	5	6.7	5.6	.37	8.1	.54
August 28, 1912.	6	6.3	5.4	.34	8.8	.55
105.06.	7	7.0	5.2	.36	8.2	.57
Third.	8	6.9	5.7	.39	8.3	.57
H. S. Pipes & Son.	9	6.9	6.0	.41	8.8	.60
		59.3		3.36		5.02
	1	13.0	5.2	.67	8.7	1.13
	2	13.6	5.1	.69	8.2	1.11
Class 14—Sec. 3.	3	12.8	5.4	.69	8.7	1.11
Jersey.	4	12.8	4.7	.60	8.6	1.10
Blood's Choice.	5	14.7	5.6	.82	8.1	1.19
November 11, 1912.	6	12.5	5.1	.63	8.9	1.11
188.59.	7	13.8	6.0	.82	8.8	1.21
First—Highest Scoring 2-yr.-old.	8	14.4	5.0	.72	8.0	1.15
H. S. Pipes & Son.	9	13.4	5.0	.67	8.8	1.17
		121.0		6.31		10.28
	1	7.1	6.0	.42	8.7	.61
	2	7.0	5.4	.37	8.8	.61
Class 14—Sec. 3.	3	6.5	6.3	.40	8.9	.57
Jersey.	4	7.0	5.5	.38	8.6	.60
Lucia Nola.	5	7.0	5.1	.35	8.7	.60
September 5, 1912.	6	6.2	5.3	.32	9.3	.57
101.36.	7	7.5	4.9	.36	8.8	.66
Second.	8	7.0	4.8	.33	8.4	.58
H. S. Pipes & Son.	9	6.4	4.4	.28	9.0	.57
		61.7		3.21		5.37
	1	6.1	6.0	.36	9.0	.54
	2	6.1	4.6	.28	8.5	.51
Class 14—Sec. 3.	3	5.2	5.1	.26	9.4	.48
Jersey.	4	6.4	5.0	.32	8.8	.56
Barkis.	5	6.5	5.2	.33	8.7	.56
September 7, 1912.	6	7.1	7.0	.49	9.1	.65
91.52.	7	6.9	4.9	.33	8.0	.55
Third.	8	5.0	4.2	.21	8.9	.44
H. S. Pipes & Son.	9	6.0	5.0	.30	9.2	.55
		55.2		2.88		4.84
	1	6.0	5.0	.30	8.4	.50
	2	6.2	4.8	.29	8.4	.52
Class 14—Sec. 4.	3	5.7	5.0	.28	8.9	.50
Jersey.	4	6.5	5.2	.33	8.2	.53
Melba.	5	6.5	4.9	.31	8.0	.52
October 10, 1912.	6	6.0	4.8	.28	9.0	.54
81.73.	7	6.5	4.2	.27	8.2	.53
First.	8	6.5	4.6	.29	8.2	.53
H. S. Pipes & Son.	9	5.8	4.9	.28	8.6	.49
		55.7		2.63		4.66
	1	23.5	5.2	1.21	7.8	1.83
	2	22.5	3.9	.87	8.4	1.89
Class 15—Sec. 1.	3	23.0	3.6	.82	7.8	1.79
Grade.	4	23.0	3.2	.73	8.2	1.88
Mary.	5	23.5	3.1	.91	7.9	1.85
October 20, 1912.	6	22.4	3.4	.76	7.8	1.74
238.53.	7	24.	3.1	.74	8.3	1.99
First.	8	21.3	3.0	.63	8.0	1.70
Fowler Bros.	9	23.	3.7	.85	8.0	1.84
		206.2		7.52		16.51
	1	14.5	3.8	.55	8.9	1.29
	2	15.3	4.0	.61	8.7	1.33
Class 15—Sec. 1.	3	17.4	3.7	.64	8.3	1.44
Grade.	4	19.7	3.8	.74	8.4	1.65
Duchess.	5	19.9	3.2	.63	8.1	1.61
November 10, 1912.	6	21.4	3.9	.83	8.0	1.71
201.54.	7	20.3	3.5	.71	8.3	1.68
Second.	8	21.9	3.4	.74	7.8	1.70
Hansford Croffman.	9	22.8	4.0	.91	7.8	1.77
		173.2		6.36		14.18
	1	19.5	3.7	.72	8.0	1.56
	2	16.5	3.8	.62	9.1	1.50
Class 15—Sec. 1.	3	16.8	3.8	.63	8.3	1.39
Grade.	4	18.2	3.3	.60	8.1	1.47
Doll.	5	20.2	3.6	.72	7.9	1.59
	6	19.2	3.8	.72	8.0	1.53
190.60.	7	19.1	3.3	.63	7.9	1.50
Third.	8	19.3	3.9	.75	7.9	1.52
T. W. Keilor.	9	17.9	3.5	.62	7.8	1.39
		166.7		6.01		13.45

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One bull 23 months old, exceptionally well bred.

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Get my Turkey Book it will tell you how to raise turkeys without serious losses, 25 cents.

SARAH E. MOSES SMITH

Woodwards Cove, Grand Manan, N. S.

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
	1	18.5	3.2	.59	8.3	1.53
	2	19.8	3.6	.71	8.6	1.70
Class 15—Sec. 1.	3	17.2	3.3	.56	8.1	1.39
Grade.	4	17.2	3.1	.53	8.6	1.47
Rose.	5	18.6	3.2	.59	8.5	1.58
October 22, 1912.	6	19.0	3.7	.60	8.2	1.55
181.12.	7	17.9	3.5	.62	8.6	1.53
Fourth.	8	19.1	3.5	.66	8.2	1.56
W. N. Boomer.	9	18.3	4.0	.73	8.1	1.48
		165.6		5.59		13.79
	1	18.7	3.4	.63	8.2	1.53
	2	18.1	3.4	.61	8.2	1.48
Class 15—Sec. 1.	3	17.8	3.4	.60	8.2	1.45
Grade.	4	17.4	3.1	.53	8.7	1.51
Niegor.	5	19.	3.4	.64	8.0	1.52
October 17, 1912.	6	18.7	3.3	.63	8.5	1.58
173.77.	7	18.0	3.4	.61	8.5	1.53
Fifth.	8	18.4	3.6	.66	8.3	1.52
Fowler Bros.	9	19.4	4.1	.79	8.2	1.59
		165.5		5.70		13.71
	1	15.2	3.4	.51	8.2	1.24
	2	15.1	3.4	.51	8.1	1.22
Class 15—Sec. 1.	3	15.0	4.4	.66	8.2	1.23
Grade.	4	15.1	4.1	.61	8.6	1.29
	5	15.5	4.0	.62	8.1	1.25
October 30, 1912.	6	16.6	4.2	.69	8.3	1.37
173.19.	7	17.1	5.0	.85	8.3	1.41
Sixth.	8	14.5	4.0	.58	7.2	1.04
A. McRae & Sons.	9	14.5	3.8	.55	8.2	1.18
		138.6		5.58		11.23
	1	18.8	2.9	.54	7.3	1.37
	2	18.0	2.8	.50	8.0	1.44
Class 15—Sec. 1.	3	18.5	2.9	.53	7.3	1.35
Grade.	4	17.2	2.4	.41	7.8	1.35
Sue.	5	18.7	2.5	.46	7.5	1.40
October 14, 1912.	6	18.7	2.9	.54	7.6	1.42
151.29.	7	17.4	2.5	.43	7.7	1.33
Seventh.	8	17.8	2.8	.49	7.6	1.35
Fowler Bros.	9	18.5	3.4	.62	7.7	1.42
		163.6		4.52		12.43
	1	11.	3.5	.38	8.2	.90
	2	10.1	3.4	.34	8.7	.87
Class 15—Sec. 1.	3	11.1	3.8	.42	7.9	.87
Grade.	4	10.	3.8	.38	8.5	.85
Jennie.	5	11.	3.6	.39	8.3	.91
July 21, 1912.	6	10.7	4.2	.44	8.1	.86
121.43.	7	10.3	3.7	.38	8.4	.86
Eigth.	8	10.3	3.9	.40	8.4	.86
Fowler Bros.	9	9.9	4.0	.39	8.4	.83
		94.4		3.52		7.81
	1	22.4	3.7	.82	7.4	1.65
	2	21.2	3.5	.74	7.6	1.61
Class 15—Sec. 2.	3	20.0	3.4	.68	7.1	1.42
Grade.	4	19.6	3.1	.60	7.6	1.48
Jewel.	5	20.5	3.0	.61	7.2	1.47
	6	20.1	3.1	.62	7.2	1.44
188.07.	7	20.2	3.0	.60	7.6	1.53
First.	8	19.6	3.0	.58	7.3	1.43
T. W. Keilor.	9	19.6	3.4	.66	7.2	1.41
		183.2		5.91		13.44
	1	13.2	3.8	.50	8.2	1.08
	2	13.2	3.6	.47	8.5	1.12
Class 15—Sec. 2.	3	12.6	4.1	.51	8.5	1.07
Grade.	4	11.7	4.0	.46	8.5	.99
Daisy.	5	12.0	4.2	.50	8.4	1.00
August 1, 1912.	6	12.9	4.1	.52	8.4	1.08
154.89.	7	13.2	4.0	.52	8.3	1.09
Second.	8	13.3	4.4	.58	8.3	1.10
Roper Bros.	9	13.0	4.8	.62	8.5	1.10
		115.1		4.68		9.63
	1	12.6	4.1	.51	7.65	.95
	2	12.8	3.7	.47	8.1	1.03
Class 15—Sec. 2.	3	12.6	4.2	.52	7.7	.97
Grade.	4	11.4	3.2	.36	8.3	.94
	5	12.6	3.5	.44	8.2	1.03
	6	12.0	4.0	.48	7.9	.94
125.55.	7	11.6	3.1	.35	8.5	.98
Third.	8	11.7	3.2	.37	8.4	.98
W. W. Black.	9	12.8	3.6	.46	8.1	1.03
		110.1		3.96		8.85

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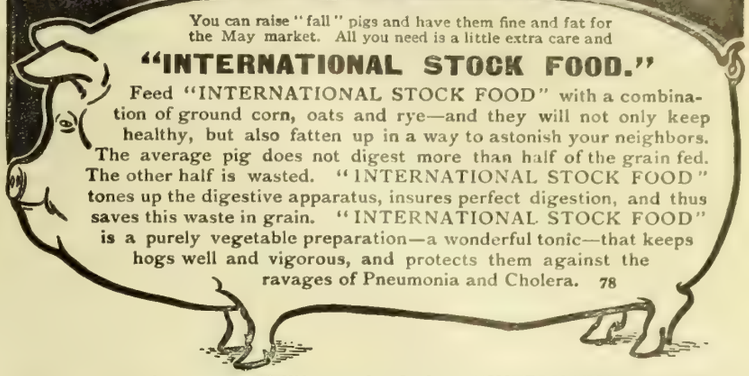

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Ayrshire and Shorthorn Cattle and Shropshire Sheep

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Yarmouth, - Nova Scotia

Explanation of Terms:—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.	Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
	1	16.	2.8	.44	7.8	1.24
	2	14.5	2.7	.39	8.2	1.18
Class 15—Sec. 2.	3	14.0	2.5	.35	7.7	1.07
Grade.	4	14.5	2.6	.37	8.0	1.16
Ida.	5	15.0	2.6	.39	7.9	1.18
October 11, 1912.	6	14.6	2.8	.40	7.7	1.12
122.11.	7	14.6	2.8	.40	7.9	1.15
Fourth.	8	13.6	2.8	.38	8.2	1.11
Fowler Bros.	9	15.1	3.2	.48	7.7	1.16
		131.9		3.60		10.37
	1	17.9	3.6	.64	8.1	1.44
	2	15.7	3.5	.54	8.4	1.31
Class 15—Sec. 3.	3	15.9	3.6	.57	8.1	1.28
Grade.	4	15.5	3.3	.51	8.4	1.30
Golden Rod.	5	16.	3.3	.52	8.2	1.34
	6	15.5	3.5	.54	8.3	1.28
158.46.	7	15.2	3.0	.45	8.3	1.26
First.	8	15.7	3.5	.54	8.3	1.30
T. W. Keilor.	9	16.7	3.7	.61	7.9	1.31
		144.1		4.92		11.82
	1	16.3	3.4	.55	7.7	1.25
	2	17.1	2.7	.48	7.0	1.19
Class 15—Sec. 3.	3	14.6	3.2	.46	7.6	1.10
Grade.	4	17.1	2.8	.47	6.7	1.14
Darkey.	5	15.3	3.5	.53	7.6	1.16
October 10, 1912.	6	14.9	3.5	.52	7.8	1.16
150.94.	7	15.0	3.7	.55	8.0	1.20
Second.	8	14.3	3.3	.47	7.9	1.12
Fowler Bros.	9	16.0	4.2	.67	7.3	1.16
		140.6		4.70		10.48
	1	17.3	2.8	.55	8.5	1.47
	2	17.5	2.6	.42	8.0	1.32
Class 15—Sec. 3.	3	17.0	3.0	.51	7.4	1.25
Grade.	4	17.0	2.6	.44	8.2	1.39
Lily.	5	17.5	2.6	.45	7.8	1.36
November 22, 1912.	6	17.0	2.7	.45	7.8	1.32
144.03.	7	18.3	2.5	.45	7.7	1.40
Third.	8	17.8	2.9	.51	7.9	1.40
Fowler Bros.	9	17.8	2.9	.51	7.6	1.35
		156.2		4.29		12.26
	1	13.5	3.6	.48	8.0	1.08
	2	13.5	3.2	.43	8.4	1.13
Class 15—Sec. 3.	3	13.8	3.6	.49	7.8	1.07
Grade.	4	13.7	3.2	.43	8.1	1.10
Bess.	5	13.4	3.4	.45	7.8	1.04
November 3, 1912.	6	13.9	3.7	.51	7.8	1.08
132.86.	7	13.1	3.7	.48	8.0	1.04
Fourth.	8	11.3	3.4	.38	7.8	.88
W. N. Boomer.	9	12.7	4.0	.50	7.5	.95
		118.9		4.15		9.37
	1	11.3	3.9	.44	8.8	.99
	2	11.7	3.9	.45	8.5	.99
Class 15—Sec. 3.	3	10.1	3.3	.33	8.5	.85
Grade.	4	11.9	3.5	.41	8.5	1.01
Beauty.	5	11.5	3.7	.42	8.4	.96
October 25, 1912.	6	11.6	3.6	.41	8.7	1.00
128.67.	7	12.4	4.0	.49	8.7	1.07
Fifth.	8	12.5	4.0	.50	7.8	.97
A. McRae & Sons.	9	12.5	5.1	.63	8.4	1.05
		105.5		4.08		8.89
	1	9.6	4.1	.39	8.2	.78
	2	9.8	3.8	.37	9.0	.88
Class 15—Sec. 4.	3	9.2	3.7	.34	8.4	.77
Grade.	4	10.2	4.1	.41	9.1	.92
Nigger.	5	9.0	3.6	.34	8.8	.79
	6	10.0	4.4	.44	8.8	.88
107.08.	7	9.2	4.0	.36	8.4	.77
First.	8	9.0	3.8	.34	8.5	.76
T. W. Keillor.	9	9.5	4.4	.41	8.6	.81
		85.5		3.40		7.36
	1	10.7	3.2	.34	8.8	.94
	2	11.0	3.3	.36	8.7	.95
Class 15—Sec. 4.	3	10.5	3.2	.33	8.0	.84
Grade.	4	10.9	3.1	.33	8.8	.95
Betty.	5	10.9	3.4	.37	8.4	.91
November 17, 1912.	6	10.9	3.5	.38	8.5	.92
104.62.	7	10.7	3.3	.35	8.9	.95
Second.	8	10.9	3.3	.35	8.6	.93
Fowler Bros.	9	10.8	3.6	.38	8.4	.90
		97.3		3.19		8.29

Explanation of Terms :—Class and Section, Breed, Cow's Name, Date of Last Calving, Total Score, Award Owner's Name.

Milking.	Lbs. Milk	Percent Fat	Lbs. Fat	Percent Solids Not Fat	Lbs. Solids Not Fat
1	9.	3.9	.35	8.1	.72
2	8.4	3.4	.28	8.4	.70
3	9.6	4.0	.38	8.3	.79
4	8.8	3.6	.31	8.7	.76
5	9.2	3.5	.32	8.3	.76
6	9.9	4.0	.39	7.9	.78
7	9.1	3.8	.34	8.8	.80
8	9.5	3.7	.35	8.5	.80
9	9.8	3.9	.38	8.2	.80
	83.3		3.10		6.91

Class 15—Sec. 4. Grade. Daisy. October 12, 1912. 98.23. Third. Edward Anderson.

1	7.1	3.6	.29	8.5	.60
2	6.8	3.4	.23	8.8	.59
3	6.7	3.6	.24	8.0	.53
4	6.9	3.6	.24	8.8	.60
5	7.	3.4	.23	8.5	.59
6	6.7	3.5	.23	8.7	.58
7	7.1	3.3	.23	8.7	.61
8	6.5	3.2	.20	8.7	.56
9	7.0	3.8	.26	8.6	.60
	61.8		2.15		5.26

Class 15—Sec. 4. Grade. Lady. October 7, 1912. 71.53. Fourth. Fowler Bros.

A crackerjack of a Christmas present

Big Ben

REMEMBER when you were a kid?—the presents that were all *shiny* and bright and that *worked*?—weren't *they* the ones that you were proudest of?

Something for your room—something you could *use all year*—something like *big people* had in *their* rooms. Didn't sensible presents appeal to you best when you were a kid? Think back a bit and see.

Then think of Big Ben for those boys and girls.—Toys, of course, should never be displaced. It wouldn't be Christmas without them, but mix in *useful* things—things that develop *pride* and make little people feel responsible. Give them presents to *live up to* and to *live up with*. Don't make the mistake of thinking they don't feel the *compliment*.—Let one of the first things that greets your little boy and girl Christmas morning be that triple nickle-plated, handsome, pleasant-looking, serviceable and inspiring clock-alarm—BIG BEN.

Just watch if they don't say, "Isn't that a crackerjack! Why! is that for me to use myself?" — Then see how proudly they carry Big Ben upstairs "*to see how he looks in my room.*" Just put yourself in that boy's or girl's place.

Big Ben *is a crackerjack-of-a Christmas-present* to give to anyone. The fact is, he is two presents in one, a dandy alarm to *wake up with*, a dandy clock to tell time *all day* by. And he's as good to look at as he's pleasing to hear.

He stands *seven inches* tall, slender, handsome, massive, with a big, frank, honest face and big, strong, clean-cut hands you can see at a glance in the *dim morning light* without even having to get out of bed.

He's got an inner vest of steel that insures him for life; large comfy keys that almost wind themselves, and a deep, jolly ring that calls just when you want and either way you want, *five straight minutes* or *every other half minute for ten minutes*, unless you flag him off.

Big Ben is sold by 18,000 watchmakers. If you can't find him at your jeweler's, a money order mailed to his designers, *Westclox, La Salle, Illinois*, will send him when and wherever you say, attractively boxed and express charges paid.

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In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

Flour and Breadmaking.

(Continued from last issue)

NUTRITIVE VALUE OF WHITE AND BROWN BREAD.

The comparative nutritive value of white and brown bread has always been a subject of controversy. The theory is advanced that in preparing the finer flours much of the most nourishing of the food materials are removed, and, consequently, the whole wheat, or Graham flour is the most nutritious and healthful. In studying the nutritive value of any food it must always be borne in mind that it is not the flour or bread that contains the highest percentage of the is the most nourishing, but it is the most valuable food constituents that one that contains the most of these constituents in a form that is capable of being absorbed. The coarser flours have a higher percentage of protein, fat, and mineral matters than the finer grades, and so has bran; but, owing to the amount of crude fibre, or cellulose, surrounding these materials, they are not so well assimilated, and they really furnish less nourishment than is obtained from the bread made from the finer grades of flour. The work of Snyder, of Minnesota, Wood and Merrill, of Maine, and others, have clearly shown this. A few figures taken from Bulletin No. 101 of the Office of Experiment Stations, Department of Agriculture, will illustrate the point.

In the work referred to the different grades of flour experimented with were made from one stream of wheat, the flours and the bread made from them were analyzed, and the digestibility of the bread determined. We shall only refer to three grades of flour—i. e., the standard patent, or straight grade, which represented about 96 per cent. of the total flour from the wheat; the entire wheat flour, which is made by removing part of the outer bran layers and then grinding, and a true whole wheat or Graham flour, i. e., a flour made from the clean, scoured wheat without any bolting process. The composition of these three kinds of flours was found to be as follows:

COMPOSITION AND HEAT OF COMBUSTION OF THE FLOURS.

	Water	Protein	Fat	Carbohydrat's	Ash	Phosphoric acid	Heat of combustion	
	%	%	%	%	%	%	Calculated calories	Determin'd calories
Standard patent or Straight	10.54	11.99	1.61	75.36	.50	.20	4.022	4.050
Entire wheat flour	10.81	12.26	2.24	73.67	1.02	.54	4.026	4.032
Graham flour	8.61	12.65	2.44	74.58	1.72	.71	4.123	4.148

No crude fibre is given in the above table, but it would increase as we pass from the finer to the coarser flours. The percentage of fat and protein also increases, but the carbohydrates decrease, and the difference here would be still more pronounced had the crude fibre been separated.

When the bread made from these three flours was submitted to digestion experiments the following results were obtained:

DIGESTIBILITY OF NUTRIENTS AND AVAILABILITY OF ENERGY OF BREAD.

	Protein	Fat	Carbohydrates	Energy
	%	%	%	
White Bread	85.8	56.4	97.5	90.1
Entire-wheat bread	80.4	55.8	94.1	85.5
Graham Bread	77.6	58.0	88.4	80.7

This means that in these experiments 85.8 per cent. of the protein in the bread from the straight grade flour was digested and only 77.6 per cent. of that in the German bread. Furthermore, while 90.1 per cent. of the total fuel or energy value of the white bread was available, only 80.7 Graham flour was of use to the person eating the bread.

The same bulletin shows that the bread from the first patent, which represents about 35 per cent. of the finest of the flour, is even more digestible than that from the straight grade flour.

In 1857 Laws and Gilbert, of the Rothamsted Institution, England, studied the same question; and, in view of the fact that the roller process of making flour was not then in use, their conclusions will be of interest. Writing in 1881, Gilbert summarized their conclusions as follows: "The higher percentage of nitrogen in bran than in fine flour has frequently led to the recommendation of the coarser breads as more nutritious than the finer. We have already seen that the more branny portions of the grain also contain a much larger percentage of mineral matter. . . It is, however, we think, very questionable whether upon such data alone a valid opinion can be formed of the comparative values as food of bread made from the finer or coarser flours from one and the same grain. Again, it is an indisputable fact that branny particles, when admitted into the flour in the degree of imperfect division in which our ordinary milling processes leave them, very considerably increase the peristaltic action, and hence the alimentary canal is cleared much more rapidly of its contents. It is also well known that the poorer classes almost invariably prefer the whiter bread; and among some of them who work the hardest and who, consequently, would soonest appreciate a difference in nutritive quality (navvies, for example), it is distinctly stated that their preference for whiter bread is founded on the fact that the browner breads pass through them too rapidly; consequently, before their systems have extracted from it as much nutritious matter as it ought to yield them. It is freely granted that much nutritious matter is, in the first instance, lost as a human food in the abandonment of 15 to 20 per cent. of the wheat grain to the lower animals. It should be remembered, however, that the amount of food so applied is by no means entirely wasted. And, further, we think it more than doubtful, even admitting that an increased proportion of mineral and nitrogenous constituents would be an advantage, whether, unless the branny particles could be either excluded or so reduced as to prevent the clearing action above alluded to, more nutriment would not be lost to the system by this action than would be gained by the introduction into the body, coincidentally with it, of a larger actual amount of supposed nutritious mat-

ter. In fact, all experience tends to show that the state, as well as the chemical composition of our food, must be considered; in other words, that its digestibility and aptitude for assimilation, are not less important qualities than its ultimate composition.

"Of course, if the branny particles were reduced to a perfect state of fineness, and it were found that this prevented the aperient action, and that other evils were not introduced; or, better still, if more of the food materials can be separated from the bran, and in either case without more cost than the saving would be worth, there might be some advantage. But to suppose that whole wheat meal as ordinarily prepared is, as has generally been assumed, weight for weight, more nutritious than ordinary bread flour is an utter fallacy, founded on theoretical text-book data, not only entirely unsupported by experience, but inconsistent with it. In fact, it is just the poorer fed and the harder working who should have the ordinary flour bread rather than the whole-meal bread as hitherto prepared, and it is the overfed and the sedentary who should have such whole-meal bread. Lastly, if whole grain were finely ground, it is by no means certain that the percentage of real nutritive nitrogenous matters would be higher than in ordinary bread-flour, and it is quite a question whether the excess of earthy phosphates would not then be injurious."

The previously presented results on the digestibility of different kinds of bread confirm the above conclusions of Laws and Gilbert. In concluding the discussions on the nutritive value of bread, we submit the conclusions of a study of the composition and digestibility of white and whole-wheat bread given in the St. Bartholomew's Hospital Report, London, England, 1897'

"From the experiments we are justified in concluding that the higher nutritive value which we might, upon pure chemical grounds, ascribe to brown bread, cannot, with the single exceptions of fats and mineral constituents, be maintained from the physiological side. On the other hand, distinctly less nutritive materials actually get into the blood in the case of the brown than of the white bread.

"White bread is, weight for weight, more nutritious than brown. Therefore, it appears the preference given by operators in large towns for white bread has to a certain extent a sound physiological basis-

able intestines white bread is to be preferred to brown.

"In the case of people with irrit-

"In the case of people with sluggish intestines brown bread is preferable to white, as it tends to maintain regular peristaltic action and ensure regular evacuation of the bowels, with all its attendant advantages.

"In the cases where the proportion of mineral ingredients, and especially of lime salts, in other articles of food or drink is insufficient, brown bread is preferable to white.

"If the dietary is insufficient in fat, or if the patient is unable readily to digest fat in other forms, brown bread may possibly be preferable to white."

In this country, where everyone eats a very varied diet, it is doubtful if a sufficiency of ash materials and fat are not taken into the system without using the bread from the coarser flour for the purpose of obtaining these substances. Moreover, it is evident that the comparative nutritive value of white and brown bread varies with the individual.

Weak Men, Read

Perfect health and strength denote the absence of disease. When you are weak it means that you lack that which is the foundation of strength—of life itself—Electricity. You may be afflicted with Rheumatism, Dyspepsia Lame Back, Weak Kidneys, Nervous Debility, Sciatica, Constipation, or any of the numerous diseases which lead to an early breaking down of the system. If you have any of these troubles they should be attended to at once. You have tried drugs, and found that if they even stimulated you they did not cure, but left you with some new trouble as a result of the poison put into your system.

It is pitiable to think of the vast number of men who go on from day to day suffering mental and physical torture as a result of their weakness, while right at their doors other men are being cured of the same disease. One who has not known it himself cannot realize the feelings of a man in an advanced stage of Nervous Debility, nor does he hear it, for these men do not talk of their troubles. Even when they are fortunately led to use the remedy which is now so well known—Dr. McLaughlin's Electric Belt---and are cured by it, they do not mention it to their closest friends; hence the prevalence of this trouble, and the means of cure are appreciated only by those who have had experience. And yet I have thousands upon thousands of grateful patients who are willing to testify to their cures by

Dr. McLaughlin's Electric Belt

and who would be glad to share their knowledge with others if written to. I send the names of these men to any one who requests them. There is not another remedy in the world to-day that has proven as effective. Its cures speak volumes for the good work it has accomplished.

Dear Sir,—I have used your Belt since last November, and I feel much better. The emissions have stopped entirely. I am well pleased with the Belt. It has proved all you claimed for it. Yours respectfully, DANIEL CHATTERTON, Cobalt, Ont.

Dear Sir,—I am glad to say that your Belt has made a permanent cure of my case. After using the Belt and following directions for three months I felt like a new man, and have not used it since. As it is now over eighteen months since I stopped using the Belt, and have had no return of my trouble, I find I am cured, and words cannot express the gratefulness I have towards you and what your Belt has done for me. Before using your Belt I weighed 140 and now I go 170. I am recommending your Belt to all my friends. I remain, yours truly, LEON ROLFE. Lime Ridge, Quebec.

Dear Sir,—I have worn my Belt for a month, and I am well pleased with the results. I feel better in every way; have a good appetite. and my food digests well. Yours very truly, IRA S. ACKER, Birchtown, N. S.

Dear Sir,—I have worn your Belt for a month now, and I am glad to say that I have received the greatest benefits from it. My back is a great deal stronger, and the pain in my legs and arms have gone and I am feeling like a new man already. You may use this letter in any way you wish. Wishing you every success, I remain, Yours truly, WILLIAM McCONNELL, Bon Accord, Vic. Co., N. B.

I cannot take up more space with those extracts. But if you will send me your address I will mail you free my beautifully illustrated book, along with testimonials from thousands of grateful people who have been fully restored to health and strength.

This appliance has cures in almost every town and city in the country, and if you will write me I will send you testimonials given to me by people that are probably well known to you. My Belt not only cures weakness, but Rheumatism, Sciatica, Lumbago, Backache, Kidney Trouble, Nervousness, Constipation, Indigestion and Stomach Trouble. I have a beautiful 80-page illustrated book, which I will mail, sealed, to any address FREE. This book is full of lots of good interesting reading for men. Call to-day. If you can't call, send coupon for Free Book.

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WEIGHT OF PROTEIN, FAT, AND CARBOHYDRATES, AND THE FUEL VALUE OF $1.00 WORTH OF EACH FOOD.

	Price per lb.	Refuse %	Protein lbs.	Fat lbs.	Carbohydrat's	Fuel Value cal.
Milk	6c. quart	.....	1.38	1.69	2.21	13,009
Milk	8c. quart	.....	1.04	1.27	1.66	10,402
Skimmed milk	10c. gallon	.....	3.4	.30	5.1	17,070
Buttermilk	10c. gallon	.....	3.0	.50	4.8	17,362
Butter	25c. pound	.....	0.04	3.4	.....	14,422
Cheese	17c. "	.....	1.63	2.16	.24	12,593
Beef, fore quarter [wholesale	6c. "	18.7	2.41	2.91	.....	16,762
Beef, hind quarter [wholesale	8c. "	15.7	1.92	2.29	.....	13,235
Beef, flank	8c. "	10.2	2.12	2.37	.....	13,944
Beef, sirloin	18c. "	12.8	.92	.90	.....	5,509
Veal, cutlets	15c. "	3.4	1.34	.50	.....	4,612
Mutton, chops	16c. "	16.0	.84	1.80	.....	9,158
Lamb, hind quarter	18c. "	15.7	.92	.90	.....	5,509
Ham, smoked	18c. "	13.6	.79	1.85	.....	9,276
Ham, smoked and cooked	30c. "	.....	.67	.75	.....	4,405
Eggs	25c. dozen	11.2	.79	.56	.....	3,853
White bread	2½ lbs. 10c.	.....	2.10	.5	12.2	28,710
Rolled oats	7 lbs. 25c.	.....	3.5	1.9	20.0	51,730
Farinas	6 lbs. 25c.	.....	2.3	.24	18.7	40,070
Potatoes	90c. bag	20.0	2.18	.10	15.6	33,492

COMPARISON OF THE NUTRITIVE VALUE OF BREAD AND SOME OF THE COMMON FOODS.

Bread is often referred to as the "staff of life," presumably because it is so universally used, and because it is one of our cheapest foods, and, at the same time, very nutritious and palatable. It is sometimes spoken of as a complete food, i. e., one that furnishes all the nutrients required to nourish the body and in the proper proportion. It possibly fails somewhat in the latter respect; but, as is well known, the food of man must please the palate as well as satisfy the demands of the body, and to do this we must have a varied and mixed diet. This is not the place to discuss the balancing or cost of diets; but, for purposes of comparison, it may not be out of place to show the amounts of the important food constituents furnished by other common foods. For this purpose we have calculated the weight of protein, fat, and carbohydrates, and the number of calories of heat one dollar's worth of each of the more common foods will furnish. The figures are based on the average composition of the foods as purchased.

In some respects the figures are hardly fair, as some of the foods have to be cooked, whereas the bread is ready for use. If the weight of protein, fat, and carbohydrates furnished by one dollar's worth of flour had been given, they would have been about double that furnished by bread, and much larger than that supplied by oatmeal. However, as the figures stand, it is evident that bread is one of our cheapest foods, and when we take into consideration its palatability and high digestibility, it may well be termed the "staff of life."

LAWNDALE STOCK FARM

We have a special lot of 3 young bulls for sale at a bargain—Two roans dropped December 1911. One, all red, dropped February 1912. Splendidly bred and excellent specimens. Also other pure bred Shorthorns.

Write for particulars.

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A Business Herd of Showring Jerseys.

NEAR the town limits of Busy Amherst on the road leading to Nappan, N. S., is the steading of Messrs. H. S. Pipes & Son so well known to our readers and the general public who visit our Maritime exhibitions as the breeders of high class show and producing Jerseys.

We have visited the Pipes farm on several occasions and learned some of the ancient history of their attractive Jersey herd.

About twenty years ago Mr. H. S. Pipes started in the Jersey business, with stock bought from the late B. W. Chipman, Milford, N. S., Prof. M. Cumming's predessor as Secretary of Agriculture for Nova Scotia. This purchase comprised nine heifers in calf, of St. Lambert breeding all sired by Stoke Pogis 2nd. These heifers were bred to a bull bought by Mr. Pipes from Capt. Wm. Ralph, of Markham, Ont. The bull in question was Ethel's John, 39410, in whose veins ran 75 per cent. of Mary Anne of St. Lambert breeding, the old cow that produced 36¾ pounds of butter in seven days. Ethel's John carried more of the old cow's blood than a son.

The get of this grand bull were great butter producers a number of them testing as high as 7 per cent. butter fat and on that account Ethel's John was kept in the Pipes herd for seven years.

The next bull purchased was Minette's Star O'Bay View, of the Minette family. The result of the cross with St. Lambert cows and heifers was most gratifying to the breeders. Minette's Star O'Bay View having proved himself the sire of grand producers was kept in the Pipes herd for upwards of nine years. Among the long list of producers sired by this good old bull is Rubena, 1303 C. J. C. C. which as a two-year-old produced by Babcock test 700 pounds butter in one year or in other words more than her own gross weight. Rubena transmitted her good qualities to her progeny as some of her heifers bid fair to eclipse her in every respect. A daughter just freshened has a grand show ring record although she has not yet reached the three-year-old section of her class. This young thing bids fair to be a forty pound two-year-old as she is even now daily going closer to the forty pound mark.

White Heather

The dam of the 23 months old Ayrshire Bull offered for sale on another page of this issue by J. Frank Roach, Sussex, N. B.

In 1906, Messrs. Pipes wanted a new sire and one of their representatives went to Ontario where he purchased from B. H. Bull & Sons, of Brampton, Old Blue Blood of Dentonia, an Island of Jersey bred bull.

Old Blue Blood's name was famous all over the Dominion as being one of the best Jersey bulls ever imported into Canada.

Blde Blood's daughters in the Pipes herd carry great quality and are also great producers.

For four seasons Blue Blood headed the Pipes herd and at the expiration of that time, notwithstanding his great age, Messrs. Bull & Sons bought him back again for use in their own herd and in exxhange gave Messrs. Pipes their present herd header Imported Fereor, 65433, another Island of Jersey bull. Fereor has also been a happy choice as his heifers, although only in their inafncy, are evidencing the points that stand towards strong dairy and show ring qualities.

Messrs. Pipes have always realized that it was quite possible for show ring and producing to go hand in hand in the same individual and we believe their efforts have been very successful as testify their show ring record since 1905. Today they are considered to be among the top notchers in the Jersey breed.

Messrs. Pipes have no difficulty in disposing of their surplus stock at remunerative prices. They tell us that they have had some grand sales during the year now fast drawing to a close. They experience a heavy demand for family cows and also for herd headers and Agricultural Society bulls. Their main obstacle seems to be the difficulty of breeding fast enough to supply the demand for young stock.

Milk and cream is sold in Busy Amherst where they own their own milk route, the milk going direct from producer to consumer. Messrs. Pipes aim to grow as much roots, ensilage corn and grain on the farm as possible all of which is turned into ready money through the manufacturing medium of the ever popular Jersey cow.

The junior member of the firm, Mr. Roy Pipes, has had the advantages of a good agricultural education. He takes a deep interest in the farm and he and his father work hand in hand for the advancement of Jersey breed interests and agriculture in general. Another example for our young men, who are prone to leave the farm, to follow.

A quiet dependable Gasoline Engine of mighty power. Improved cooling, and ignition systems. Perfect, economical carburetor. The Gilson Engine is approved by the foremost authorities and mechanical engineers. All sizes. Write for catalogue. 40 Founded 1850.

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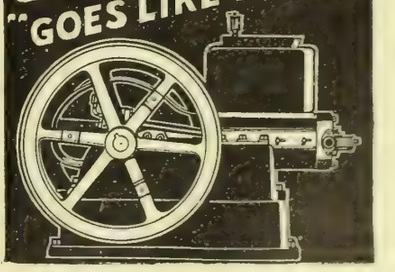

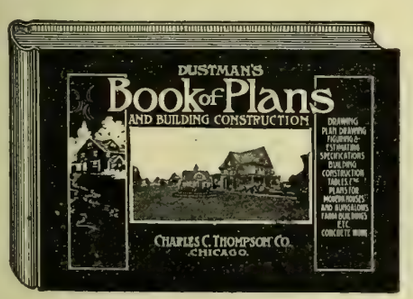

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CONTENTS : General Construction Plans—Arrangement of Rooms—Things to be Considered in Laying out a building—Heating Facilities—How to Estimate Cost—Figuring Amount of Material Required—Time Saving Tables—Mechanical Drawing and How it is Applied in Construction of a Building—Plans with Estimated Cost of 150 Houses, Bungalows Barns, in Frame, Concrete or Brick Construction—Country Houses—General Barns, Cattle and Horse Stables—Dairy Barns—Poultry Houses and Silos—Hints as to Best Style of Structure Details of Interior Construction and Finish—Window and Door Framing—Stairways—Store Fronts—Roof Construction—General Directions For Mixing and Placing Concrete - Proportions—Sand and Gravel—Itamized List of Material Costs—Writing of Specifications.

This book will be sent, together with a year's subscription to THE MARITIME FARMER to any person upon receipt of $2.00. That is if you are already a subscriber and will send us two dollars we will send you the book and give you credit for one year's subscription. If you are not already a subscriber and want the book, you may obtain it and THE MARITIME FARMER for $2.00 These books cannot be purchased anywhere for less than $2.00 each and they are a bargain at the price.

THE MARITIME FARMER, SUSSEX, N. B.

The East Court Ayrshire Herd.

PRACTICALLY all our readers are acquainted with the name Retson Bros., some personally some by reputation. Will Retson has been herdsman on the College Farm, Truro for a number of years, while a mile east of the college farm is located, East Court Farm, on which John, George and Jim Retson carry on the breeding of high-class producing Ayrshires and a splendid flock of Leicester sheep, under the firm name of Retson Bros.

Retson Bros. were born and brought up in Scotland, the land of the Ayrshire. They bought East Court Farm in 1908. The farm consists of 160 acres of which 90 acres are under cultivation, 6 acres in orchard and the balance in pasture. They started breeding operations with a herd of ten pure-bred imported Ayrshires and five head of Border Leicester sheep.

In the spring of 1910 they imported the highly bred bull, "Gardrum Prince" selected for the great milk record backing. His dam had a record of 12,637 pounds of 3.8 per cent. milk in 36 weeks. His grand dam, on his sire's side had an official record of over 13,000 pounds of milk in 36 weeks and a private record of 18,000 pounds in 365 days.

Four of Gardrum Prince's half sisters, in 1909 stood highest in the Scotch records for milk and butter fat.

In the spring of 1911 the Retsons found it necessary to make another importation of females to keep pace with the growing demand for stock.

The East Court herd at present consists of upwards of forty head of pure-bred Ayrshires, either imported or from imported stock, selected from such well known herds as Kennedy's of Glenshamrock; Baird's of Gaiclaunch; Reid's of Bonshaw; Faulds of Clerkland, and other noted breeders.

The young stock sired by Gardrum Prince are a thrifty looking lot and excellent specimens of the breed. Many of his get are to be seen in the vicinity of Truro, especially at the College Farm, where he has been extensively used.

Stock from the East Court herd are making a name for themselves in many parts of Canada and the United States.

Among the cows that have recently freshened at East Court are: Ocean Girl and Princess Bell. These cows are in splendid fit and producing from 55 to 60 pounds of milk per day, on quite a light ration. Cotton seed meal constitutes the principal meal fed this year by Retson Bros. as it is not much more expensive than bran or shorts and it has a much higher percentage of feed and manurial value. They find that the cheapest way to make milk at present high prices for grain feed is on a ration of from forty to sixty pounds of roots, with three or four pounds of cottonseed per day, and all the good, bright clover hay they will eat.

Last summer was their first experience in growing corn for ensilage and they are so well satisfied with the results that they are planning to grow it more extensively in future years.

The young stock are wintered on straw and turnips with a mixture of bran, oats and oil cake. They find that their young stock keeps in a vigorous growing, not over fat condition on this ration and that they do exceptionally well after they are turned out to pasture.

Over a score of Border Leicester breeding ewes are kept on East Court Farm, mostly all purchased from the flocks of the Boswalls and the Clarks of Prince Edward Island, with the exception of a few ewes and rams imported from Scotland. The ram in question, "Hillhouse Stamp," from one of the best flocks in Scotland was a noted prize winner and he has proved a valuable investment as is shown by his vigorous lambs. Retson Bros. are making good in their chosen profession; they are good citizens and they are setting a good example in showing what may be accomplished in the Maritime Provinces by those whose object is "To will and to do."

ACCEPTABLE XMAS GIFTS FOR GIRLS and BOYS

The Little Ones will appreciate a Christmas Gift of any one of these High Grade Garments, give them the surprise they have been looking forward to. It is not too soon to order now, as the Festive Season is drawing nigh.

QUALITY—ECONOMY—SERVICE

Handsome Coats For Girls

27-624.—Made with fashionable box back, double breasted with large fancy buttons, plain tailored sleeves, patch pockets and turned down collar. Good full cape finished with a) in. band of self material piped in red and finished with small, fancy buttons. A very sensible coat of navy only. Sizes 6 to 14 years. Price $6.98

THIS BEAUTIFUL DOLL

37-104 — Jointed Dressed Doll—20 inch, satin dress, in pink, blue or red, with wide applique lace trimming down front of blouse and skirt, fancy hat to match .. .. .. 98c.

The "Etonia" & "Sou-Wester" Combination

18-600

English single Texture Slip-On Waterproof for Children; finished with Vertical Pockets and wide close fitting collar. This Waterproof is a beautifully finished garment ,and guaranteed absolutely rainproof.

Boy's sizes:—
28 in. to 36 in. chest
36 in. to 46 in. long $4.50

Misses' Sizes:—
26 in. to 32 in. bust
40 in. to 48 in. long $3.98

Hats of Sou' Westers to match—
Sizes 6 1-2 to 7 1-2 .. 59c.

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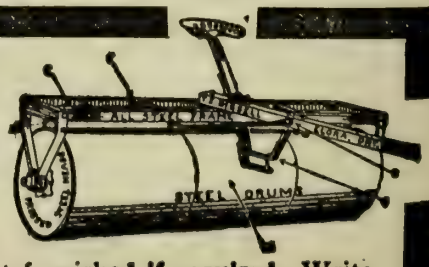
The "Bissell" is a 3-drum roller

3 DRUMS make the best Land Roller. It is easy to understand how the "Bissell" Roller with 3 drums and supported by 6 heads is a STRONGER IMPLEMENT than any 2 drum Roller on the market. With 3 drums the centre bearing is not needed. When the "Bissell" Roller is at work, the axle turns with the drums.

It costs more to manufacture the 3 drum Roller than the 2 drum, but you pay no more for the "Bissell" 3 drum and get BETTER VALUE FOR YOUR MONEY. You get heavier weight in the "Bissell" drums too.

The good points cannot all be told here. Ask your dealer about the "Bissell" Roller and do not be put off with a Roller unless the name "Bissell" is plainly stencilled thereon.



Grass Seeder Attachment furnished if required. Write Dept. M for free catalogue. 63

T. E. BISSELL CO., LIMITED, ELORA, ONT.

Draft Horses, Beef Cattle, Sheep and Apples.

ANOTHER successful example of successful fruit and stock raising in the fruit belt of Nova Scotia is that of Mr. Wm. Sharp, of Windsor Forks, whose farm is located about two miles from the town of Windsor.

We recently visited his farm and there saw the Clydesdale stallion Baron Frederic and also a pair of well bred brood mares weighing about 3200 pounds, that won first and second prizes in their class at the recent Halifax Exhibition. We also saw a pair of three-year-olds, first and second prize winners in their class at the 1911 Halifax exhibition, a mare and gelding, weighing 3,000 pounds, also a promising two-year-old and a lusty pair of yearlings all sired by Baron Frederic.

At the 1911 Halifax exhibition Mr. Sharp's aged mare was first with three of her offspring. She has been a grand good breeder and her offspring are all that any breeder could wish.

The foals are left with the mares until they are about five months old, a longer or shorter period—determined by the amount of work for which the mares are required. The mares are bred to foal in April, and are worked regularly. They are given a rest of about two weeks after foaling after which they are again put to the regular farm work; the foals being left in a box stall in the barn. About the middle of the forenoon and also about the middle of the afternoon the mares are brought to the barn to give the foals a chance to suckle.

Weaning is done gradually and the foals are taught to eat a little grain. In some cases they are taught to drink skim milk.

The first winter rations for the colts consist of oats, bran, cull apples, turnips and hay and about the end of May they go to pasture. They are broken to harness when from two to two and one-half years old and when the opportunity arrives they are sold at remunerative prices.

Besides the prize winnings already referred to Mr. Sharp won a first prize on one of his yearlings and a ?hird prize on a two-year-old in strong competition.

Mr. Sharp also keeps a pure-bred Durham bull and eight or ten cows and a lot of young cattle. They fatten their steers and sell them when they are about two and one-half years old. The calves are allowed to suckle their dams and run with them at pasture.

A flock of twenty Shropshire breeding ewes have their home on this farm and are highly prized by their owner. Dogs do not bother them and they thrive well and the farm thrives with them. Mr. Sharp's Tolouse geese also add to the farm income.

Mr. Sharp has a fine, well cultivated apple orchard of the leading commercial varieties. The average yield is about 600 barrels but this quantity will soon be very materially augmented as a promising young orchard is fast approaching the bearing age.

The rotation followed:—Oats, roots, grain, seeded with timothy and clover followed with hay for two or three years.

Mr. Sharpe has been on his present farm since 1886. He comes of good old English descent and is a thorough horseman. He has proven that stock raising is a valuable asset to the fruit grower.

Horses For the Farmer.

THERE are probably few better ways of benefiting a country than by improving its live stock, it costs no more to feed a first-class animal than an inferior one, and the returns for the former in price and profit in every way, is greater, we in Nova Scotia are perhaps a little behind some of the other provinces in this matter, but we do not mean to remain there any longer. One of the many problems that confront the farmer in the carrying on of his farm operations, is the question of tillage or sufficient power to use the various implements now in use to the very best advantage which every farmer wants to do as quickly as possible, cheaply and effectively, and as no other power can take the place of the horse on account of the variety of the work to be performed, we then have to decide which is the most profitable class of horse for the farmer to raise for the carrying on of his farm operations, and to bring the best returns when offered for sale. It is true that in some cases trotting horses or showy drivers have brought extravagant prices, but both classes are more of a luxury than a necessity, and the draft horse is undoubtedly the most profitable horse for the farmer to raise, because the selling price of a good draft horse in proportion to the cost of raising and breaking, up to four or five years old, is better than can be realized in any other class. The draft colt can also be reared with less risk and liability to accident than those of the lighter class, due to the fact that the draft bred colt is a lighter animal than others of the lighter class, and will also earn his own keep after he is two years old and his education completed in doing the work of the farm, thus the farmer who breeds him can secure his real market value. The good draft mare is one of the most profitable farm products, as she not only pays her way by the work she does, in working the farm, but also pays her owner a divident in the colt she produces. In selecting brood mares they should be of good size, the right conformation, and above all, of a good disposition, so that they can be handled and cared for at foaling time, as it sometimes happens a colt is weak and has to be assisted in getting hold of the teat, and a mare of an ugly disposition will not allow anyone to come near her, and again her offspring is sure to inherit some of her faults. She should also be a good worker, kind and sensible. Breed her to the best pure bred draft stallion obtainable, of good size and above all, of good action, while size and action are both desirable, do not sacrifice action for size. A few miles and a few dollars should not induce any farmer to breed to a cheap stallion to raise a cheap colt, when the services of good draft stallions can be obtained at a reasonable figure. As to what time of the year it is desirable to have the foals come, every one will have to do whatever suits their own particular case. The writer having had some experience with both spring and fall foals, will have to confess that I am not in favor of fall foals, as they often go into winter quarters ill prepared to stand cold weather and warmth and plenty of excercise, plan to have the colts come early in May. Prior to foaling the mare should have daily, morning and evening, a bran mash and plenty of excercise or light work. This should insure (if other conditions are right) an easy foaling and plenty of milk. Do not over feed the mare immediately after foaling but continue the bran mash which will assist in carrying off the fever incident to foaling. From this time on, the mare should have a few cracked oats the quantity depending on the kind of a pasture the mare is likely to be in during the summer. At four and one-half or five months old, the colt should be weaned. The plan I prefer, is to separate the mare and the foal out of hearing distance. The mare should be milked two or three times a day or until she is dry. Put the colt in a good smooth box stall visit it frequently as it will get lonesome. Offer it water often and teach it to eat cracked oats and bran, as the first winter is the most critical time in the colts existence, it should be carefully attended to. Keep the diet as near grass conditions as possible with bran, cracked oats and roots. The colt during the winter should be handled and taught to lead by the halter. The following summer to ensure a steady growth, the colt should have good pasture in which there is shade and plenty of water, the next winter the colt should have plenty of good hay and sufficient roots to keep healthy, towards spring add two or three quarts of cracked oats per day, at which time the colt should be handled and harnessed and taught to do light work, and from this time on, be worked and developed to the owners liking. Formerly many of our farmers thought the draft horse too large for farm work but we are fast coming to appreciate his merits on the farm as well as to sell, and the lumber woods, stone and gypsum quarries are constantly calling for good draft horses, but the farmers who do not read stock journals and learn the experience of others go on in blissful ignorance and complain of the times the middle man and the world as all wrong, while if they would wake up and attend the short courses at the Agricultural College at Truro, read and think and act, and improve their stock and their farming methods, they would have no cause to complain.—Address by Wm. O'Brien, Windsor Forks, N. S. before the N. S. F. A.

"Clay" Gates

STRONGEST and best farm gate made. 30,000 sold in 1912. Can't sag, bend or break. Can be raised as shown. Good for Winter and Summer. Send for illustrated price list.

The CANADIAN GATE CO. Ltd.
54 Morris St., GUELPH, Ont. 1

7% GUARANTEED 7%

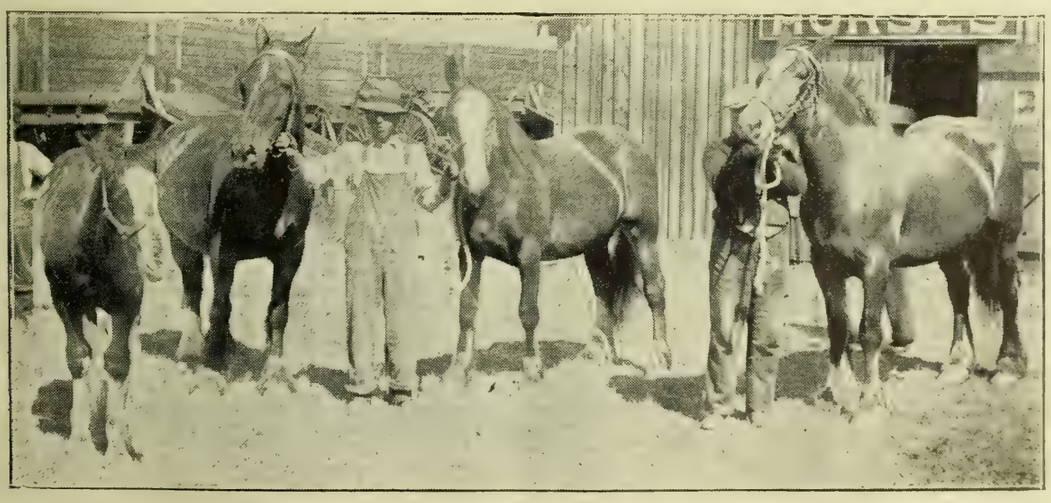
THE SIEMON COMPANY LIMITED
Authorized Capital $1,000,000.00

Business established 26 years with trade connection in principal countries of the world. This is one of largest businesses of its kind in the world.

The company do their own financing, and pay **interest twice a year**, on 1st June and December. and allow the investor to withdraw his money at any time after one year on 60 days' notice if desired.

This security is different from any other ever issued with its **Profit Sharing Features**, and is as safe as any farm mortgage. Investors wanting the highest earning capacity with absolute safety, should write at once for full particulars to

NATIONAL SECURITIES CORPORATION LIMITED
Confederation Life Building, Toronto, Canada.



A Strong Quartette

First Prize Heavy Draught mare and three of her progeny at the 1911 Halifax Exhibition. Bred, owned and exhibited by Sharpe & McNeil, Windsor, N. S

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

Let me remember how it used to be and bring one morning back again.

I came into the second-best parlor after breakfast, with my books, and an exercise book, and a slate. My mother is ready for me at her writing desk, but not half so ready as Mr. Murdstone in his easy-chair by the window (though he pretends to be reading a book), or as Miss Murdstone, sitting near my mother stringing steel beads. The very sight of these two has such an influence over me that I begin to feel the words I have been at infinite pains to get into my head, all sliding away, and going I don't know where. I wonder where they do go by-the-by?

I hand the first book to my mother. Perhaps it is a grammar, perhaps a history or geography. I take a last drowning look at the page as I give it into her hands, and start off aloud at a racing pace while I have got it fresh. I trip over a word, Mr. Murdstone looks up. I trip over another word. Mr. Murdstone looks up. I redden, tumble over half-a-dozen words and stop. I think my mother would show me the book if she dared, but she does not dare, and she says softly:

"Oh, Davy, Davy!"

"Now, Clara," says Mr. Murdstone, "be firm with the boy. Don't say, 'Oh, Davy, Davy'. That's childish. He knows his lessons, or he does not know it."

"He does not know it," Miss Murdstone imposes awfully.

"I am really afraid he does not," says my mother.

"Then you see, Clara," returns Miss Murdstone, "you should just give him the book back, and make him know it."

"Yes, certainly," says my mother; "that is what I intend to do, my dear Jane. Now, Davy, try once more, and don't be stupid."

I obey the first clause of the injunction by trying once more, but am not so successful with the second, for I am very stupid. I tumble down before I get to the old place, at a point where I was all right before, and stop to think. But I can't think about the lesson. I think of the number of yards of net in Miss Murdstone's cap, or of the price of Mr. Murdstone's dressing-gown, or any such ridiculous problem that I have no business with, and don't want to have anything at all to do with. Mr. Murdstone makes a movement of impatience which I have been expecting for a long time. Miss Murdstone does the same. My mother glances submissively at them, shuts the book, and lays it by as an arrear to be worked out when my other tasks are done.

There is a pile of these arrears very soon, and it swells like a rolling snowball. The bigger it gets, the more stupid I get. The case is so hopeless, and I feel that I am wallowing in such a bog of nonsense, that I give up all idea of getting out, and abandon myself to my fate. The despairing way in which my mother and I look at each other, as I blunder on, is truly melancholy. But the greatest effect in these miserable lessons is when my mother (thinking nobody is observing her) tries to give me the cue by the motion of her lips. At that instant, Miss Murdstone, who has been lying in wait for nothing else all along, says in a deep warning voice:

"Clara!"

My mother starts, colors and smiles faintly. Mr. Murdstone comes out of his chair, takes the book, throws it at me or boxes my ears with it, and turns me out of the room by the shoulders.

Even when the lessons are done, the worst is yet to happen, in the shape of an appalling sum. This is invented for me, and delivered to me orally by Mr. Murdstone, and begins, "If I go into a cheesemonger's shop, and buy five thousand double-Glocester cheeses at fourpence-halfpenny each, present payment"—at which I see Miss Murdestone secretly overjoyed. I pore over these cheeses without any result or enlightenment until dinner time, when, having made a Mulatto of myself by getting the dirt of the slate into the pores of my skin, I have a slice of bread to help me out with the cheeses, and am considered in disgrace for the rest of the evening.

It seems to me, at this distance of time, as if my unfortunate studies generally took this course. I could have done very well if I had been without the Murdstones; but the influence of the Murdstones upon me was like the fascination of two snakes on a wretched young girl. Even when I did get through the morning with tolerable credit, there was not much gained but dinner; for Miss Murdstone never could endure to see me untasked, and if I rashly made any show of being unemployed, called my mother's attention to me by saying, "Clara, my dear, there's nothing like work—give your boy an exercise;" which caused me to be clapped down to some new labor there and then. As to any recreation with other children of my age, I had very little of that; for the gloomy theology of the Murdstones made all children out to be a swarm of little vipers (though there was a child once set in the midst of the Disciples) and held that they contaminated one another.

The natural result of this treatment continued, I suppose, for some six months or more, was to make me sullen, dull and dogged. I was not made the less so, by my sense of being more and more shut out and alienated from my mother. I believe I should have been almost stupified but for one circumstance.

It was this. My father had left a small collection of books in a little room upstairs, to which I had access (for it adjoined my own) and which nobody else in our house ever troubled. From that blessed little room Roderick Random, Peregrine Pickle, Humphrey Clinker, Tom Jones, the Vicar of Wakefield, Don Quixote, Gil Blas, and Robinson Cruesoe, came out, a glorious host, to keep me company. They kept alive my fancy and my hope of something beyond that place and time—they, and the Arabian Nights, and the Tales of the Genii—and did me no harm; for whatever harm was in some of them was not there for me; I knew nothing of it. It is astonishing to me now, how I found time, in the midst of my pore. ings and blunderings over heavier themes, to read those books as I did. It is curious to me how I could ever have consoled myself under small troubles (which were great troubles to me), by impersonating my favorite characters in them—as I did—and putting Mr. and Miss Murdstone into all the bad ones—which I did too. I have been Tom Jones (a child's Tom Jones, a harmless creature) for a week together. I have sustained my own idea of Roderick Random for a month at a stretch, I verily believe. I had a greedy relish of a few volumes of Voyages and Travels—I forget what, now—that were on those shelves; and for days and days I can remember to have gone about my region of our house, armed with the centre-piece out of an old set of boot-trees—the perfect realisation of Captain Somebody, of the Royal British Navy, in danger of being beset by savages, and resolved to sell his life at a great price. The Captain never lost his dignity, from having his ears boxed with the Latin Grammar. I did; but the Captain was a Captain and a hero, in despite of all the grammars of all the languages in the world, dead or alive.

This was my only and my constant comfort. When I think of it, the picture rises in my mind, of a summer evening, the boys at play in the churchyard, and I sitting on my bed, reading as if for life. Every barn in the neighborhood, every stone in the church, and every foot of the churchyard, had some association of its own, in my mind, connected with these books, and stood for some locality made famous in them. I have seen Tom Pipes go climbing up the church-steeple, I have watched Strap, with the knapsack on his back, stooping to rest himself upon the wicket-gate; and I know that Commodore Trunnion held that club with Mr. Pickle, in the parlor of our little village alehouse.

The reader now understands, as well as I do, what I was when I came to the point of my youthful history to which I am now coming again.

One morning when I went into the parlor with my books, I found my mother looking anxious, Miss Murdstone looking firm, and Mr. Murdstone binding something round the bottom of a cane—a lithe and limber cane, which he left off binding when I came in, and poised and switched in the air.

"I tell you, Clara," said Mr. Murdstone, "I have often been flogged myself."

"To be sure; of course," said Miss Murdstone.

"Certainly, my dear Jane," faltered my mother, meekly. "But—but do you think it did Edward good?"

"Do you think it did Edward harm, Clara?" asked Mr. Murdstone, gravely.

"That's the point," said his sister.

To this my mother returned, "Certainly, my dear Jane," and said no more.

I felt apurehensive that I was personally interested in this dialogue, and sought Mr. Murdstone's eye as it lighted on mine.

"Now, David," he said—and I saw that cast again as he said it—"you must be far more careful to-day than usual." He gave the cane another poise, and another switch; and having finished his preparation of it, laid it down beside him, with an impressive look, and took up his book.

This was a good freshener to my presence of mind, as a beginning. I felt the words of my lesson slipping off, not one by one, or line by line, but by the entire page; I tried to lay hold of them; but they seemed, if I may so express it, to have put skates on, and to skim from me with a smoothness there was no checking.

We began badly, and went on worse. I had come in, with an idea of distinguishing myself rather, conceiving that I was rather well prepared; but it turned out to be quite a mistake. Book after book was added to the heap of failures, Miss Murdstone being firmly watchful of us all the time. And when we came at last to the five thousand cheeses (canes he made it that day, I remember), my mother burst out crying.

"Clara!" said Miss Murdstone, in her warning voice.

"I am not quite well, my dear Jane, I think," said my mother.

I saw him wink solemnly, at his sister, as he rose and said, taking up the cane:

"Why, Jane, we can hardly expect Clara to bear, with perfect firmness, the worry and torment that David has occasioned her to-day. That would be stoical. Clara is greatly strengthened and improved, but we can hardly expect so much from her. David, you and I will go up-stairs, boy."

...

As he took me out at the door, my mother ran towards us. Miss Murdstone said, "Clara! are you a perfect fool?" and interfered. I saw my mother stop her ears then, and I heard her crying.

He walked me up to my room slowly and gravely—I am certain he had a delight in that formal parade of executing justice—and when we got there, suddenly twisted my head under his arm.

"Mr. Murdstone! Sir!" I cried to him. "Don't Pray don't beat me! I have tried to learn, sir, but I can't learn while you and Miss Murdstone are by. I can't indeed!"

"Can't you, indeed, David?" he said. "We'll try that."

He had my head as in a vise, but I twined round him somehow, and stopped him for a moment, entreating him not to beat me. It was only for a moment that I stopped him, for he cut me heavily an instant afterwards, and in the same instant I caught the hand with which he held me in my mouth, between my teeth, and bit it through. It sets my teeth on edge to think of it.

He beat me then, as if he would have beaten me to death. Above all the noise we made, I heard them running up the stairs, and crying out—I heard my mother crying out—and Peggotty. Then he was gone; and the door was locked outside; and I was lying, fevered and hot, and torn, and sore, and raging in my puny way, upon the floor.

How well I recollect, when I became quiet, what an unnatural stillness seemed to reign through the whole house! How well I remember, when my smart and passion began to cool, how wicked I began to feel.

I sat listening for a long while, but there was not a sound. I crawled up from the floor, and saw my face in the glass, so swollen, red, and ugly that it almost frightened me. My stripes were sore and stiff, and made me cry afresh, when I moved; but they were nothing to the guilt I felt. It lay heavier on my breast than if I had been a most astrocious criminal, I dare say.

It had begun to grow dark, and I had shut the window (I had been lying, for the most part, with my head upon the sill, by turns crying, dozing, and looking listlessly out), when the key was turned, and Miss Murdstone came in with some bread and meat and milk. These she put down on the table without a word, glaring at me the while with ememplary firmness and then retired, locking the door after her.

(Continued in next issue)

Successful Lessons in Poultry Raising

Twenty complete Lessons. The successful Poultry Book a simple and comprehensive treatise in the care and culture of domestic fowls. This book is sent free on request.

OCTAVIEN ROLLAND

Sole Agent for the Des Mones Incubator, P. O. Box 2363, Montreal, P. Q.

The Woman's Part.

In the morning to rise early and gladly, and to rouse the spirit as well as the body; to look out first of all at the most beautiful picture framed by her window, even if it be but a glimpse of blue sky between city buildings; to breathe deep, on rainy days to think a moment of the clean leaves and freshened petals: on sunny days to find almost enough joy in the sun alone: to greet such birds as are near the dwelling even if they be only querulous sparrows—this is the housewife's first duty, that she may break the fast of her spirit.

Many other duties close in upon her, cooking and sewing, perhaps, ordering and planning, nursing the sick, caring for those she loves. Her hands must be strong, her fingers deft and nimble. For the hands that labor faithfully lift the whole race and speed us all on our way to God. And a thousand years from now men and women will be a little bit brighter and braver for this her present toil. But the hands that will not cleanse or repair or fashion clutch at the feet of the Race and hold us all back.

Many duties press in upon her, but perhaps one more than all others: perhaps there is for her one labor of heart and mind unique and beautiful. Perhaps for this one thing she was born of her mother. If this be so, then for this task all lesser tasks should wait. When God who lives in her says, ""This do and thou shalt live!" she may not answer that there are other demands. For efficient service is not blind slavery, and blind slavery is not the highest service. Let her heed her individual nature.

Her body may be confined within the four walls of her dwelling, but her spirit should have liberty to reach out into the Universal. Her pantry shelf may be poorly furnished, but her heart she must nourish at all costs. Her house should be swept and and garnished, but it profits her little to have a clean house with a cobwebby mind. Order and Serinity should reign in her chambers, but they will not avail for her happiness unless they reign in her life.

To have in the home some beauty so persuasive, so adhesive and concentrated that when she goes out she carries it with her unconsciously—to be able to bring it from every brief excursion a sweet new power, a subtle joy, a chance of benison, to hold the doors of the home wide open alike for guests who can bring love and for guests who can receive it: with the setting of the sun to give herself over to gaiety with those who are her dearest ones this is the breaking of the bread to which the house-keeper is called.

Then, let the oak trees cast long shadows under the moon and stars while she lies resting, for the love that broods about her will whisper that she has lived one day well.—Woman's World.

Cold Tomato Catsup.

Peel and chop very fine one-half peck ripe tomatoes.

Drain in colander, put into an earthern vessel and add'

One-half cup grated horse radish.

One cup salt.

One cup black and white mustard seed, mixed.

Two pounds black pepper.

Two red peppers and two roots celery chopped fine.

One cup brown sugar.

One cup nasturtium seeds, chopped fine.

Two pounds ground cloves.

Two pounds allspice.

One teaspoon cinnamon.

One teaspoon mace.

One quart cider vinegar.

Mix all well, bottle and seal.

Many a man has been patted on the back so much that it has stunted his growth.

Free to Stock and Poultry Raisers

We will send absolutely free, for the asking, postpaid, one of our large sixty-four page books, with insert, on the common diseases of stock and poultry. Tells how to feed all kinds of heavy and light horses, colts and mares, milch cows, calves and fattening steers; also, how to keep and feed poultry so that they will lay as well in winter as summer. No farmer should be without it.

NOW is the time to use Royal Purple Stock Specific. At a cost of only two-thirds of a cent per day per animal, it will increase it 25 per cent. in value. It permanently cured Bots, Colic, Worms, Skin Diseases and Debility. Restores run-down animals to plumpness and vigor. It will increase the milk yield three to five pounds per cow per day and make the milk richer.

Royal Purple is not a stock food. There is no filler used in its manufacture, and we import from Europe all the seeds, herbs, barks, etc., and grind them on our own premises. Therefore, we can guarantee it to you as being absolutely pure. We do not use cheap filler to make up a large package. We give you the best condition powder ever put on the market in a concentrated form.

A tablespoon levelled off, once a day, is sufficient for a full-grown animal. It prvents disease, keeps your animals in perfect health, and is absolutely harmless. It makes six-weeks-old calves as large as ordinary calves at ten weeks. You can develop six pigs ready for market in just one month's less time than you can possibly do without it, at a cost of only $1.50, saving you a month's work and food.

A 50c. package will last a horse 70 days. A $1.50 pail or air-tight tin, containing four times as much as a 50c. package, will last an animal 280 days.

If you have never used it, try it on the poorest animal you have on your place, and watch results. If it does not produce better results than anything you have ever used, or give you satisfaction, we will refund your money.

Toledo, Ont., July 1, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—I have used a part of a package of your "Royal Purple Stock Specific." I fed it to one cow according to directions. She gained six pounds of milk while using part of a package. The rest of my herd reduced in milk while this one gained. I consider it has no equal.

T. G. BELLAMY.

Bondhead, Ont., Aug. 31, 1912.

The W. A. Jenkins Mfg. Co., London, Ont.

Gentlemen,—After experimenting with a great many stock foods, I was about convinced that there was very little virtue in any of it, but your dealer insisted on me trying Royal Purple Stock Specific, saying it was different from all others. I have since used a great lot of it, as I keep from ten to twenty horses and about the same of cattle. This Specific, in my opinion, is certainly in a class by itself as a conditioner, and is the best I have ever used.

GEORGE MAPES.

Clear Creek, Ont., Sept. 19, 1912.

W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Your "Royal Purple" Stock Specific is the best stock conditioner I have ever had in my stables, and am never without it. I had a brood sow that had milk fever very bad. Your "Royal Purple" saved her life. Put her on her feet in three days. I had three calves last spring that got scouring very badly. Could not get it stopped until I used "Royal Purple." It did the work O.K.

Yours truly, H. B. MOULTON.

Saskatoon, Sask., Sept. 20th.

The W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—Some months ago we bought some of your Royal Purple Stock Specific from Mr. Vogan here. We have been using it ever since, and we find it the best conditioner for driving horses we have ever tried.

H. F. McCALLUM, "The Palace Livery."

Scott, Sask., May 22nd, 1911.

The W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Do you want a man to represent your Royal Purple goods in this district. I am from Ontario, and have fed your Stock Specific—got it from Mr. J. Corbett, of Brownsville. My cows, while us ng it, made the largest average, and tested five points over average at C.M.P. at Brownsville. I know your goods are the highest class Stock Specific on the market, and take great pleasure in representing you in this district

NORMAN G. CHARLTON.

Royal Purple Poultry Specific

will make your hens lay in winter, as well as summer, and yet a 50c. package will last 25 hens 70 days, or a $1.50 pail or air-tight tin, containing four times as much as a 50c. package, will last 280 days. It prevents poultry from losing flesh at moulting time, cures and prevents all the ordinary diseases, makes their plumage bright, and keeps them in prime condition.

Port Colborne, May 11.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—This is to certify that I have used one $1.50 tin of your "Royal Purple" Poultry Specific, and there is nothing that can equal it. I wanted yours again and your agent did not have any, so he gave me another brand, and I can assure you it was not worth carrying home, for my hens layed better without it. I have been from 12 to 15 dozen eggs short every week since I have not used your "Royal Purple."

CHARLES RICHARDSON.

Royal Purple

STOCK AND POULTRY SPECIFICS

A second from Mr. Richardson as follows :—

Port Colbborne, Ont., Aug. 24, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—Please find enclosed express order for $3.00, for which please send me two tins of your "Royal Purple" Poultry Specific.

C. RICHARDSON.

A third letter from Mr. Richardson as follows :—

Port Colborne, Ont., Aug. 29, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—I received two tins of "Royal Purple" Poultry Specific all O.K. I have tried all kinds of specific to make my hens lay, and I find that you are the only ones that manufacture the genuine article. All the rest, I think, is a waste of time and money to bother with. As an egg-producer, I cannot praise your Poultry Specific high enough, for I would not be without it if I had to pay double the money.

C. RICHARDSON.

Sherbrooke, Que., Aug. 1, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—I have used your Specific for one year, and have given it to my birds with good results. See my winnings at the different fairs, which will tell the tale.

MISS GEORGINA CAMIRAUD.

Royal Purple Cough Specific

During the last four years there has been an epidemic cough going through every stable in Canada, which has been a great source of annoyance to horsemen. Our Royal Purple Cough Cure will absolutely cure this cough in four days, will break up and cure distemper in ten days. Absolutely guaranteed. 50c. per tin; by mail, 55c.

Royal Purple Gall Cure

will cure all sorts of open sores on man or beast. Will absolutely dry up and cure scratches in a very few days.

MR. SAM OWEN, coachman for the Hon. Adam Beck, says: "By following directions, I find your Royal Purple Gall Cure will cure scratches and make the scabs peel off perfectly dry in about four or five days." Price, 25c.; by mail, 30c.

Royal Purple Sweat Liniment

will reduce lameness in a very short time. Mr. John M. Daly, coalman in London, says: "We have nine horses constantly teaming coal, and have all kinds of trouble with them being lame at times. I have used your Sweat Liniment for a year back, and have never known it to fail to cure sprained tendons, etc." Price, 50c., 8-ounce bottles; by mail, 60c.

Royal Purple Lice Killer

This is entirely different from any lice killer on the market. In order for you to understand the process of manufacture of this lice killer, you will have to send for one of our booklets, as we give you a full history of it there. It will entirely exterminate lice on fowls or animals with not more than one or two applications. It smothers them. Price 25c.; by mail, 30c.

Royal Purple Disinfectant (Sheep Dip)

In this line we give you the largest value for the money of any disinfectant on the market. A tin containing 1 3-8 qts. Imperial measure will cost you only 50c. Also put up in 25c. tins.

Royal Purple Roup Cure

Mr. Dulmage, the great breeder, of White Rocks, tells us that he has never used a Roup Cure that will give relief so quickly to hens suffering from Roup or kindred diseases. Our book tells you all about it. 25c. per tin; 30c. by mail.

Royal Purple Worm Powders

For animals. 25c. per tin; by mail, 30c.

In using our Stock Specific, we guarantee you better results by using the ordinary food grown on your farm, such as good hay, oats and bran, and so forth, than you can possibly obtain by using any of the many patent foods on the market. In these the percentage of nutrition is usually very small for the amount of money paid for the same. You know exactly what hay, oats, bran, chop or any farm products cost you, and ROYAL PURPLE makes animals digest these foods properly.

What we wish to impress on your mind is that we manufacture nothing but pure, unadulterated goods. Our booklet gives over 300 recommendations for our different lines from people all over Canada. While we give you above the names of a few who have used it, our best recommendation is for you to ask any person who has ever used any line we manufacture.

These goods may be obtained from Halifax Seed Co., Halifax; Amherst Trading Co., Amherst; A. Horne & Co., Charlottetown; Maynes & Riley, St. John.

W. A. JENKINS MANFG. CO., London, Ont.

AN ASSORTED ORDER AMOUNTING TO $5.00 WE WILL PREPAY.

Distribution of Seed Grain and Potatoes

By instructions of the Hon. Minister of Agriculture a distribution of superior sorts of grain and potatoes will be made during the coming winter and spring to Canadian farmers. The samples for general distribution will consist of spring wheat (5 lbs.), white oats (4 lbs.), and field peas (5 lbs.). These will be sent out from Ottawa. A distribution of potatoes (in 3 lb. samples) will be carried on from several of the experimental farms, the Central Farm at Ottawa supplying only the provinces of Ontario and Quebec. All samples will be sent free, by mail.

Applicants must give particulars in regard to the soil on their farms, and some account of their experience with such kinds of grain (or potatoes) as they have grown, so that a promising sort for their conditions may be selected.

Each application must be separate and must be signed by the applicant. Only one sample of grain and one of potatoes can be sent to each farm. Applications on any kind of printed form cannot be accepted. If two or more samples are asked for in the same letter only one will be sent.

As the supply of seed is limited, farmers are advised to apply early; but the applications will not necessarily be filled in the exact order in which they are received. Preference will always be given to the most thoughtful and explicit requests. Applications received after the end of January will probably be too late.

All applications for grain (and applications from the provinces of Ontario and Quebec for potatoes) should be addressed to the Dominion Cerealist, Central Experimental Farm, Ottawa. Such applications require no postage. If otherwise addressed delay and disappointment may occur.

Applications, for potatoes, from farmers in any other province should be addressed (postage prepaid) to the Superintendent of the nearest Branch Experimental Farm in that province.

J. H. GRISDALE,
Director, Dominion Experimental Farms.

Larger Freight Shipments via I. C. R.

Nova Scotia apples of the finest grades are not all being shipped to English markets. During the past two years the products of the Nova Scotia orchards have been shipped to the Northwest where they bring a higher price than any competing fruit on account of a superiority in flavor.

This year the shipments to the West have practically quadrupled owing to the energy of the Freight Department of the Intercolonial Railway which, seeing great opportunities in the apple shipments, set about to develop the Western movement. Next year this business promises to be very large as the dealers are finding a profitable market in the West.

Apples grown in the Maritime Provinces have a distinctive flavor from the fruit grown inland and this is largely responsible for the demand.

The freight business of the Intercolonial is increasing wonderfully, the total tonnage carried this year being far in excess of all previous records. Large quantities of fresh and cured fish are being shipped to Montreal and Toronto from Mulgrave, a feature being the great quantities of finnan haddies which are being rushed through in refrigerator cars.

Large shipments of gypsum are also being made and lumber is moving in larger quantities during the winter months.

1867 | 133 'Phone 133 | 1912

We are buyers of Farm Produce

All Lines First Quality Goods Only Wanted

Dressed Pork ALL SIZES
Bear Meat and Rabbits
POULTRY all kinds
Eggs & Butter

Remittance by cheque or express orders

John Hopkins
St. John, N. B.

1912 | Established | 1867

MODERN SANITARY CONVENIENCE ON THE FARM

The "Good Health Sanitary Chemical Closet is a modern Sanitary Convenience constructed particularly for families who live in a district where it is impossible to have waterworks or sewerage; a sanitary closet that can be placed in your home, store, school, hotel or public buildings; a closet that is made right by overcoming each and every objectionable feature found in other so-called "Sanitary-Closets." There is no burning to do. The "Good Health" Closet is 17 inches high; 17 inches wide; 24 inches long. It is manufactured from best English Sheet Steel, is polished brass and nickle plated fittings; all wooden parts being hard birch highly polished with mahogany finish. Costs from $1.00 to $2.00 per year for maintenance and from 50c to $1.00 to install according to range of pipe.

PRESERVE LIFE BY DESTROYING THE GERMS WHICH CAUSE DEATH

It is a well known fact that millions of germs are directly traceable to outhouses. Are you going to allow that horrible pest to remain within a short distance of your home? Are you going to make it necessary for your family to use it—It is unnecessary for us to illustrate the faults and evils of this abominable nuisance.

DON'T LOCK THE DOOR AFTER THE HORSE IS STOLEN

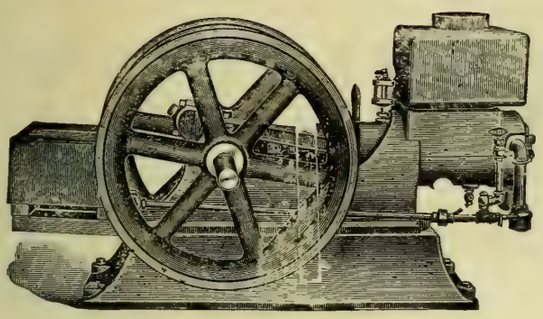
Install a "Good Health" Sanitary Chemical Closet in your home NOW. Your family will appreciate its privacy and convenience.

A POSTAL WILL BRING FULL PARTICULARS

The National Mfg. Company, Limited, Moncton, N. B.

The Gasoline Engine Trade Is Yours

If you handle the Sussex Motor Co's. Waterloo Boy



The advantages of handling the Motor Co.'s engines are these: When you handle this engine, you have working for you the tremendous business-getting power of the Highest Quality and the Underselling price, the benefit of a great advertising and selling plan that reaches out and brings the buyer right into your place of business and and in addition to all these advantages, you now have the greatest sales clincher an engine ever had—absolute convincing proof that it is the best in the world—the winning of the first prize in the World's Competition.

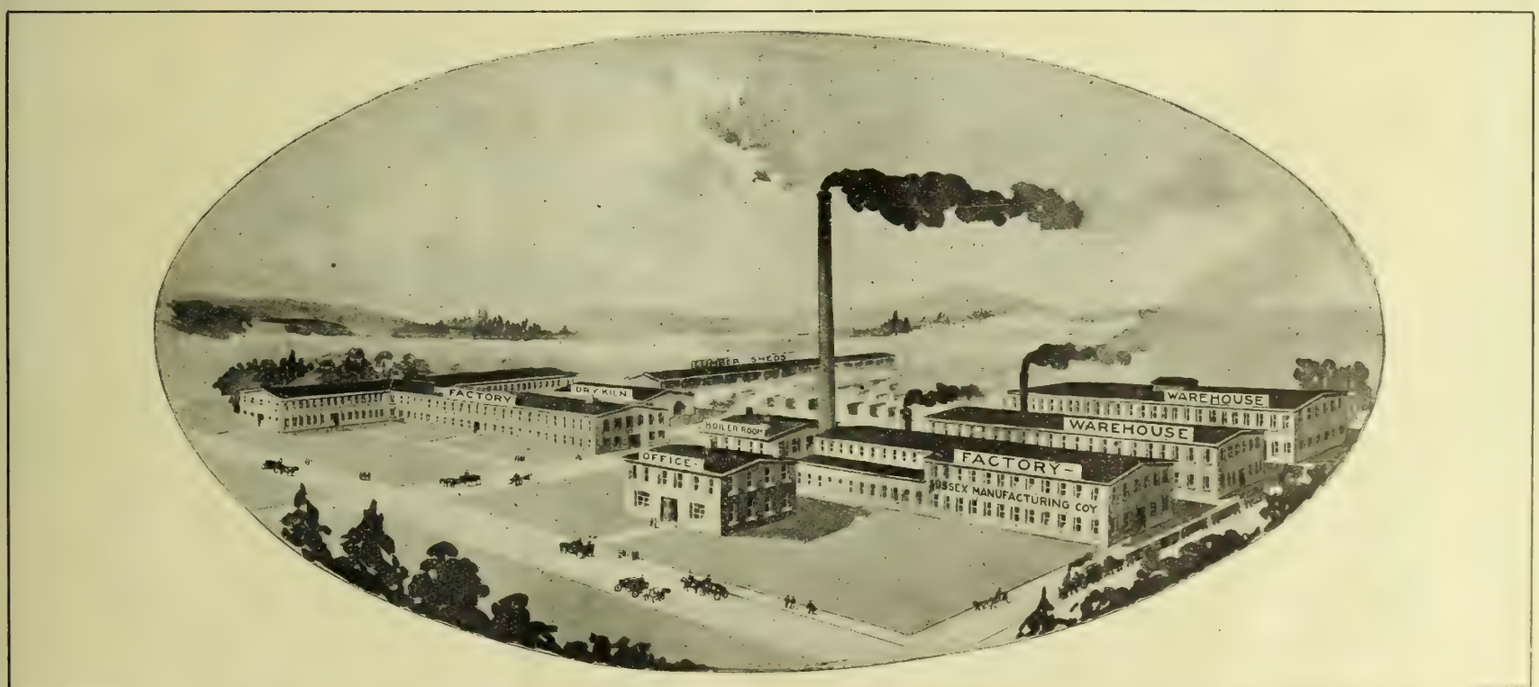
Your customers really want the best. They will pay more money for a thing, if you can convince them that it is cheapest in the long run. With the Waterloo Boy you have absolute proof that your engine is the best and in addition you can name a reasonable price. Can you see where your competitors have any chance at all against this combination?

There is no two ways about it, the Waterloo Boy "simply has the other fellow's goat." It is the best engine in the world and the farmers know it. It has the most exclusive advantages, develops the most power for it's size and weight, is the easiest managed and cheapest to run, most widely advertised and farmers buy more of them than any other kind on the market.

Now, there are more Waterloo Boys sold than any other, and it stands to reason that each Waterloo dealer will sell more than his competitor and that you can sell more engines and make more money handling the Waterloo Boy than any other on the market.

WRITE US FOR AGENT'S PROPOSITION

The Sussex Motor Co., Limited, Sussex, N. B.



Why Should Maritime Province Farmers

buy products made by a Maritime Province concern such as the Sussex Mfg. Co., of Sussex, N. B.? Because they are made of material grown and mined in the Maritime Provinces. Our company has in the vicinity of one hundred men in its employ who buy goods produced by the farmers in the Maritime Provinces. We with other manufacturing concerns in the Maritime Provinces furnish our farmers with their market. They are the people who are the backbone of development in this Province. They along with other employees of the Maritime Provinces, constitute our towns and villages, thus creating a larger demand for products grown on the farm. By buying machines from this concern, you are not only helping to build up our industry but you are helping build up your own farms. If our goods were not as good or superior to other makes we would not solicit your patronage in this way.

If you require any of the following lines, let us send you description and quote prices on: Threshers, Wood Cutters, Hay Presses, Grain Grinders, Root Pulpers, Garden Seeders, Castings, Farmer's Feed Boilers, Refrigerators, House Finish, Church Furniture, etc.

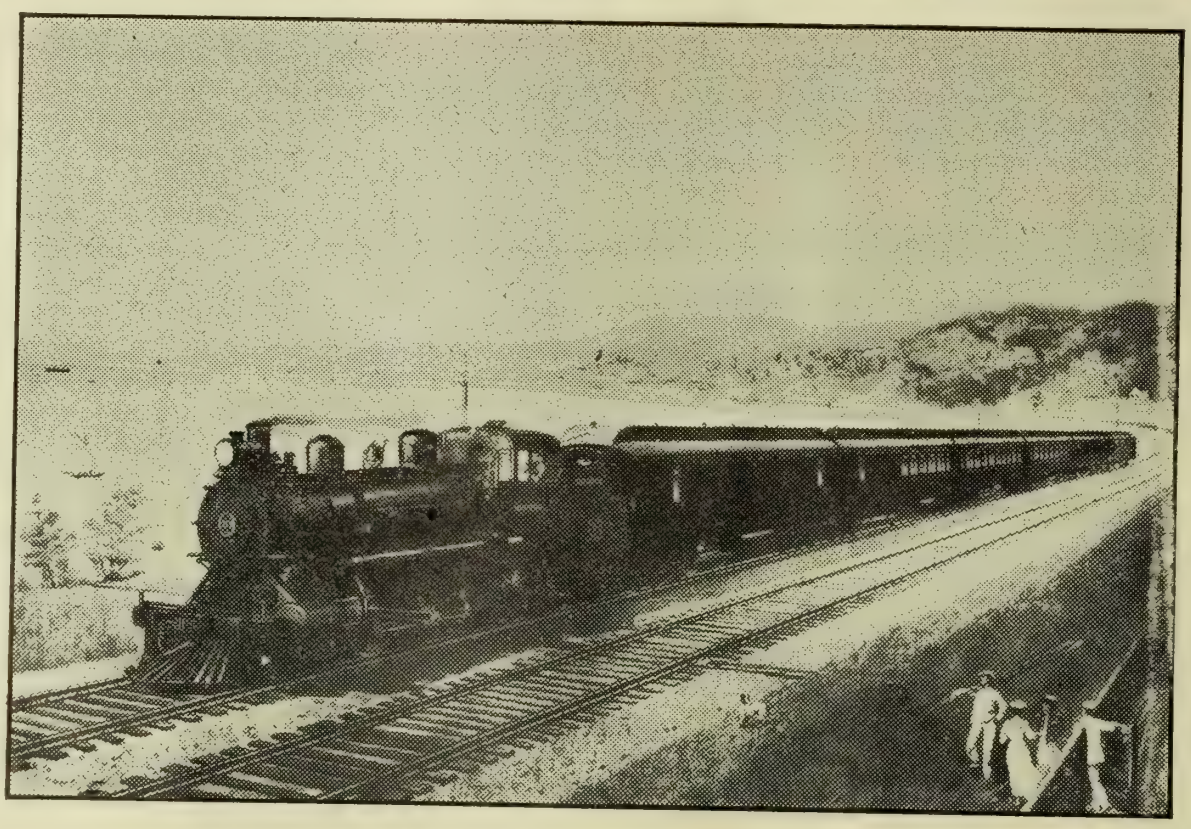
THE SUSSEX MANUFACTURING CO., LIMITED

SUSSEX, N. B.

INTERCOLONIAL RAILWAY

THE ONLY ALL CANADIAN ROUTE

BETWEEN THE
MARITIME PROVINCES
AND THE
METROPOLIS OF CANADA



2 THROUGH PASSENGER TRAINS TO QUEBEC AND MONTREAL 2

THE **OCEAN LIMITED** (Daily) ‖ THE **MARITIME EXPRESS** (Except Sundays)

Both Renowned for Splendid Equipment and Excellence of Sleeping and Dining Car Service

FAST THROUGH FREIGHTS Afford the Best Facilities for the Shipment of all Products to the Markets of the Canadian West.

PATRONIZE YOUR OWN LINE

What more Appropriate Gift for Christmas than a Year's Subscription to

The Canadian Countryman

a magazine conveying the thought of leading Canadian citizens and publicists on subjects educational, Political, Economic and Civic ?

People who are reading The Canadian Countryman and who are interested in it:

Farmers
Land-Owners
Market Gardeners
Fruit Growers
Merchants
Bankers
Students of Agriculture
Tradesmen
City Folks Interested in Agriculture
The Country Woman
School Teachers
Lawyers
Doctors
Veterinary Surgeons

The anadian Countryman views agriculture as both an industry and a trade—the fundamental industry of the country upon which the prosperity of the nation depends. The Canadian Countryman is practical and broad-guaged. It takes the reader away from his own neighborhood; brings to him the success of others interested in agriculture in other places; brings to him new ideas; increases his learning, his productiveness and his earnings.

Sixty per cent. of the population of Canada are directly interested in agriculture. Ninety per cent. are wholly dependent on its progress. Every person is more or less associated with this, Canada's greatest industry.

All the great interests of Canadians everywhere are Common. But they are great--and should be better understood.

To giving the ***facts*** about Canada to Canadians, so that our rapidly increasing population will be the ***right sort*** of Canadians, ***The Canadian Countryman*** is dedicated.

Over a thousand dollars are being spent every week in getting and printing up-to-the-minute information and advice on the conditions of cultivation, of marketing, in farm management, in government agricultural policies, in rural life. The great economic problems of Canada and the Empire will be discussed by the best writers.

To send a year's subscription to The Canadian Countryman as a Christmas present would be like sending fifty-two different presents throughout the year, for the recipient will be receiving every week a Magazine brimful of practical articles on poultry, live stock, road building, the dairy, farm machinery, the church, the rural school, the grange, farmer's clubs and other aspects of country community life; co-operative marketing; building and furnishing the house; fire insurance on farm buildings; a regular department on the scientific advance of agriculture and new inventions; wholesome fiction and verse; and a strong editorial page that ***stands always for the interests of Canadian Citizenship.***

If you are wondering what gift will be most acceptable to friends and if you want to avoid the rush and crowds at Christmas, let this suggestion solve your difficulties. The Canadian Countryman has prepared a beautiful Christmas card which will carry the name of the person who orders the subscription and which will be mailed in time to be received on Christmas Day by each person for whom a subscription is ordered. This way of announcing the gift adds greatly to its attractiveness.

Give your own name and address as well as the name and address of the recipient when you remit, and clearly state that it is intended as a Christmas Gift. Order now, sending $1.00 for each subscription ($1.50 in the United States). By sending promptly, any possible delay will be avoided, but the announcement will be held and mailed so as to be received on December 25th, while the subscription will be started with our Christmas number.

The Canadian Countryman Publishing Company, Limited, Toronto

Chapman and Stickney Gasoline Engines

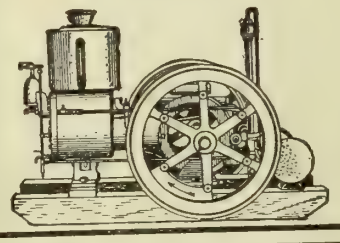
Are Easiest To Run And Keep Running

Learn what a good gasoline engine can do for you, and why the Chapman & Stickney are the favorites with farmers everywhere.

Save Time, Money and Bother

by writing for our FREE books of facts and experiences.

ONTARIO WIND ENGINE & PUMP CO., LIMITED TORONTO



ELMWOOD STOCK FARM.

Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

Maple Grove Ayrshires

For immediate sale several young Bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N. B.

Natural Gas Lighting on I. C. R. Cars.

Something novel is being introduced by the Intercolonial Railway in connection with the lighting of their cars. Recent experiments with the natural gas from the Albert County wells which is now being extensively used in Moncton, demonstrated that not only could the gas be used successfully on the cars, but that the capacity for compression was much greater and their cost per car much less. It was proved also that the natural gas mixed satisfactorily with the Pintch gas, thus overcoming any difficulty of renewing the supply where the natural gas is not available. The Intercolonial is probably the first railway in America to use natural gas for car lighting.

When you have a bilious attack give Chamberlain's Tablets a trial. They are excellent. For sale by all dealers.

If you are troubled with chronic constipation, the mild and gentle effect of Chamberlainjs Tablets makes them especially suited to your case. For sale by all dealers.

Diversified Farming on a N. S. Fruit Belt Farm.

(Continued from page 161.)

As a valuable means of disposing of the by-products of the dairy and the farm, the O'Briens keep a few pure bred Yorkshires and plan to always have a bunch fattening for market.

In the poultry line, White Wyandotte aad Buff Orpington hens give a full egg basket, enough for home use and a lot to spare for the market. Tolouse geese and Bronze turkeys are also kept on the O'Brien farm. A fine pair of Tolouse geese have recently been purchased at a big figure from one of the foremost Ontario breeders. The poultry pick up a lot of grain and seeds around the farm that would otherwise go to waste.

The O'Briens practice the following rotation of crops:—First year grain to rot the sods and prepare the land for easy tillage during the second year when roots are grown. During the third year the ground is devoted to another crop of oats, barley or mixed grains seeded with timothy and clover. The fourth crop is hay and the fifth year another crop of hay is cut or the land may be devoted to pasturing purposes.

They plan to do as much fall plowing as possible so that the seeding operations may start at the very earliest date possible in the spring. Large quantities of barnyard manure are broadcasted at the rate of 25 loads per acre on the fields intended for roots and worked in by cross plowing and thorough discing. They use a Scotch turnip seeder that sows commercial fertilizers, to give the roots a good start, and also sows the seeds at one operation.

The turnips are thinned to fifteen inches apart as soon as they show pretty well in the row. The cultivator is kept busy throughout the growing season to conserve the moisture and to keep the soil free from weeds.

The O'Briens also grow several hundred barrels of potatoes for the local market. In some seasons they ship carloads to distant markets.

The O'Briens ideas of carrying on a system of mixed farming is sound. They have tried and succeeded. Theirs is no blue ruin story in years when any particular crop fails for they have the other branches of their operations to help them along. Their motto is "We grow as much of everything as we can."

Mr. O'Brien is well versed in the various public questions of the day. He was one of the founders of the Nova Scotia Farmers' Association and seldom fails to be present at the annual deliberations. He brings a clear mind and ready judgment to bear on the various perplexing questions with which the Farmers' Parliament is confronted. He has given his boys and girls, now grown to manhood and womanhood, the benefits of a good education, and in their every day life each and every one of them are like their parents, the very essence of good industrious citizens. It is a pleasure to meet Mr. O'Brien and his sons in their own home, or anywhere for that matter. They all seem to enjoy each other's confidences and make up one ideal, happy family.

Although some of the boys have settled on farms of their own, they all work together as suits best and in this way they are a powerful example of the old adage "In unity there is strength."

Prize Winners at Maritime Winter Fair

BEEF CATTLE.

SHORTHORNS

Steer 2 years old and under 3 years—1, Harold Etter; 2, Chas. W. Forrest; 3, C. H. Angus; 4, Geo. M. Holmes; 5, Fred T. Holmes.

Steer 18 months and under 2 years—1, Harold Etter; 2, Geo. M. Holmes.

Steer 1 year and under 18 months—1, Chas. W. Forrest; 2, Edwin Forrest; 3, Geo. M. Holmes.

Steer 6 months and under 1 year—1, Edwin Forrest; 2, Harold Etter; 3, C. H. Angus; 4, Geo. M. Holmes.

Steer under 6 months—1, Chas. W. Forrest; 2 and 3, Geo. M. Holmes.

Cow or heifer 3 years or over—1 and 3, N. Curry; 2, R. A. Snowball; 4, Harold Etter; 5, C. H. Angus.

Heifer 2 years and under 3 years—1 and 2, R. A. Snowball; 3, Chas. W. Forrest; 4, Hazen Etter.

Heifer 1 year and unner 18 months

Roofing

Free Samples
Free Catalogues
Free Plans

Valuable information about roofing, of the kind suitable for the building you have in mind, will be sent to you free of charge.

Just write on a post card the word "Roofing" give your name and address, and full particulars will be sent by return mail.

The Galt Art Metal Co. Limited
265 Stone Road, Galt, Ontario.

FREE

5 HANDSOME PRESENTS

These 5 presents all packed in a lovely box and given without one cent of cost. Easy to get.

Ladies, you never had such a chance before and you never will. Our determination to advertise and further the sales of a grand remedy makes this great opportunity possible. Every lady who loves beautiful jewelry should take advantage of this opportunity.

READ WHAT THESE ELEGANT PRESENTS CONSIST OF

1. A large, fine, gold-burnished pattern jewel case of elegant design, lined with blue silk. 2. A richly designed platinume Lavalliere with long chain and set with sparkling diamond brilliants and pearl. 3. A handsome solid gold pattern ring set with beautiful gems and equal in appearance to a $100.00 ring. 4. A large, beautiful rose gold brooch set with Tourmaline and 3 diamond brilliants. 5. A handsome Scarf Pin, shield design, set with rich doublet.

Jewelry stores get immense price for jewelry not as fine as jewelry contained in this set.

READ HOW TO OBTAIN THESE HANDSOME PRESENTS ABSOLUTELY FREE

We are the makers of the famous **NEW LIFE VEGETABLE PILLS**, the grand tonic and blood maker, which have proved a boon to thousands of ailing persons, and their remarkable tonic and nerve and blood-making properties make them in great demand all over Canada and United States and this great demand has been supplied solely by our agents, who are winning thousands of dollars' worth of our elegant presents.

Instead of placing our grand remedy in the hands of jobbers and druggists, we prefer to place them in the hands of worthy persons who are constantly coming in contact with the sick and ailing, to whom **NEW LIFE VEGETABLE PILLS** prove a blessing. Therefore, to every lady who will send us her name and address and agree to sell only 10 boxes of the famous New Life Vegetable Pills at 25 cts. a box we will give, absolutely free, the lovely box of 5 handsome presents.

All we ask of you is to send us your name and address and we will send you only 10 boxes and trust you with them until sold. As soon as you have sold them, return us only $2.50 and we will immediately ship you the 5 handsome presents. We arrange to pay the carriage charges.

Act at once. Don't delay. There are thousands of sick and ailing who need such grand medicine as **NEW LIFE VEGETABLE PILLS** and by supplying this great demand you can have the 5 handsomest presents ever offered. Send your name and address to-day to:

THE NEW LIFE REMEDY CO. Dept. J. 1352 **TORONTO, ONT.**

Cobequid Farm Holsteins

We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown. N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.
W. C. McLeod & Sons, Loch Lomond West. N.S.

Shropshires

C A. Archibald, Truro, N. S.

POULTRY.

Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.
W. J. M. MacLeod, Loch Lomond, West N. S., Houdans, and Silver Grey Dorkings

Springbrook Ayrshires !

Champions in the show ring dairy tests, and winners of the Silver Tea Service over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

ONE CENT A WORD

FOR SALE—Two yearling pure bred Guernsey bulls from good size stock. T. D. BLAIKIE, Great Village, N. S.

GUERNSEYS FOR SALE—1 yearling bull, and 4 between the ages of 4 and 10 months, all very fine animals. WILLIAM COX & SON, Canard, N. S.

WANTED—An active man to do farm work, including getting of fire wood. Must be able to manage horses and handle farm machinery. An agreeable man who would appreciate a good home. Apply stating wages and experience. E. C. ATKINSON, Southampton, N. S.

THE PRUDENTIAL CAN SELL YOUR REAL ESTATE. Our International Reputation Guarantees Results. Quick Sale, Best Price, Least Expense. Our 60 Day Sales Have Made Us World Famous. PRUDENTIAL REALTY SECURITY COMPANY, Publicity — 3212 1-2 Washington Boulevard—Department, Chicago.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shediac, N. B., during the week ending April 20th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, Sussex, N. B.

BANKRUPT BELTING BARGAINS—Positively 85 p.c. to 70 p.c. saved, New and Second hand all kinds and sizes for every purpose. Also enormous stocks of Iron Piping, Pulleys, Shafting, Hangers, new and relaying Rails, Saws, Chains and Cables, Roofing, etc. Write us for prices and tell us what you need. Catalog on request. The IMPERIAL WASTE & METAL CO., 3 Queen Street, Montreal.

WANTED—Young Man or Woman to learn mail order business Send ten cents for postage —we will send goods to sell for $2.50. Ten cents is the total cost to you until you sell the goods. We teach you the business free; supply circulars free; write your advertising free and pay for it; and supply you with goods without deposit. You pay for the goods after they are sold. Over 100 per cent profit. HOMEWORKERS ASSOCIATION, Box 772, Halifax.

If You Have Live Stock For Sale Advertise it in the Maritime Farmer.

—1, R. A. Snowball; 2, Chas. W. Forrest.

Heifer 1 year and under 18 months —1, R. A. Snowball; 2 and 3, J. McCully Pipes; 4, Walter Patterson.

Heifer 6 months and under 1 year—1, Harold Etter; 2, R. A. Snowball; 3, Chas. W. Forrest; 4, Edward Anderson.

Heifer under 6 montns—1 and 3, R. A. Snowball; 2, Harold Etter; 4, J. McCully Pipes.

Best female any age—R. A. Snowball.

Best steer any age—Harold Etter.

Best animal any age—R. A. Snowball.

HEREFORDS, ABERDEEN—ANGUS, GALLOWS AND DEVONS.

Steer 2 years old and under 3 years —1, W. W. Black.

Steer 18 months and under 2 years —1 and 2, W. W. Black.

Steer 1 year and under 18 months—1, W. W. Black.

Steer 6 months and under 1 year—1, W. W. Black.

Cow or heifer 3 years or over—1, 3 and 4, W. W. Black; 2, A. Bradshaw. shaw.

Heifer 2 years and under 3 years—1, 3 and 4, W. W. Black; 2, A. Bradshaw.

Heifer 18 months and under 2 years —1, A. O. H. Gill; 2 and 3, W. W. Black.

Heifer 1 year and under 18 months —1 and 2, W. W. Black.

Heifer 6 months and under 1 year—1, A. O. H. Gill; 2 and 3, W. W. Black.

Heifer under 6 months—1 and 2, W. W. Black.

Best female, any age—A. O. H. Gill.

Best steer any age—W. W. Black.

Best animal any age—A. O. H. Gill.

GRADES OF ANY BREED.

Steer 2 yrs. old and under 3yrs—1 Chas. W. Forrest.

Steer 3 years old and upwards—1 and 3, W. W. Black; 2, Fowler Bros.; 4 and 5, Hazen Etter.

Steer 18 months and under 2 years —1 and 3, W. W. Black; 2, Hazen Etter; 4, Geo. Holmes; 5, Edwin Forrest; 6, Harold Etter.

Steer 1 year and under 18 months—1, W. W. Black; 2, Harold Etter; 3 and 5, Hazen Etter; 4, Edwin Forrest; 6, H. H. Atkinson.

Steer 6 months and under 1 year—1, Harold Etter; 2, Edward Anderson; 3, Chas. W. Forrest; 4, C. W. Pugsley; 5, W. W. Black; 6, Hazen Etter.

Steer under 6 months—1, Harold Etter; 2, W. W. Black; 3, Laurie M. Anderson; 4, Courtney Lusby.

Cow 3 years old and upwards—1, Edwin Forrest; 2 and 4, W. W. Black; 3, Edwin Anderson; 5, Harold Etter.

Heifer 2 years and under 3 years—1, Edwin Forrest; 2 and 4, W. W. Black; 3, Chas. W. Forrest; 5, Laurie M. Anderson.

Heifer 18 months and under 2 years —1, Edwin Forrest; 2, W. W. Black; 3, Edward Anderson; 4 and 6, Walter Patterson; 5, Laurie M. Anderson.

Heifer 1 year and under 18 months —1, Edwin Forrest; 2, Thos. J. Etter; 3 and 5, Laurie M. Anderson; 4, Hazen Etter.

Heifer 6 months and under 1 year—1, Chas. W. Forrest; 2, Thos. J. Etter; 3, C. W. Pugsley; 4, Edwin Forrest; 5 and 6, W. W. Black; 7, Edward Anderson.

Heifer under 6 months—1, Thos. J. Etter; 2 and 4, Edwin Forrest; 3, Edward Anderson; 5, Laurie M. Anderson; 6, W. W. Black.

DRESSED BEEF CARCASSES.

Dressed Beef Carcasses from animals shown in foregoing classes—1, Fowler Bros.; 2, Chas. W. Forrest; 3, Harold Etter; 4, W. W. Black; 5, Edwin Forrest.

DAIRY CATTLE.

SHORTHORNS

Cow 4 years and upwards—1, Geo. M. Holmes; 2, Fred T. Holmes.

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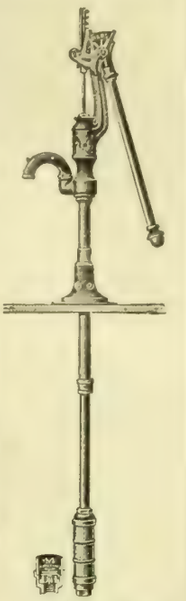

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RED TIP CALKS
The Modern Method of Winter Sharpening

American Plain and Barbed Wire Is The Best

We are in a position to offer you this at prices that will appeal to you. Also Woven Wire Fencing.

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HOLSTEINS of QUALITY

We still have a few more fresh cows to part with, also some fine young heifers ready to breed, bulls fit for service, and a few calves either sex.

THE HOMESTEAD FARM HOLSTEINS

have always given a good account of themselves in the show-ring and at the pail. Our past sales have given universal satisfaction. Many of our old customers are back again this year getting new herd headers. Give us a trial order while our prices are low.

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SHORTHORN BULLS FOR SALE. Walter Eaton, Upper Canard, N. S.

FOR SALE—Pure bred imported Clydesdale mare, seven year old. MORRIS SCOVIL, Gagetown, N. B.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Four Ayrshire bulls, five to eleven months old from good producing stock. JOHN F. FROST, Hampton, N. B.

INVESTORS, send for my list of active stocks sold on the instalment plan. A. R. AARESTRUP, Broker, 206 Creighton St., Halifax, N. S.

WANTED—Small or Large Timber Tracts. Give all particulars when writing to A. R. AARESTRUP, 206 Creighton St., Halifax, N. S.

BROTHER—Accidentally discovered root will cure both tobacco habit and indigestion. Gladly send particulars. S. T. STOKES, Mohawk, Florida.

GUERNSEY BULL FOR SALE, 16 months old Gold Coin 7th, after first prize good butter cow. Price right, good size. HUGH FRASER, Elmsdale, Hants Co., N. S.

FOR SALE—Four registered Yorkshire sows in good breeding condition. Also one boar four months old. BOYD A. WETMORE, Bloomfield Station, N. B.

BRONZE TURKEYS AND EMBDEN GEESE For Sale—Look up my winnings at the Maritime Winter Fair and write for prices. J. TITUS BARNES, Sussex, N. B.

FOR SALE—Registered Holsteins. 1 bull four years old; 2 bull calves dropped in April, 1 bull calf dropped in October, all good stock. W. GARFIELD CAMPBELL, Salisbury, N. B.

FOR SALE—Oxford Dawn ram lambs and ewes of all ages. choice stock, prices reasonable. R. G. McLEOD & SONS, Lansdowne Station, Pictou Co., N. S.

FOR SALE—Six pure bred Yorkshire sows, one and one-half years. Also one boar three months. BOYD A. WETMORE, Bloomfield Station, N. B.

10,000 COON AND SKUNK WANTED—Do not sell until you have my offer. Nine trapping secrets for stamps. E. W. DOUGLAS, Stanley, N. B.

AYRSHIRE BULLS FOR SALE—1 bull, 21 months old; 1 bull dropped Nov. 7th, 1912. The bulls are from good milking stock. Apply to LAMONT KENT, Stewiacke, Col. Co., N. S.

AGENTS WANTED—To handle stocks and bonds (American) on liberal terms. Apply to A. R. AARESTRUP, Broker, 206 Creighton St., Halifax, N. S.

IF YOU HAVE REAL ESTATE OR STOCK and Bonds of any kind to sell, write me. As this is my business. A. R, AARESTRUP, Real Estats Broker, 206 Creighton St., Halifax, N. S.

JERSEY BULL FOR SALE. Four years old, sire Ferror (Imp.) No. 391, dam Brampton Regan, No. 439. Apply to J. J. CLARK, Sect. Tatamagouche, N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

25 FANCY CHRISTMAS AND NEW YEAR'S CARDS, only 25c. Also 100 free. High Grade, Very handsome. Beautifully colored and gold embossed. FARMER EMPORIUM, Beebe, Que.

WANTED—A Newfoundland dog (pup). Write stating price to G. E. STEEVES, Hillsboro, Albert Co., N. B.

GUERNSEY BULLS FOR SALE—Ages twelve, four, and two months. All from record of performance cows. D. G. McKAY & SON, Scotsburn.

MUSICAL NOVELTY, POST CARD SONGS—Every song copyrighted. Send one to your friends. Six assorted for Twenty-five cents, postpaid. THE SAVOY, Oshawa, Ontario.

WANTED—Ladies to do plain and light sewing at home, whole or spare time, good pay; work sent any distance, charges prepaid, send stamp for full particulars. National Manufacturing Company, Montreal.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co., Queen Street, Montreal.

Cow 3 years old—1, Geo. M. Holmes; 2, Fred T. Holmes.

Heifer 2 years old—2, George M. Holmes; 3, Fred T. Holmes.

Heifer 1 year old—1, Geo. M. Holmes; 2, Fred T. Holmes.

AYRSHIRES

Cow 4 years old and upwards—1 and 4, A. McRae & Sons; 2, Charles Symes; 3 and 5, McIntyre Bros.; 6, John Retson.

Cow 3 years old—1, Fred S. Black; 2, A. McRae & Sons; 3, 4 and 5, McIntyre Bros.

Heifer 2 years old—1, Fred S. Black; 2, A. McRae & Sons; 3 and 4, McIntyre Bros.

Heifer 1 year old—1, Fred S. Black; 2, McIntyre Bros.

HOLSTEINS

Cow 4 years old and upwards—1, 2 and 3, Samuel Dickie & Son; 4 and 6, Logan Bros.; 5, R. L. Hicks.

Cow 3 years old—1, Samuel Dickie & Son; 2, 3 and 5, Logan Bros.; 4, R. L. Hicks.

Heifer 2 years old—1, 2, 4 and 5, Logan Bros.; 3, Samuel Dickie & Son.

Heifer 1 year old—1 and 5, Logan Bros.; 2, R. L. Hicks; 3, Samuel Dickie & Son; 4, W. S. Harding.

GUERNSEYS.

Cow 4 years old and upwards—1, Hugh A. Dickson; 2 and 3, Roper Bros.

Cow 3 years old—1, Hugh A. Dickson; 2, Roper Bros.

Heifer 2 years old—1, Roper Bros.; 2 and 3, Hugh A. Dickson.

Heifer 1 year old—1, Hugh A. Dickson.

JERSEYS

Cow 4 years old and upwards—1, 4 and 5, H. S. Pipes & Sons; 2 and 3, James E. Baker & Son.

Cow 3 years old—1 and 3, H. S. Pipes & Sons; 2, W. E. Harding.

Heifer 2 years old—1, 2 and 3, H. S. Pipes & Sons.

Heifer 1 year old—1, H. S. Pipes & Sons.

GRADES.

Cow 4 years old—1, 5, 7 and 8, Fowler Bros.; 2, Hansford Croffman; 3, T. W. Keillor; 4, W. N. Boomer; 6, A. McRae & Sons.

Cow 3 years old—1, T. W. Keillor; 2, Roper Bros.; 3, W. W. Black; 4, Fowler Bros.

Heifer 2 years old—1, T. W. Keillor; 2 and 3, Fowler Bros.; 4, W. N. Boomer; 5, A. McRae & Sons.

Heifer 1 year old—1, T. W. Keillor; 2 and 4, Fowler Bros.; 3, Edward Anderson.

SHEEP

LEICESTERS

Ewe 2 years old or over—1, 2 and 3, Albert Boswall Sr.

Ewe 1 year and under 2—1, 2, 3 and 4, Albert Boswall, Sr.

Ewe Lamb—1, 2, 3, 4 and 5, Albert Boswall, Sr.

Yearling Wether—1, 2 and 3, S. C. Lane.

Wether Lamb—1, Geo. L. Boswall; 2 and 4, S. C. Lane; 3, Albert Boswall.

LINCOLNS

Ewe 2 years old and over—1, C. W. Pugsley; 2 and 3, Albert Boswall; 4, Charles Symes.

Ewe 1 year and under 2—1, Albert Boswall; 2, C. W. Pugsley; 3 and 4, Charles Symes.

Ewe Lamb—1 and 2, Albert Boswall; 3, C. W. Pugsley.

Yearling Wether—1 and 2, C. W. Pugsley; 3, Albert Boswall.

Wether Lamb—1, C. W. Pugsley; 2, Albert Boswall.

COTSWOLDS.

Ewe 2 years old or over—1 and 2, John Tweedie.

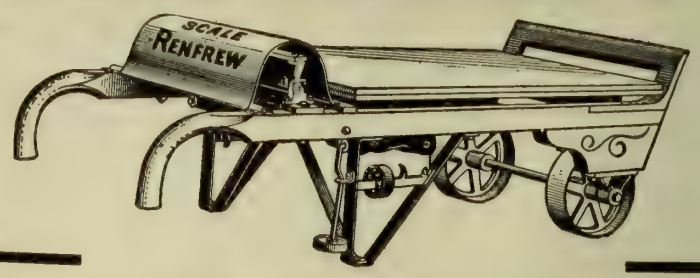
Ewe 1 year old and under 2—1 and 2, John Tweedie.

Ewe Lamb—1, 2 and 3, John Tweedie.

Yearling Wether—1, Albert Boswall.

(Continued on page 180)

"WHEEL THE SCALE TO WHAT YOU WANT TO WEIGH"



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Gives the farmer all his profits on everything he sells by weight.

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Weighs everything from one pound to 2000 lbs,--and weighs it right. To verify these statements:

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IF you want to give any member of your family a Good Practical as well as serviceable present this Christmas make it a pair of

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They will be more acceptable than any other article you could get.

Insist upon having "Taylor's." The soles have our name on them.

The Robert Taylor Co., Limited
HALIFAX, N. S.

Prize Winners at the Newfoundland Poultry Show.

(Con)inued f?om page 153)

White Wyandotte hen—1, M. McLeod; 2, C. H. Hutchings, St. John's; 3, Heber Parsons.

White Wyandotte cockerel—1 and 2, M. McLeod; 3, Thos. Harris Jr., Carpasian Rd., St. John's.

White Wyandotte pullet—1, 2 and 3, M. McLeod.

White Leghorn cock—1, Howard Parsons, 156 Pleasant St., City; 2, Fred Perry, 258 Hamilton Ave., City.

White Leghorn hen—1 and 3, Fred Perry ; 2, Howard Parsons.

White Leghorn cockerel—1 and 2, Howard Parsons.

White Leghorn pullet—1, 2 and 3, Howard Parsons.

Brown Leghorn cock—2, Mrs. Jas. D. Munn, Harbor Grace.

Brown Leghorn hen—1 and 2, Frank Bennett.

Brown Leghorn cockerel—1, Mrs. D. Munn.

Brown Leghorn pullet—1, Mrs. Jas. D. Munn.

Buff Leghorn cockerel—1 and 2, S. Emberly, 12 Wood St., City.

Buff Leghorn pullet—1 and 2, S. Emberly.

Ancona cockerel—1, Rev. J. J. Coady; 2, C. H. Hutchings, 125 Le Marchant Road, City.

Ancona pullet—1 and 2, Rev. J. J. Coady; 3, C. H. Hutchings.

Rhode Island Red cock—1, O. Rusch, St. John's; 2, Mrs. Conroy, Alexander Road, St. John's; 3, Percie Johnson.

Rhode Island Red hen—1 and 2, O. Rush; 3, Percie Johnson.

Rhode Island Red cockerel—1 and 2, Percie Johnson; 3, W. J. Morehen, Le Marchant Road, St. John's.

Rhode Island Red pullet—1,Percie Johnson; 2, Mrs. F. E. Rendell, St. John's 3,W. J. Marehen.

S. C. Black Minorca cock—1, John Duff, Carbonier; 2 and 3, W. R. Butler.

Black Minorca hen—1 and 3, John Duff; 2, W. R. Butler.

Black Minorca cockerel—1, Carl Parsons, St. John's; 2, W. R. Butler.

Black Minorca pullet—1 and 2, W. R. Butler.

R. C. Black Minorca cock—1, W. Campbell, Waterford Bridge Road.

R. C. Black Minorca hen—1, W. Campbell.

R. C. Black Minorca pullet—1 and 2, W. Campbell.

Guinea hen—1, Hon. Geo. Knowling.

A. O. V. cock—1, W. R. Butler, 5 Leslie St., St. John's.

A. O. V. hen—1, Frank Bennett.

A. O. V. cockerel—1, Mrs. N. Fisher, Humbermouth.

A. O. N. pullet—1, Mrs. N. Fisher.

Bantam cock—1, Hector McNeil; 2, G. W. Gushue, St. John's.

Bantam hen—1, John Duff, Carbonier.

Tolouse Gander—1, John Daff.

Tolouse Goose—1, John Duff.

Bronze Turkey cock—1, John King, Tor Bay; 2, Heber Parsons.

Bronze Turkey hen—1, John King; 7, W. R. Butler.

Bronze Turkey cockerel—1, Mrs. M. Walsh, Mt. Scio; 2, W. R. Butler.

Bronze Turkey pullet—1, Mrs. M. Walsh.

Black Turkey cock—1, Mrs. M. Walsh.

Black Turkey pullet—1, Mrs. M. Walsh.

Pekin Drake—1, P. H. Hudson; 2, Heber Parsons; 3, E. A. Payne, St. John's.

Pekin Duck—1 and 2, P. H. Hudson; 3, E. A. Payne.

Pekin Drake of 1912—1, W. R. Butler; 2, Robt. Cowan, Topsail Road, St. John's.

Pekin Duck of 1912—1 and 2, Robt. Cowan.

Buff Orpington Drake—1, J. E. Dempster; 2, A. McKeen, St. John's.

Buff Orpington Duck—1, J. E. Demp-ster; 2, A. McKeen.

Indian Runner Drake of 1912—1 and 2, Mrs. Jas. D. Munn, Harbor Grace.

Indian Runner Duck of 1912—1, Mrs. Jas. D. Munn.

Muscovey Drake of 1912—1, E. A. Payne, St. John's.

Muscovey Duck of 1912—1 and 2, E. A. Payne.

Rouen Drake—1,Mrs. M. Walsh.

Rouen Duck—1, Mrs. M. Walsh.

Rouen Drake of 1912—1, O. Rusch.

Rouen Duck of 1912—1 and 2, O. Rusch.

SILVER CUPS.

Given by Hon. W. C. Job, won by W. Barker, for best display of locally bred Barred Plymouth Rocks.

Given by Hon. Geo. Knowling, won by Percie Johnson, for best display of Rhode Island Reds locally bred.

Given by Hon. John Harris, won by W. Reid, for first Cock, Hen, Cockerel and Pullet, White Plymouth Rocks.

Given by W. D. Reid, Esq., won by Rev. J. J. Coady for winner of largest number of Blue Ribbons for locally bred birds.

Given by Percie Johnson, Esq., won by M. McLeod, for first Cock, Hen, Cockerel and Pullet, locally bred White Wyandottes.

SPECIAL PRIZES.

Given by Gerald Harvey, Esq., 1 box of biscuits; won by John King for merit in Barred Rock class.

Given by Gerald Harvey, Esq., 1 box of biscuits; won by Rev. J. J. Coady for general merit.

Given by Gerald Harvey, Esq., 1 box of biscuits; won by Frank Bennett.

Given by J. S. Martin, Esq., Port Dover, Ont., 1 $5.00 setting of eggs; won by M. McLeod for best pair of White Wyandottes.

Given by P. F. Collins, 1 suit of underwear; won by O. Rusch for general merit.

Given by Hearn & Co., 1 tub butter won by Mrs. M. Walsh, for Waterfowl.

Given by T. Edens, 1 5 lb. pkge. Bulldog Tea; won by O. Rusch, for best R. I. Red Cock.

Given by W. Clouston, 1 10 lb. box Boneless Fish; won by R. Cowan.

Given by Royal Stores, 1 sack feed; won by S. Emberly.

Given by F. Morris, 1 silk umbrella; won by W. Campbell.

Given by W. J. Clouston, 1 nickle kettle; won by Percie Johnson.

Given by M. N. Kent, 1 box sodas; won by E. A. Payn.

Given by Ayr & Sons, 1 Thermos Bottle; won by Mrs. N. Fisher, Humbermouth.

Given by W. Campbell, 1 Sack Middlings; won by Frank Parsons.

Given by Agricultural Board, 4 $5.00 Orders for Feed; won by W. R. Butler, J. E. Dempster, W. Reid, and Mrs. J. D. Munn.

Given by R. H. Trapnell, 1 Big Ben Clock; won by Mrs. F. Rendell.

Given by the Standard Mfg. Co., 1 case Fancy Soap; won by H. W. Blackall.

Given by J. M. Devine, 1 pair of Broadway Boots; won by Heber Parsons.

Given by S. H. Parsons & Sons, 1 Picture; won by John Duff.

Given by Harvey & Co., 1 sack Molassine Feed; won by G. W. Gushue.

Given by Park & Pollard Co., 1 sack Feed; won by Thos. Harris, Jr.

Given by A. E. Canning, 2 Bags Gritz; won by Rev. J, J. Coady.

Given by S. O. Steele, 1 Fruit Set; won by Hector McNeil.

Given by the Standard Mfg. Co., 1 half-gross package Soap; won by H. W. F. Blackall.

Given by J. F. Martin, 1 Silver Teapot; won by Stanley White.

Given by Bell Island Miner, W. M. Dooley, 5 annual Subs.; won by J. E. Dempster, W. Barker, S. Emberly, Mrs. Conroy and Hector McNeil.

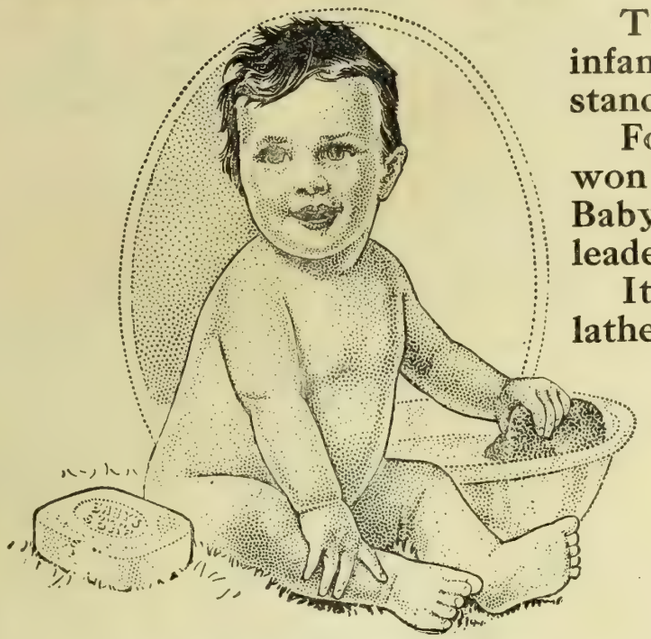
Given by R. G. Ash & Co., 1 case St. Charles Cream; won by Howard Parsons.

Given by Imperial Tobacco Co., 608 Cigarettes; won by P. Johnson.

Given by Imperial Tobacco Co. 400 Cigarettes; won by W. Barker.

Given by Park & Pollard Co., 5 Poultry Books; won by Thos. Harris, Jr., Mrs. F. E. Rendell, W. J. Morehen, G. Knowling, John King.

BABY'S OWN SOAP



To help the tender skin of an infant is the Baby's Own Soap standard.

For four generations, it has won unstinted praise and today Baby's Own is the recognized leader for nursery and toilet.

Its pure, creamy, fragrant lather softens and heals, and its daily use is a renewed delight.

It's Best for Baby and Best for You.

Sold almost everywhere—but insist on Baby's Own.

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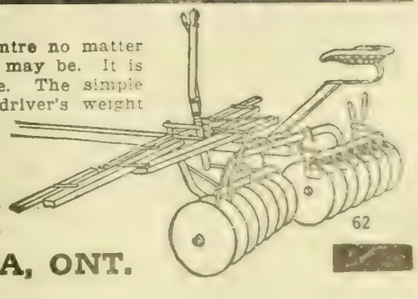
Compare the "BISSELL" with other disks

Thousands of Canadian Farmers have tested the "Bissell" Disk Harrow in the same field with other makes and found that the "Bissell" HAS THE GREATEST CAPACITY.

The plates on the "Bissell" Harrow are the correct shape. They cut, turn and pulverize the soil where others only scrape the ground and set it on edge. The "Bissell" does clean work where others make a poor job of it.

The "Bissell" Scrapers meet the plates chisel fashion and keep the plates clean. Movable Clod Irons—an exclusive feature — keep the space between the plates clear.

The "Bissell" stays RIGHT DOWN TO ITS WORK. It won't bind, buckle or hump in the centre no matter how stiff or hard the soil may be. It is built to stand hard usage. The simple method of balancing the driver's weight removes neck weight. It is the Harrow you should know more about.



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T. E. BISSELL CO., LTD., ELORA, ONT.

FELL AWAY TO A SHADOW.

All Her People Thought She Had

CONSUMPTION.

Mrs. Wm. Martin, Lower Ship Harbor East, N.S., writes:—"I am sending you a testimonial of my cure by Dr. Wood's Norway Pine Syrup. Last May I took a cold, and it settled on my lungs. I got so bad I could not rest at night. I had two doctors to treat me but got no relief.

"All of my people thought I had Consumption. I had fallen away to a shadow. I had given up all hopes of ever getting better again until my daughter went to a store one day and bought me a bottle of Dr. Wood's Norway Pine Syrup. After taking half of it I felt better, so I got two more, and thanks to them I am well to-day, and able to do my house work. I cannot say too much in its praise, and I shall always keep it in the house."

Dr. Wood's Norway Pine Syrup contains all the lung healing virtues of the famous Norway Pine tree which makes it the very best preparation for Coughs, Colds and all Throat and Lung Troubles.

See that you get "Dr. Wood's" when you ask for it. There are many imitations on the market.

Price, 25 and 50 cents.

See that the name, The T. Milburn Co., Limited, is on the yellow wrapper.

FOR SALE

Six pure bred Jersey bulls, from one month to two years old, sired by Pogis 40th, of Hood Farm and Fohallk St. John O'Dreamwold.

JOSSELYN & YOUNG.

Lawndale Stock Farm

OFFERS FOR SALE

The following Pure bred Shorthorns

A few yearling heifers and bull calves bred in the purple. Also a few aged cows in calf to our herd bull Pontiac 82710. Prices reasonable. Call or write.

Lawndale Stock Farm, I. M. Lovett, M. D., Prop.

YARMOUTH, N. S.

RASPBERRIES

We can supply plants of the best hardy varieties Red Raspberries for fall setting, including "Herbert" the great yielder which at Ezperimental Farm, Ottawa, produced at the rate of 220 bushels per acre, also King (the best early) Hiram, Cuthbert, Eaton, etc. Guaranteed to live or replaced free.

ORCHARD HILL FARM, Brown's Flats, N. B.

BARGAINS!

To make room for our young stock we are offering for sale B. P. Rock Hens, (yearlings) which will be most suitable for breeding next season.

CRAIG BROS., Amherst, N. S.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
Canard, N. S.

Prize Winners at the Maritime Winter Fair.

(Continued from page 178.)

CHEVIOTS

Ewe 2 years old or over——1, 2, 3 and 4, Charles Symes.

Ewe 1 year old and under 2—1, 2, 3 and 4, Charles Symes.

Ewe Lamb—1, 2, 3 and 4, Charles Symes.

Yearling Wether—1, 2, 3 and 4, Charles Symes.

Wether Lamb—1, 2 and 3, Charles Symes.

HORNED DORSETS.

Ewe 2 years old or over—1, 2, 3 and 4, Geo. L. Boswall.

Ewe 1 year old and under 2—1 and 2, Geo. L. Boswall.

Ewe Lamb—1, 2 and 3, Geo. L. Boswall.

Yearling Wether—1 and 2, Geo. L. Boswall.

Wether Lamb—1 and 2, Geo. L. Boswall; 3, John Tweedie.

SOUTHDOWNS.

Ewe 2 years old or over—1 and 4, Jas. E. Baker & Sons; 2 and 3, Cephas Nunn.

Ewe 1 year old and under 2—1, Cephas Nunn; 2, Jas. E. Baker & Sons; 3, Oliver C. Saunders.

Ewe Lamb—1, Jas. E. Baker & Sons; 2, Cephas Nunn; 3 and 4, Oliver C. Saunders.

Yearling Wether—1, Cephas Nunn; 2, Oliver C. Saunders; 3, Jas. E. Baker & Sons.

Wether Lamb—1, Cephas Nunn; 2 and 4, Oliver C. Saunders; 3, Jas. E. Baker & Sons.

SHROPSHIRES.

Ewe 2 years old or over—1 and 3, Jas. I.Stewart; 2, Geo. L. Boswall; 4, Cephas Nunn.

Ewe 1 year old and under 2—1 and 2, Jas. I. Stewart; 3 and 4, Geo. L. Boswall.

Ewe Lamb—1, 2 and 4, Geo. L. Boswall; 3, Jas. I. Stewart.

Yearling Wether—1 and 2, Jas. I. Stewart; 3, Cephas Nunn; 4, Geo. L. Boswall.

Wether Lamb—1 and 2, Jas. I. Stewart; 3, Geo. L. Boswall.

OXFORDS.

Ewe 2 years old and over—1 and 3, Jas. E. Baker & Sons; 2 and 4, Burder Goodwin.

Ewe 1 year old and under 2—1 and 3, Jas. E. Baker & Sons; 2 and 4, Burder Goodwin.

Ewe Lamb—1 and 2, Burder Goodwin; 3 and 4, J. E. Baker & Sons.

Wether Lamb—1, Jas. E. Baker & Sons.

HAMPSHIRES.

Ewe 2 years old or over—1, 2 and 3, Cephas Nunn.

Ewe 1 year old and under 2—1 and 2, Cephas Nunn.

Ewe Lamb—1 and 2, Cephas Nunn.

Yearling Wether—Cephas Nunn.

Wether Lambs—Cephas Nunn.

SUFFOLKS.

Ewe 2 years old and over—1, 2, 3 and 4, Albert Boswall.

Ewe 1 year old and under 2—1, 2, 3 and 4, Albert Boswall.

Ewe Lamb—1, 2, 3, Albert Boswall.

Yearling Wether—1, Albert Boswall.

Wether Lamb—1, Albert Boswall.

GRADES OR CROSSES.

Ewe 2 years old and over—1 and 5, Jas. I. Stewart; 2, Cephas Nunn; 3, Jas. E. Baker & Sons; 4, S. C. Lane; 6, Geo. L. Boswall.

Ewe 1 year old and under 2—1 and 4, Oliver C. Saunders; 2, Jas. I. Stewart; 3, Jas. E. Baker & Sons; 5, Geo. L. Boswall; 6, S. C. Lane.

Ewe Lamb—1 and 4, Jas. I. Stewart; 2, Oliver C. Saunders; 3, Albert Boswall; 5, Geo. L. Boswall.

Yearling Wether—1, Jas. I. Stewart; 2 and 3, S. C. Lane; 4, Albert Boswall; 5, Oliver C. Saunders.

Wether Lamb—1 and 2, Oliver C. Saunders; 3, Jas. I. Stewart; 4, Albert Boswall; 5, S. C. Lane.

WILL GIVE $500 TO SICK READERS OF MARITIME FARMER

Famous Scientist Who Originated the Now Wonderful "Home Treatment" Offers $1.00 Package Free to Sick and Ailing.

In order that every reader of Maritime Farmer who may not have heard of this wonderful "Home Treatment" may have an opportunity to test this celebrated medicine, the now famous scientist, Dr. James W. Kidd, offers to give absolutely free a full size $1.00 package to five hundred readers of this paper, to prove the wonderful claims which have been made for it. In making this offer the scientist said: "I know that there are many people who have been suffering for years with some chronic disease and many of them have spent large sums of money seeking a cure. I know that these people hesitate about investing money in medicine because they have despaired of ever getting well. Thousands have told me that story and many thousands of the same people have told me afterwards that my treatment had cured them after doctors and everything else had failed. I want to prove to a limited number—no matter what the disease, no matter how long they may have suffered no matter how blue and discouraged—that my treatment really and actually does accomplish the wonderful results that have been reported."

People who suffer from Rheumatism, Kidney Trouble, Stomach Trouble, Liver or Bowel Disorders, Catarrh, Bronchitis, Asthma, Chronic Coughs, Weak Lungs, Lumbago, Piles, Urinary Disorders, Female Weaknesses of any kind, the weak, worn out, broken-down and despondent will be delighted at the effect of a few doses. This wonderful treatment creates a fine appetite and helps the digestive organs to carry on their functions as they should. It strengthens the kidneys, too, and drives rheumatism poisons from the blood as if by magic. That is why people who try it become so enthusiastic.

Any reader of Maritime Farmer who will try this extraordinary medicine that has created so much excitement by its cures can obtain absolutely free a full $1.00 treatment by simply filling in the coupon below or writing a letter describing their case in their own words, if they prefer, and mailing it today to James W. Kidd, Toronto, Canada. No money need be sent and no charge of any kind will be made.

As this offer is limited, you should write at once, in order to be sure to receive your free treatment.

Coupon CB-260 For Free Dollar Treatment

Dr. Jas. W. Kidd, Toronto, Canada.

Please send me a Full $1.00 Course of Treatment for my case **free and postage paid**, just as you promise.

Name _____

Post Office _____ Province _____

Street and No. _____

Age _____ How long afflicted? _____

Make a cross (X) before disease you have Two crosses (XX) before the one from which you suffer most.

....Rheumatism	....Kidney Trouble	....Impure Blood	....Female Weakness
....Lumbago	....Bladder Trouble	....Anemia	....Womb Trouble
....Catarrh	....Weak Lungs	....Pimples	....Ovarian Trouble
....Constipation	....Chronic Cough	....Eczema	....Painful Periods
....Piles	....Malaria	....Neuralgia	....Hot Flashes
....Diarrhoea	....Asthma	....Headache	....Bearing Down Pains
....Torbid Liver	....Hay Fever	....Dizziness	....Leucorrhoea
....Indigestion	....Heart Trouble	....Nervousness	
....Stomach Trouble	....Poor Circulation	....Obesity	

Give any other symptoms on a separate sheet. Correspondence in all languages.

FREE

Handsome doll and carriage and set of real China dishes for dolly and you

Girls—we want to give you **absolutely free** this handsome doll and beautiful carriage with blued steel wheels, and set of the most beautiful china dishes you ever saw. Dolly is tall, graceful and most lifelike, with handsome gown, and has long, curly hair and handsome hat. You can move her hands and feet. She stands nearly half a yard tall. The lovely carriage we give you with the doll is made of finely interwoven wicker, mounted on steel wheels and axles. Just the beautiful carriage you want for the loveliest doll you can get. The set of dishes is big enough for you and your doll to hold a five o'clock tea, and it is genuine china, handsomely decorated. The teapot holds two large cups of tea; you will be delighted with it. Think, girls!—You can have these three elegant presents **absolutely free.**

Free

Send us your name and address at once and agree to sell only 25 bottles of our delicious, fast selling, oriental perfume at only 10 cents per bottle. They come in six delicious odors—rose, carnation, lily of the valley, heliotrope, violet and lilac. Our perfumes are so good and sweet, and so handsomely put up that they sell like lightning.

You will have no trouble at all to dispose of only 25 bottles. When sold, send us the money, only $2.50, and we will promptly ship you the doll, carriage and the beautiful tea set exactly as represented. **Don't delay, we are giving handsome extra presents for promptness. Address:**

THE ROSE PERFUME CO., Dept 421 , TORONTO, ONTARIO

Big Values for Xmas

Christmas is the time to encourage young musicians. A Musical family is a Happy family.

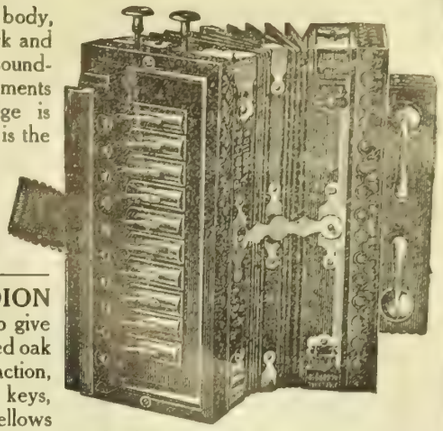
Look at the lovely **MANDOLIN** Santa is bringing to some fortunate boy or girl! A splendid instrument. 18 ribs finished in mahogany with strips of black wood between. Top of spruce inlaid with purfling round the edge and sound-hole; bound with white celluloid. The neck is hardwood — mahogany finished, rosewood finger-board, inlaid with pearl; position dots.

A rich, mellow-toned instrument. Our special price for this delightful Mandolin is only **$4.00.** Others up to $90.00.

At these prices our stock of "Specials" will not last long. No present is more appreciated than a good musical instrument. We will send in time for Christmas if ordered early.

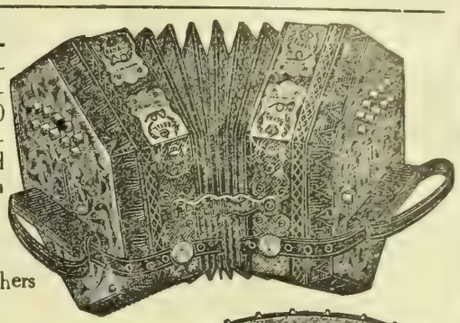
Gladden your Christmas with Music

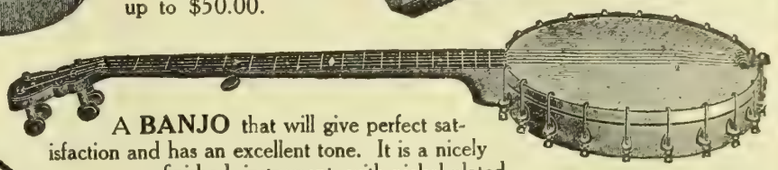
This **GUITAR** has a maple body, finished in a beautiful rich dark and light colored spruce top. The sound-hole is inlaid with fancy ornaments of jet and pearl. The bridge is finely scrolled and ebonized, as is the finger-board. It also has brass patent heads. Perfect in tone and workmanship. Our special price, **$3.75.** Others up to $85.00.



A very good **ACCORDION** of German make, guaranteed to give perfect satisfaction. Nicely finished oak case and mouldings, open action, nickel keys, 6 fold bellows, 10 keys, 2 stops, 2 sets of reeds. Bellows box neatly finished in dark wine color leatherette and gilt edged, nickel corner-protectors. Our special price, **$3.25** (including instruction book). Others up to $50.00.

An exceptional **CONCERTINA,** well constructed and with an excellent tone. It has 20 keys, imitation rosewood case, 8-fold fancy bellows, German silver sound-holes. Our special price (including instruction book), **$2.75.** Others up to $50.00.





A **BANJO** that will give perfect satisfaction and has an excellent tone. It is a nicely finished instrument with nickel-plated band on wood shell, six nickel-plated, good quality hexagon brackets, with hooks, finger-board with raised frets and position dots, and good quality calfskin head. A very desirable instrument for a beginner. Our special price, **$3.50.** Others up to $75.00.

Bargain upon Bargain is to be found in our book "MUSICAL TREASURES." It is a book of special interest to all lovers of music—containing a great amount of musical information. It is a handy shopping guide too. Send for your copy to-day. It is free.

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CANADA'S LARGEST MUSICAL MAIL ORDER HOUSE.

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DRESSED SHEEP CARCASSES.

Dressed carcasses to be shown from any sheep over one yegr old exhibited in foregoing classes—1, Jas. I. Stewart; 2, 5 and 6, Jas. E. Baker & Sons; 3, Cephas Nunn; 4, Oliver C. Saunders.

Dressed carcasses to be shown from any sheep under 1 year old exhibited in foregoing classes—1, 3, 4 and 5, Jas. I. Stewart; 8, Oliver C. Saunders; 6, Jas. E. Baker & Sons.

BEST WOOLED SHEEP.

Best Fleeced Sheep, Lincoln—1, Albert Boswall; 2, C. W. Pugsley.

Best Fleeced Sheep, Leicester—1, Albert Boswall, Sr.; 2, S. C. Lane.

Bset Fleeced Sheep, Cotswold—1, John Tweedie; 2, Albert Boswall.

Best Fleeced Sheep, Oxford—1, J. E. Baker & Sons; 2, Burder Goodwin.

Best Fleeced Sheep, Shropshires—1, Geo. L. Boswall; 2, Jas. I. Stewart.

Best Fleeced Sheep, Southdown—1, J. E. Baker & Sons; 2, O. C. Saunders.

Best Fleeced Sheep, Dorset—1 and 2, Geo. L. Boswall.

Best Fleeced Sheep, Hampshire—1, Cephas Nunn; 2, Albert Boswall.

Best Fleeced Sheep, Longwool—1, Albert Boswall, Sr.

Best Fleeced Sheep, Short or Medium wool—1, J. E. Baker & Sons.

SWINE.

Barrow 6 months and under 9—1, Logan Bros.; 2 and 3, J. W. Callbeck; 4, A. A. McBeath.

Barrow under 6 months—1, J. W. Callbeck; 2, Roper Bros.; 3, W. H. Pope Cooke; 4, Geo. M. Holmes.

Sow 9 months and under 15—1, Stewart Bros.; 2 and 3, J. W. Callbeck; 4, A. A. McBeath.

Sow 6 mths. and under 1 yr.—1 and 2 Stewart Bros.; 3 and 5, J. W. Callbeck; 4, A. A. McBeath.

Sow under 6 months—1 and 3, Stewart Bros.; 2, J. W. Callbeck; 4, Charles Etter; 5, A. A. McBeath.

TAMWORTHS.

Barrow 6 months and under 9—1 and 2, W. J. Gibson.

Barrow under 6 months—1, Wm. J. Gibson.

Sow 9 months and under 15—1, Roper Bros.

Sow 6 months and under 9—1 and 2, Wm. J. Gibson.

BERKSHIRES.

Barrow 6 months and under 9—1, Jas. I. Stewart; 2, Fowler Bros.; 3, Wm. J. Gibson; 4, Peter Brodie.

Barrow under 6 months—1, Fowler Bros.; 2 and 3, Wm. J. Gibson; 4, Jas. I. Stewart; 5, Peter Brodie.

Sow 9 months and under 15—1, and 4, Peter Brodie; 2, Fowler Bros.; 3, John Berrigan.

Sow 6 months and under 9—1 and 3, Jas. I Stewart; 2, Peter Brodie; 4, Stewart Bros.; 5, Fowler Bros.

Sow under 6 months—1 and 2, Fowler Bros.; 3 and 4, Peter Brodie; 5. Jas. I. Stewart.

ANY OTHER PURE BREED.

Barrow 6 months and under 9—1 2 and 3, A. H. Boswall; 4 and 5, W. H. Pope Cook.

Barrow under 6 months—1, Roper Bros.; 2 and 3, A. H. Boswall; 4 and 5, W. H. Pope Cook.

Sow 9 months and under 15—1, W. H. Pope Cook; 2, A. H. Boswall; 3, T. J. Etter.

Sow 6 months and under 9—1, A. H. Boswall; 2 and 3, W. H. Pope Cook; 4, T. J. Etter.

Sow under 6 months—1, Roper Bros.; 2, A. H. Boswall; 3 and 4, W. H. Pope Cook; 5, Charles Symes.

GRADES OF ANY BREED.

Barrow 6 months and under 9—1, Edwin Forrest; 2, Chas. W. Forrest; 3, Courteney Lusby; 4, Logan Bros.; 5, J. W. Callbeck.

Barrow under 6 months—1, J. W. Callbeck; 2, Peter Brodie; 3, Courtney Lusby; 4, Edwin Forrest; 5, Roper Bros.

Sow 9 months and under 15—1, J. W. Callbeck; 2, Albert Boswall; 3, W. N. Boomer; 4, Geo. M. Holmes.

(Continued on page 184.)

It's A Pleasure To Do The Churning

with Maxwell's " Favourite ". The roller bearings—and easy Foot and Lever Drive enable you to bring the butter without an effort.

Maxwell's is the finest butter maker in the world—and the best made, the strongest, the most satisfactory churn on the market. The proof is in the fact that more of these churns are sold in Canada than all other kinds combined.

Ask your dealer or write for catalogue.

MAXWELL'S FAVORITE CHURN

CREATE AN INCOME Provide For The Future

My Partial Payment Plan which enables you to purchase HIGH GRADE BONDS of low denominations, is a safe simple and easy way to secure Paying Investments. Absolutely no risk to you. This plan is appealing to conservative investors everywhere. It is worth investigating.

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INVESTMENT BONDS
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PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

We will have a hard time to beat last year's record, but will try to do it, and have already made a good start.

Enter as soon as you can, so as to be ready for work when the call comes.

Our new Catalogue gives our rates and just the information you want. Send for it to-day.

THE ST. JOHN Business COLLEGE

S. KERR Principal.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

Fitting the Harness.

The importance of this operation is easily seen when one stops to think that no two horses have the same conformation and that as far as little peculiarities go they are as diffenent as people. Jones and Smith may wear shoes of the same size but if after each has worn a pair a month, they happen to get them mixed up, there are two men who are most uncomfortable until they get their their own shoes. The same is true of horses. The collar, and the rest of the harness should fit the horse in order that you may get the maximum amount of service.

Perhaps, on account of the general prevalence of sore shoulders and similar troubles, the fitting of the collar is the most important single operation in getting the harness to set well. The fleshing of the shoulders must be taken into consideration. If they are especially thick, the use of a sweeny collar helps a great deal. Collars that are snug and rather long have a tendency to draw up and down with serious consequences, while a short collar frequently causes more or less choking and often brings sores on the neck. Soaking the face of a new collar in water is a practice that is often recommended as it enables the collar to conform to the shape of the horse's neck. Sweat pads should be used with discretion and when used should be given especial care.

It is important that the hames conform to the collar. How often we see hames hanging loose sometimes causing all the strain to be on the outside of the collar. The point of the heaviest draft should come to a point about one-third of the distance upward from the point of the shoulder. If this point of draft is too low, it often results in severe bruises at the point of the shoulders. A parting injunction in regard to the hames is to always keep the upper strap buckled tight.

Carelessness often results in the traces being of unequal length resulting in an excessive strain on one side of the shoulder. The short hitch is always to be preferred as it keeps the horse closer to the vehicle and the driver while on the other hand the long hitch gains little or no extra power. Too frequently, we see the back pads any place between the croup and the withers. They should be in the depression just back of the withers and keeping them there results in a better looking turnout as well as keeps the harness in better condition. In a great deal of farm work, breeching is entirely unnecessary, but when used they should be properly placed. It is important that the traces draw in a straight line.

The Horses' Teeth.

Any farmer of good judgment can be taught to float the sharp points horses' teeth, but any of us can be shown in a few minutes how to accomplish something that we could not learn in days from what any man can write on the subject. Of course, horse dentistry cannot be taught in a few minutes, but the floating off the sharp points of a horse's teeth can. The first lesson that needs teaching is that the upper jaw of a horse is much wider than the lower jaw, and when the mouth is closed the teeth do not set squarely together. The teeth on the lower jaw set only on the inner part of the teeth of the upper jaw. Lesson No. 2 is that when a horse masticates his food he doesn't do it by simply shutting his teeth down on the food. He gets the mouthful of food on his tongue, which he uses to carry the food between the teeth, and the lower jaw works sideways enough to grind the lower teeth on the up-

Water Troughs Galvanized Steel

REPLACE INSANITARY AND DISEASE-BREEDING WOODEN-TROUGHS WITH CLEAN AND RUST-PROOF STEEL TROUGHS. These are made of heavy galvanised steel, thoroughly riveted and heavy soldered so that they cannot leak, and finished on the outside with aluminum. We will send you one on free trial, if not satisfactory return it. Prices are reasonable, ranging from $7.50 to $20.00 according to size. Send for illustrated folder.

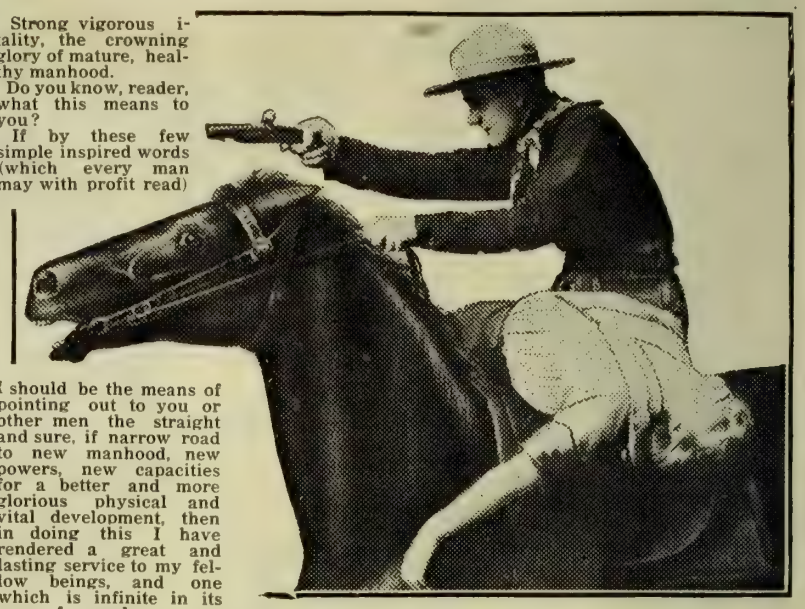
STEEL TROUGH & MACHINE CO., LTD. 9 James Street, Tweed, Ont.

Any Man May Easily Regain LOST VITALITY

Strong vigorous itality, the crowning glory of mature, healthy manhood.

Do you know, reader, what this means to you?

If by these few simple inspired words (which every man may with profit read)



I should be the means of pointing out to you or other men the straight and sure, if narrow road to new manhood, new powers, new capacities for a better and more glorious physical and vital development, then in doing this I have rendered a great and lasting service to my fellow beings, and one which is infinite in its power for good

This self-same VITALITY, this builder of manhood and manly vigor, may easily be regained, and I will tell you how.

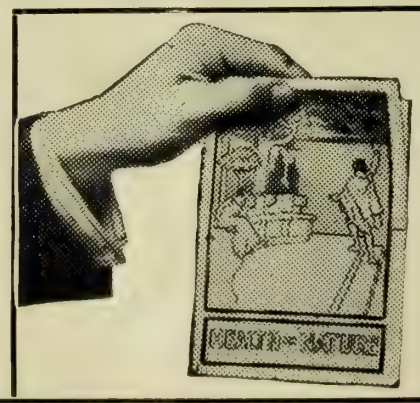
Have you ever stopped to consider that it is this VITAL FORCE which makes rugged men the real men that they are? It is this same MAN FORCE which is behind every great achievement in the world to-day, which gives the flower of our army and navy the courage to meet and face death unflinchingly, which gives the rough and rugged man of the plains that compelling power to rescue at all odds a loved one from some great peril, as our illustration here portrays, and it is this self-same, identical VITAL VIGOR which I must impart to you, reader, if you are not the man you should be.

Therefore, if I give you new vitality, I make you young again, and keep you feeling young the balance of your days. By increasing your vital supply, I soon have you answering "Simply feeling fine" to your friends' morning greetings, while they in their turn will secretly marvel at the wonderous change for the better which has come over you. A thoroughly vital, manly man is the greatest inspiration in the world; his power and fascination are felt by all women and all men alike who are near him. Nothing but death can conquer the giant of strength and manly vigor. On the other hand, how different with the half-man, the neurasthenic degenerate, who is burning up his vitality in dissipation and excesses! Is there any sight more pitiable, more repellent to one's sense of decency, then the weakling who deliberately kills his manhood and self-respect by acts of willful debauchery? Such a man has neither my sympathy nor can he proft by what of wisdom I can impart. But any man who is willing to make a fair, square fight for the return of his lost vitality and lost manhood, who will promise faithfully and honestly to discontinue any debasing practices or excesses he may be indulging, who will help me thus by helping himself to such, no matter how despondent he may be, no matter how weak and debilitated, no matter what years of folly have passed, to such a man I can offer all the encouragement in the world. Just lead a decent man's life, my friend, and then increase your VITALITY. All else will come.

I make and distribute a vitalizing appliance which I call a HEALTH BELT. I do not want you to get one of there HEALTH BELTS now nor to-morrow nor next week, for that matter, but first wish you to write for or call and get one of my little free books. I want you to thus have my whole story of this subject of VITALITY, so that you may judge for yourself. My HEALTH BELT, with suspensory attachment, is a complete treatment in itself; that is you place it comfortably around your waist nights when you go to bed and wear it at the time when you are asleep. The vitality which it produces and sends into your system hour after hour is felt as it flows in. There is no shock, but merely a pleasant, warm, soothing sensation which induces a sound, refreshing sleep. Weak back often disappears at once, and a better feeling is immediately experienced. Two or three months' wear is usually sufficient. The cost is nominal. With special attachments, my HEALTH BELT is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, etc.

Let Me Send You THIS BOOK Free

My book, as described above, will be sent in plain, sealed envelope to anyone who fills in the below coupon. It is fully illustrated with photo reproductions, printed on fine coated paper, and should be read by every man, young, middle aged or elderly, whether ailing or strong. Write or call to-day. Hours 9 to 6.



DR. M. F. SANDEN CO., 140 Yonge St., TORONTO, ONT.

Dear Sirs—Please forward me your Book, as advertised, free, sealed.

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An advertisement in the Maritime Farmer will sell your surplus stock---Try it !

per teeth. Now, if he carries this sideways motion so far as to go clear across the teeth on the upper jaw there would be an even wearing of the teeth, but, as a rule, he does not.

Consequently the inner part of the teeth on the upper jaw is worn off, and the outer part of the teeth on the lower jaw. Thus it is that a saw of sharp points is formed on the outer edge of the teeth on the upper jaw, and a similar ridge of points in the inner edge of the teeth in the lower jaw. In time, as the wearing goes on, these points wound the cheek or the tongue of the horse so that he cannot make the lateral motion of the lower teeth on the upper teeth, as the ridge prevents it; also he cannot use his tongue as he would or should in carrying the food between the teeth.

WHAT IS TO BE DONE.

Now, all that needs to be done is to float off these points. Never allow the rasp to touch the main crown of the teeth. In case this is done, then the enamel of the tooth is removed, and the tooth soon decays, and the nerve of the tooth is exposed and the horse can never again chew his food without pain. Ignorant men think the teeth need filing down with the tooth rasp, when they need no such thing at all. It is the striking of the points named that makes the grating noise sometimes noticed and not that the front teeth are so long the grinders (molar teeth) cannot come together. The front teeth never need dressing. They are used only to pull hay out of the rack or nip off grass; and they never get long, as many suppose. The gums, as the horse grows older, settle away from them and make them appear to grow longer than they formerly were. This is all the secret there is about filing of the horses teeth. Use care to file off only the sharp points, then stop as soon as the points or ridges are filed off.

A twitch is needed to be put on the nose, and the tongue carefully pulled to one side by an assistant, so that it may not be in the way of the one filing the teeth. Ignorance of what is needed spoils many a horse's mouth. It is seldom that all that is necessary to do cannot be done in ten minutes, and half the time is often enough when the rasp is a good one and the man who uses it understands his business. Ignorant men always try to do too much, and makes a great spread over a simple matter. It is more in the know how than in doing the needed work.—Dr. Smead, in Tribune Farmer.

Crooked legs in young horses are congenital, and in many cases accidental, that is not derived from sire or dam. If due to weakness, good food may do much to set them straight. Management of the hoofs in certain kinds of limb deformity will do still more. If the fetlock joint inclines outward, as is most frequently the case, then the inside of the hoof should be lowered as much as possible. If the toe turns inward, then the rectification is more difficult, but here also the inside of the hoof may be advantageously lowered.

"A horse is as good as his hoofs." This is an old and wise saying for without hoofs, a horse with a good body is worthless. It should be the aim of every owner of horses to keep the hoofs in as good condition as possible. Do not let the horses go too long without shoeing. Probably a long percenatge of the hoof ailments are caused by the neglect of the breeder when the animal is a colt. It is always a good plan to keep the little colt's feet neatly trimmed, for it is then that the destiny of the hoof is determined.

Horsemen Attention!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Their use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

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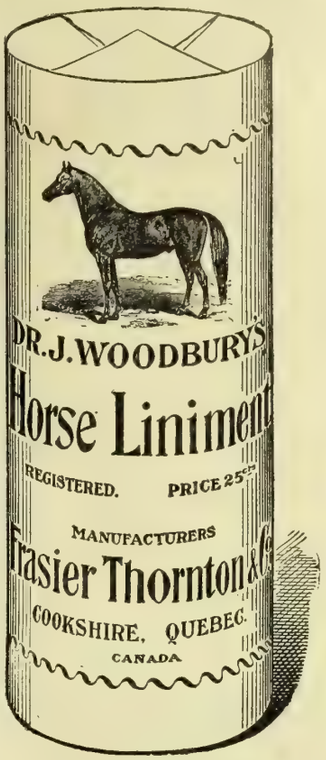
Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

For Sale all Dealers

Price 25 cents



Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

Demand

DR. J. Woodbury's

Horse Liniment

AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

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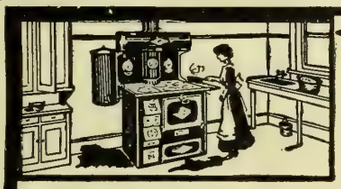

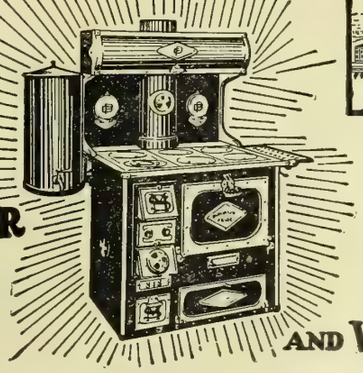

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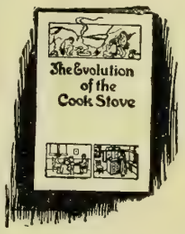
IF you want to save from $25 to $30, and at the same time get the most satisfactory kitchen range made, write for our Catalogue and look into the merits of the "DOMINION PRIDE," at from $41 to $49.

If we sold you identically the same range in the usual way, through a dealer, you would have to pay from $69 to $78 for it. You would be paying two extra profits—to wholesaler and retailer—which would add $25 to $30 to the cost of your range, but absolutely nothing to its value.



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TELLS about cooking from the time the Cave Dwellers dropped hot stones into the pot to boil it. It also tells all about "Dominion Pride" Ranges. Whether you need a Range just now or not you will enjoy reading this book.

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A "DOMINION PRIDE" Range, with high closet shelf and elevated tank or flush reservoir, with zinc sheet to go under range, 8 sections blue polished steel pipe and two elbows, will be delivered to any station in Ontario, Quebec or the Maritime Provinces for $41, or to any station in the four Western Provinces for $49—$5 to be sent with order and balance to be paid when the Range is delivered at your station. If not convenient to pay cash we will arrange to accept your note.

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That is why it fits Regal.

This flour *must* satisfy you, else your dealer returns your money.

REGAL FLOUR

Prize Winners at the Maritime Winter Fair.

(Continued from page 181.)

Sow 6 months and under 9—1, Peter Brodie; 2, A. A. McBeath; 3, W. H. Pope Cook; 4, Courtney Lusby; 5, J. W. Callbeck.

Sow under 6 months—1, Seymour Thompson; 2, Chas. W. Forrest; 3, J. W. Callbeck; 4, W. H. Pope Cooke; 5, Peter Brodie.

Pair of carcasses must have been shown in foregoing classes—1, 5 and 6, Wm. J. Gibson; 2, 3 and 9, J. W. Callbeck; 4 and 11, Peter Brodie; 7, Edwin Forrest; 8, Jas. I. Stewart; 10 and 12, W. H. Pope Cooke.

POULTRY.

Note—C. cock; h. hen; r. cockerel; p. pullet.

Anconas—Hartland Poultry yards, 1h; 1r; 1p;. Geo A. Callbeck, 1c; 2r; 2p.

Andalusians—H. P. yards, 1c; 2h; 2r. Frank A. Aiton, 2c; 1h. Thos Campbell, 1r; 1 and 2p.

Brahnas, Light—Thos. C. Latham, 1 and 2c; 1h; 1r; 1 and 2p. Hartland Poultry yards, 2h. F. M. Merritt, 2r.

Brahmas, Dark—F. M. Merritt, 1c; 1p. Thos. C. Latham, 2c; 1h. H. P. yards, 2h.

Black Spanish—H. P. yards, 1 and 2c; 1h; 2p. Thos. C. Latham, 1 and 2r. L. A. Haszard, 1p.

Cochin, Buff—W. A. Balsor, 1 and 2c; 1 and 2h; 1 and 2r; 1 and 2p. H. P. yards, 3h.

Cochin,A. O. V.—Robt. Balsor, 1c; 2h; 1r; 1 and 2p. H. P. yards, 2c; 1h; 2p.

Dorkings—Hartland Poultry yards, 1c; 1h. Earl Roach, 1 and 2r; 1 and 2p.

Game, Black, Red—Fred H. Graham, 1 and 2c; 2h; 2r; 1p. Samuel Bell, 1h; 1r.

Game, Indian, Cornish and White—F. M. Metritt, 1c; 2h; 2r; 1p. H. P. yards, 2c; 1h; 2p. Clarence J. Cock, 1r. Samuel Bell, 3r.

Game, A. O. V.—T. Barret, 1c; 1h. Geo. England, 2c; 2h; 2r; 1p. Samuel Bell, 1r. Fred H. Graham, 2p.

Hamburgs, Black—Frank A. Aiton, 1c; 2h. H. P. yards, 2c; 1h; 1r; 1 and 2p.

Hamburgs, G. P. or S. P.—A. H. Boswall, 1 and 2c; 1 and 2h; 1, 2, 5 and 6r; 1, 2, 3, 4 and 6p. L. A. Haszard, 3 and 4r; 5p.

Hamburgs, G. S. or S. S.—N. J. Govang, 1c. H. P. yards, 2c; 2p. John Tweedie, 3c; 2 and 3h; 2 and 3r; 1p. L. A. Hazard, 1h. F. M. Merritt, 1r; 3p.

Houdans— Wolfville Poultry yards, 1c; 2 and 3h; 2r; 2p. Thos. C. Latham, 3c; 1h. Earl Roach, 2c; 1r; 1p.

Leghorns, White, S. C.—Kingsdale Poultry & Supply Co., 1 and 2c; 2 and 3h; 2, 4 and 5r. Maritime Poultry Supply Co., 3c; 1 and 4h; 4p. F. M. Merritt, 5h; 1r; 3 and 5p. Gordon Carter, 6h; 6p. Thos. C. Latham, 3r. Wm. Beazley, 1 and 2p. H. P. yards, 6r.

Leghorns, Brown S. C.—Wolfville Poultry yards, 1c; 2h; 3p. H. P. yards, 2c. W. H. Henry, 1h; 1, 2 and 3r; 1 and 2p.

Leghorns, Brown, R. C.—E. J. McGrath, 1c. E. H. Hall, 2c; 2h; 3r. H. P. yards, 1h. Philip Beed, 1 and 2r; 1 and 2p.

Leghorns, Buff, S. C.—H. P. yards, 1c. Wm. Beazley, 2c. Maritime Poultry Supply Co., 1, 2 and 3h; 3r; 2 and 3p. Geo. Cavanagh, 1r; 1p. Gordon Carter, 2r.

Leghorns, A. O. V.—E. H. Hall, 1 and 2c; 1r; 1p. N. J. Govang, 1h. H. P. Poultry yards, 2h; 2r; 1p.

Minorcas, Black, S. C.—Kingsdale Poultry & Supply Co., 1c; 1, 2 and 3h; 3r; 2p. R. B. Stewart, 2c; 4 and 5h; 2, 4 and 5 r. F. M. Merritt, 6h; 1r; 1p. W. A. Balsor, 6r; 4 and 5p. M. E. Goodwin, 6p. Gordon Carter, 3p.

Minorcas, Black, R. C.—John D.

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exactly meet the need which so often arises in every family for a medicine to open up and regulate the bowels. Not only are they effective in all cases of Constipation, but they help greatly in breaking up a Cold or La Grippe by cleaning out the system and purifying the blood. In the same way they relieve or cure Biliousness, Indigestion, Sick Headaches, Rheumatism and other common ailments. In the fullest sense of the words Dr. Morse's Indian Root Pills are 47

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from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. $2.00 a bottle delivered. Horse Book 9 E free.

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We wish to call your attention to the fact that most infectious diseases such as whooping cough, diphtheria and scarlet fever are contracted when the child has a cold. Chamberlain's Cough Remedy will quickly cure a cold and greatly lessen the danger of contracting these diseases. This remedy is famous for its cures of colds. It contains no opium or other narcotics and may be given to a child with implicit confidence. Sold by all dealers.

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FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
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I have found the cure.

I will mail, **free** of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure — **you**, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience**, we know better than any doctor. **I know** that my home treatment is a safe and sure cure for **Leucorrhoea** or **Whitish discharges, Ulceration, Displacement** or **Falling** of the **Womb, Profuse, Scanty** or **Painful Periods, Uterine** or **Ovarian Tumors** or **Growths**, also **pains in the head; back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar** to our sex.

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address**, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost**, my book—"WOMAN'S OWN MEDICAL ADVISER" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers** of **Daughters**, I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all woman's diseases and makes women well, strong, plump and robust. **Just send me your address**, and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

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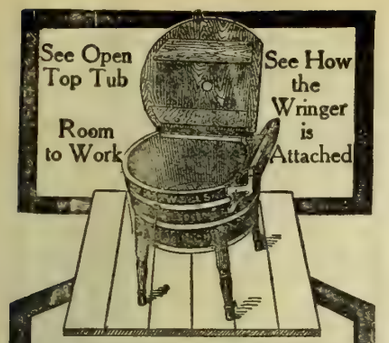
We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.



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Orpingtons, Buff, S. C.—E. S. Brown, 1c; 2r. L. A. Haszard, 2 and 3c; 3h; 1 and 4r; 3p. C. H. Wisener, 1h; 3r; 4 and 5p. John D. Robinson, 2h; 5r; 1p. W. H. Henry, 6r; 2p. Jas. Retson, 6p.

Orpingtons, White, A. V.—Kingsdale Poultry & Supply Co., 1c; 1 and 2hl M. B. Jones, 2c; 2 and 3r; 1p. Jas. Retson, 3h; 1r. Cooke McCallum, 2 and 3p.

Orpingtons, Black, A. V.—C. H. Wisener, 1c; 1 and 2r; 2p. Thos. C. Latham, 2c; 2h. Gordon Carter 1h. H. P. yards, 1p.

Plymouth Rocks, Barred—Kingsdale Poultry & Supply Co., 1c; 4h; 3p. Watson Lutz, 2c; 2 and 3h; 3r; 4p. L. H. D. Foster, 3c; 6h; 1r; 2p. Hartland Poultry yards, 4c; 4r. Craig Bros., 5 and 6c; 1 and 5h; 2, 5 and 6r; 1, 5 and 6p.

Plymouth Rocks, White—Albert Boswall, 1c; 1h. Cooke McCallum 2c. Gordon Carter, 3c; 2h. Geo. A. Callbeck, 3h; 1 and 3r. John T. Jones, 2r; 1 and 3p. H. P. yards, 2p.

Plymouth Rocks, Buff—H. D. Thompson, 1 and 2c; 1 and 5r; 1 and 5p. L. H. D. Foster, 3c; 1 and 2h; 2r; 4p. H. P. yards, 3h. A. E. Simmons, 3r; 6p. L. A. Haszard, 4 and 6r; 2 and 3p.

Rhode Island Reds, S. C.—Kingsdale Poultry & Supply Co., 1c; 2h; 5r. F. M. Merritt, 2c. Jennie D. Hitchens, 3c; 1h; 2r; 1p. John Higson, 3h; 4p. Clarence J. Cock, 1 and 4r. W. H. Henry, 3r; 2 and 5p. J. T. Waugh, 3p. Geo. Cavanaugh, 6p. H. P. Poultry yards, 6r.

Rhode Island Reds, R. C.—Geo. H. Seaman, 1 and 2c; 3h; 1, 4 and 6r; 1 and 4p. Dr. J. W. Clark, 3c; 2h; 3p. W. H. Henry, 1h; 1 and 3r; 2 and 6p. Clarence J. Cock, 5r; 5p.

Wyandottes, Golden—H. P. yards, 1c; 1h; 2r; 2p. Geo. H. Seaman, 2h; 1r; 1p.

Wyandottes, Silver—S. E. McKie, 1 and 2c; 1, 2 and3h; 2 and3r; 1 and 2p. E. S. Brown, 1r. John D. Fraser, 3p.

Wyandottes, Buff—H. P. yards, 1c. Wm. Beazley, 2c; 2h; 1 and 2r; 2p. C. R. MacKay, 1h; 1p.

Wyandottes, White—Kingsdale Poultry & Supply Co., 1c; 3h; 1p. John D. Fraser, 2c. A. C. Read, 3 and 6c; 1 and 4h; 1, 2 and 3r; 2 and 3p. Wolfville Poultry yards, 4c; 5p. Watson Lutz, 5c; 2h; 4r; 4 and 6p. Frank A. Aiton, 5h. Maritime Poultry & Supply Co., 6h. Cooke McCallum, 5r. J. S. Thompson, 6r.

Wyandottes, Columbian—Orchard Hill Farm, 1 and 2c; 1h; 1 and 2r; 1 and 2p. C. R. McKay, 2h.

Any Other Variety—Gordon Carter, 1c; 1 and 6h. F. M. Merritt, 2 and 5c; 4h; 1r; 1, 2, 4 and 5p. C. R. McKay, 3c. H. P. Poultry yards, 4c; 2 and 5h. Thos. C. Latham, 6c; 3h. W. A. Balsor, 2r; 3p. Maritime Poultry & Supply Co., 3r; 6p. N. J. Govang, 4, 5 and 6r.

Bantams, Game, B. B. Reds—F. M. Merritt, 1c; 1h; 1p. Geo. H. Seaman, 1r; 2p.

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Bantams, Japanese, Black Tailed, White and Black—L. A. Haszard, 1h. Wm. Beazley, 1r; 1p.

Bantams, Polish, Bearded, White, Buff, Laced, Non Bearded—Gordon Carter, 1c; 1h. H. P. yards, 2h.

(Continued on page 188.)

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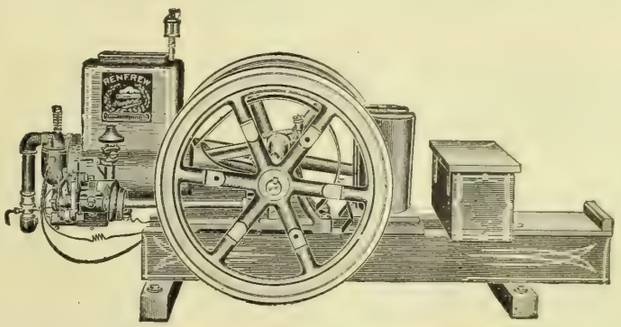

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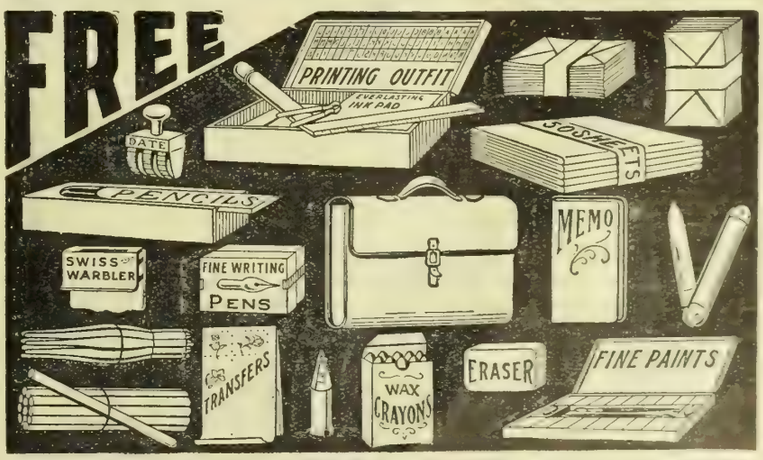

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1 large leather bound school bag, 1 dozen fine quality H. B. pencils, 6 steel tip pen holders, 1 dozen 292 pennibs, 50 sheets of writing paper, 1 dozen envelopes to match, 1 box of 15 water colors paints with brushes and pots, 10 beautiful drawing crayons of different colors, 1 fine quality steel blade penknife, 1 large hardwood slide top pencil box, 1 complete printing outfit containing type, ink, tweezers and stamping pad, 1 twelve inch ruler, 1 large memorandum book, 1 complete dater good for five years, 1 large rubber eraser, 1 steel blade pencil sharpener, and last but not least, 1 Swiss warbler the greatest invention for imitating birds and animals.

Think of it this scholar's complete outfit is FREE. We are determined to sell a million packages of Marvel Bluing this year and are sparing no expense to reach this mark.

Marvel Bluing is a great improvement on the old style of bluing and goes twice as far. Everybody buys it because it is so good and a present is given away with every package.

We will give you one of these grand scholar's outfits IF YOU WILL AGREE TO SELL ONLY 25 PACKAGES OF MARVEL BLUING AT ONLY 10c. PER PACKAGE. Any boy or girl can sell 25 packages easy. No trouble at all.

We send you the Marvel Bluing free and trust you with it until sold. Simply send us your name and address to-day. Every girl and boy should win one of these grand scholar's outfits.

Try. If you can't sell the Marvel Bluing send it back to us.

Address to-day THE MARVEL BLUING CO., Dept. G. 101 Toronto, Ont.

EVERY BOY AND GIRL IS ALWAYS PLEASED WITH OUR PREMIUMS

When Writing Advertisers Please Mention the Maritime Farmer.

FREE!! $200.00 IN CASH

AND 100 VALUABLE PREMIUMS GIVEN AWAY

1st Prize, $50.00 in Cash. 3rd Prize, $35.00 in Cash.
2nd Prize, $40.00 in Cash. 4th Prize. $25.00 in Cash.
5th to 9th Prizes, each $10.00 in Cash.

Herewith will be found the picture of a Chinaman washing clothes. Hidden about his figure and tub are seven faces. Can you find them. It is not easy, but can be accomplished. Try—you may win a cash prize by doing so. Many have done this as will be shown by the names and addresses published below. If you find the faces mark each one you find with an **X** cut out the picture and send it to us, together with a slip of paper on which you have written the words "I have found all the faces and marked them."

Write these nine words plainly and neatly, as in case of ties, both writing and neatness will be considered factors in this contest.

This may take up a little of your time, but as there is TWO HUNDRED DOLLARS in cash and One Hundred premiums given away, it it worth your time to take a little trouble over this matter.

Remember, all you have to do is to mark the faces, cut out the picture and write on a separate piece of paper the words, "I have found all the faces and marked them."

We do not ask You to Spend One Cent of Your Money in order to enter this Contest,

Send your answer at once; we will reply by Return Mail telling you whether your answer is correct or not, and we will send you a complete Prize List, together with the names and addresses of persons who have recently received over One Thousand Five Hundred dollars in Cash Prizes from us, and full particulars of a simple condition that must be fulfilled. (This condition does not involve the spending of any of your money.)

Winners of cash prizes in our late competitions will not be allowed to enter this Contest.

This competition will be judged by two well known business men of undoubted integrity, namely, the advertising Managers of the Montreal Daily Herald and Montreal Daily La Presse, whose decisions must be accepted as final.

Below will be found a partial list of the names and addresses of a few persons who have won some of our larger prizes in recent contests. Although these persons are entirely unknown to us, they are our references. An enquiry from any one of them will bring the information that our contests are carried out with the utmost fairness and integrity. Your opportunity to win a good round sum is equally as good as that of anyone else, **as all previous winners of cash prizes are debarred from entering this contest**

Names and Addresses of a few Prize-Winners in recent Contests

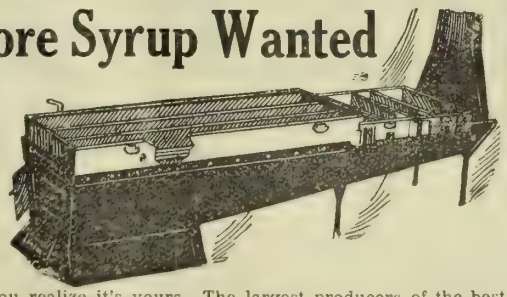
Mrs. W. A. C. Orr, 398 Gunnell St., Winnipeg	$50.00	Mr. K. A. Rodger, 4 Manhattan Apts., Church St. Toronto	$35.00
Miss E. Brodeur, 6 Gillespie St., Sherbrooke	50.00	Mrs. J. B. Girouard, 656 Maisonneuve St., Montreal	35.00
Mr. Louis Quintal, Charlemagne, Que.	50.00	Mrs A. Ferguson, 39 Stobart Block, Winnipeg	35.00
Mr. Alphonse Drouin, Dept of Sec of State, Ottawa	50.00	Mr. R. E. Strange, 300 Rockland Rd., St. John, N.B.	35.00
Mr. J. A. St. Pierre, Athabaska, Que.	50.00	Miss Mary Cochrane, 114 Preston St., Ottawa	35.00
Mrs. E. McMillan, 335 Medland St West Toronto	50.00	Mrs. G. H. Benson, 33 Hargrave St., Winnipeg	35.00
Mr. H. Lloyd, Stanley Barracks, Toronto, Ont	50.00	Mrs W. D. Little, Powassan, Ont.	30.00
Mr. Jos. P. Champagne, 252 Bolton, Ottawa Ont	50.00	Mr. Thos. Blakey. 88 Huntley St., Toronto	25.00
Miss Daisy Rabey, 182 University Ave, Toronto	40.00	Miss Mary Lamb, 22 Spencer St., St. John's, Nfld	25.00
Mr. Jno W. London, 486 Ross Ave, Winnipeg Man.	40.00	Miss E. A. Kennedy, 16 Railway St., Hamilton	25.00
Miss I. B. Benjamin, 125 Hughson St., Hamilton	40.00	Mr. Jules Vascancelles, Goulais River, Ont.	25.00
Miss H. C. Powell, P.O. Dept., Ottawa, Ont.	40.00	Mr. Jno. M. Sullivan, Duckworth, St. John's, Nfld.	25.00
Mrs. Andrew Johnson Box 103, Roblin, Man.	40.00	Mrs. E. H. Dunnett, 200 Hughson St., Hamilton	25.00
Mr. Norman Robinson, Milford Haven, Ont	40.00	Mr. W. C. Mason, 2475 Hutchison St., Montreal	25.00
Mr. Thos Huniphries c/o Ayers & Sons, St. John's,	40.00	Mrs. H. W. Healey, Box 171 Ingersoll, Ont.	25.00
Mr. F. A. Ferguson, 323 James Ave., Winnipeg	40.00	Mr. M. J. Brouse, 63 St. George St., Toronto, Ont	25.00
Mrs. Quinnie R. Stark, 3 St. Mary's Place, Winnipeg, Man.	35.00	Mrs. Francis Boynton, 235 Ross St., St. Thomas, Ont.	25.00

Send your reply direct to

BOVEL MANUFACTURING COMPANY

BOVEL BUILDING, (31 LATOUR ST.) MONTREAL, CAN.

Better and More Syrup Wanted



Are you making any profit from your Sugar Bush, or merely wasting time and producing a little syrup and sugar at a higher cost than you could buy it for? If your Sugar Bush isn't paying you a profit, the *"Champion" Evaporator* will make it do so; if it *is* paying the *"Champion"* will make it pay better.

The *"Champion" Evaporator* will get everything that it's possible to get out of your maple grove, and pay for itself before you realize it's yours. The largest producers of the best syrup and sugar on the continent use the *"Champion" Evaporator.* Don't put it off. Write us to-day for our new illustrated catalogue free.

THE GRIMM MFG. CO., LTD. 58 WELLINGTON STREET MONTREAL, Quebec

FOR SALE--Pure Bred Shropshires

20 to 30 Shropshires.
6 Cheviots.
5 Leinsters.
A few Southdowns, Oxfords and Lincolns.

These sheep are from one to two years old, extra choice, being picked from noted flocks by Mr. R. H. Harding of Mapleview farm, Thorndale, Ont. Write or wire.

F. DeL. CLEMENTS, 9 & 11 Rodney St., St. John, N.B.

How to Disinfect a Dairy Stable.

The following inquiry has come from a reader, and it is of such importance that we shall give it more than the usual attention in a condensed reply: "I wish to disinfect thoroughly some old barns I have recently bought, rendering them safe for my cattle. Will you advise me what to do and how to do it?"

In disinfecting a stable there are some fundamental principles to be borne in mind; but unfortunately they are often left out of the procedure. It should be remembered, for instance, that disease is due to infection by germs; that the germs are minute and may remain effective for extended periods in stables that are dark, dirty and badly ventilated, and that any method of disinfection that does not also do away with these unsanitary conditions and keep them permanently away, must fail of success. Germs thrive, grow and live in the dirt of dark, damp places. So do the insect and vegetable parasites which prey on farm animals. Sanitation, suggested by the need of sunlight, ventilation and cleanliness, therefore has the twofold effect of lessening the chances of infectious disease and keeping animals free from parasite foes. Take tuberculosis, for example. The disease is due, as all of our readers are aware, to the specific bacillus of the disease. No case of tuberculosis can start without its seed—the bacillus. The dark, damp, hot, badly ventilated stable cannot produce the disease any more than one can grow a crop of corn or potatoes without planting seed corn or tubers. This is true of all other germ diseases. The start of all disease is always the presence of the specific germ. It must next be remembered, however, that an animal living in a stable of the unsanitary sort will be an unhealthy beast, with impure blood, sluggish circulation, and overworked, impaired excretory organs. Disease once started runs the most rapid and fatal course in the unhealthy occupants of the stable.

The direct rays of the sun will quickly kill the germs that cause tuberculosis. The bacillus of tetanus cannot cause lockjaw in the presence of fresh air (oxygen). The germs which cause glanders, pneumonia, blood poisonong, pus formation and pus absorption (pyaemia) naval infection, strangles (colt distemper), influenza, shipping or stock yards fever of horses, purpura haemorrhagica, haemorrhagica septicaemia, anthrax, blackleg and some other diseases, including John's disease, contagious abortion and infectiouss vaginitis, all most surely affect animals and lurk and linger longest in the stables that are not rendered hygienic by lighting, frequent cleansing and adequate ventilation.

With a full appreciation of these essentials, then disinfection of a stable entails the putting in of a sufficient amount of window glass to allow free entrance of God's good sunshine, which kills germs and is otherwise absolutely necessary for health. Each adult animal in a stable should have at least four square feet of window glass for this purpose. Fresh air is as essential, and so the stable will have to be perfectly ventilated. The King system now predominates in popularity, because it gives entrance to fresh air at the level of the ceiling, forces the warm air down upon the cattle and through the medium of many air shafts in the walls and connecting with high chimneys in the roof, sucks out the vitiated air from the ground surface. True disinfection renders the provision of some such system of ventilation imperative in every stable.

See to these things first; then remove from the stable everything that possibly can harbor germs. Tear out

Warranted to Give Satisfaction.

Gombault's Caustic Balsam

Has Imitators But No Competitors.

Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Toronto, Ont.

Send your Raw FURS to John Hallam

Sixty Thousand trappers now send us their **Raw Furs.** Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada.

FREE Our "Up to the minute" Fur quotations and the last Edition of **HALLAM'S TRAPPERS GUIDE,** a book of 96 pages, mailed **FREE.**

Write to-day to John Hallam, Mail Dep't 18 . **TORONTO,** 111 Front St. E.

NORTHERN GROWN TREES

Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery—no agents. Send list of your wants for prices, etc.

E. L. COLPITTS

Petitcodiac, New Brunswick

Pure Bred Barred Plymouth Rock Pullets

I can offer about 20 birds for immediate sale at 75c each.

ALLANDALE FARM, Hampton, N. B.

" HILLSIDE STOCK FARM "

We have for sale at right prices four Ayrshire bulls from twelve to fifteen mos. old. They are sired by the champion bull of 1911; a son of the renowned Scotch champion "Spicy Sam."

Prescott Blanchard, Truro, N. S.

Guernsey Bull For Sale

We have a choice 25 months old bull for sale. We also have a number of choice cockerels of Barred Plymouth Rock, White Wyanndotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Apply to

Walter McMonagle & Sons,

Sussex Corner, N. B.

PANDORA RANGE

Seeing this splendid range places you under no obligation to buy. We guarantee the "Pandora" just as willingly as McClary people because we know its perfections just as thoroughly.
110

McClary's

HOW TO CONQUER RHEUMATISM AT YOUR OWN HOME

If you or any of your friends suffer from rheumatism, kidney disorders or excess of uric acid, causing lameness, backache, muscular pains; stiff, painful, swollen joints, pain in the limbs and feet; dimness of sight, itching skin or frequent neuralgic pains, I invite you to send for a generous **Free Trial Treatment** of my well-known, reliable **Chronicure**, with references and full particulars by mail. (This is no C. O. D. scheme.) No matter how many may have failed in your case, let me prove to you, free of cost, that rheumatism can be conquered. **Chronicure** succeeds where all else fails. **Chronicure cleanses the blood and removes the cause.** Also for a weakened, run-down condition of the system, you will find **Chronicure** a most satisfactory **general tonic** that makes you feel that life is worth living. Please tell your friends of this liberal offer, and **send today** for large free package, to **MRS. M. SUMMERS, Box E.** 309—**Windsor, Ont.**

FARMERS!

You are not doing your duty by your sons, if you fail to give them the advantage of a good Business Education such as may be obtained at

FREDERICTON The Business COLLEGE

W. J. OSBORNE PRINCIPAL.

Enter at any time. Send for free catalogue containing full information. Address,

W. J. OSBORNE, Principal.
Fredericton, N. B.

Annapolis Valley Fruit Farm
Equipped; Big Money-Maker

One of the best apple orchards in the Valley, picking 1000 bbls. in season; 96 acres; near neighbors, school, churches and depot; everything is here to make farming an ideal occupation; borders salt water; splendid 2-story, 12-room house; 2 barns, one 40x60; cuts 75 tons hay; abundant supply wood and timber; accident to owner induces him to throw in full line stock, tools and machinery; the low price for this splendid profit producer is only $7300, part cash; for traveling instructions for this and a 228-acre fruit farm for only $1900, see page 61, our New Mammoth Farm Catalogue No. 35, The MARITIME FARMER, Box D., Sussex, N. B.

If You Have Live Stock For Sale Advertise it in the Maritime Farmer.

and burn all saturated, porous, ancient timber of mangers, feed boxes, and hay racks, walls, floors, partitions and other parts of the internal fittings of the stable. And to the creamating fire all old bedding, soiled feed and trash. Dig out four inches of dirt floor and put in new, clean earth, or a clay and cinder compost mixture wetted and tramped down; or, far better than either, put in a concrete floor. Scrub and scrap the remaining woodwork or stonework. Get the dirt out of every nook crevice, crack, cranny and corner. Get rid of those festoons of cobwebs. They are filthy, germ laden, yet often left by the superficial cleaner of the stable.

Now saturate everything above, below and on every side, with a strong effective, disinfecting solution. That means a solution that will actually kill each germ it touches; not merely stan it, make it weak, wobbly, or sick at the stomach. Such a disinfectant may not have a bad smell. Some of the poorest of disinfectants smell the worst. Use a solution of six ounces of formaldehyde to the gallon of water; or a 1-50 mixture of commercial coal tar disinfectant; or compound solution of cresol; or two or three ounces of liquid carbolic acid (95 per cent pure) to a gallon of water. Put the liquid on with a spray pump which forces it into every place possibly occupied by germs and follow it with a thorough spraying with fresh-made lime wash containing a pound of chloride of lime to each three gallons.

The following formula for lime wash with an added disinfectant, is also recommended by the Bureau of Animal Industry: To prepare five gallons: Slake 7½ pounds of lime, using hot water, if necessary to start action. Mix to a creamy consistency with water. Stir in 15 fluid ounces of 95 per cent. pure liquid carbolic acid and make up five gallons. Stir thoroughly and strain through a wire sieve, if it is to be applied by means of a spray nozzle. Where disease has been known to exist we do not only disinfect the entire stable according to the above plan, but also flood the floors with the lime and disinfectant wash combination.—A. S. Alexander, V. S., in Rural New Yorker.

A Business Man With a Business Herd.

(Continued from page 152)

The stock is then watered—there is a watering device in each stall but the water is only turned on morning, noon and night. After the morning drink a liberal quantity of hay is fed. At 2 o'clock P. M. the feeding operations are again repeated and the milking operations are completed shortly after five o'clock P. M. and at six o'clock, the chores having been all completed the barns are closed for the night.

The cows are fed on an average about 40 pounds roots or ensilage, 4 pounds bran, 4 pounds crushed oats and one pound oil meal. These quantities are decreased or increased according to the needs of the respective animals as indicated by the record sheets.

We also saw several promising young heifers and bulls that will go forth to improve some other herds.

Mr. Irving is a farmer because he thoroughly enjoys working the soil. He is a lover of good stock and his is an example that our young men may well imitate. He is striving to make his home district better than he found it. May his shadow never grow less.

NA-DRU-CO
Syrup of Linseed, Licorice & Chlorodyne

is an absolutely reliable household cough-and-cold remedy, prepared by expert chemists. It quickly relieves coughs, and if taken when the first symptoms appear it breaks up colds before they become serious or troublesome.

It's a good thing to keep always on hand in the Medicine Cabinet.

In 25c. and 50c. bottles, at your Druggist's.

NATIONAL DRUG AND CHEMICAL CO. OF CANADA, LIMITED.
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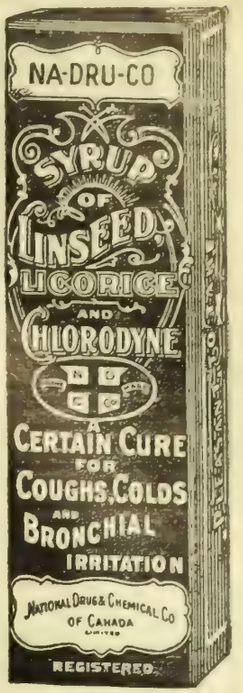
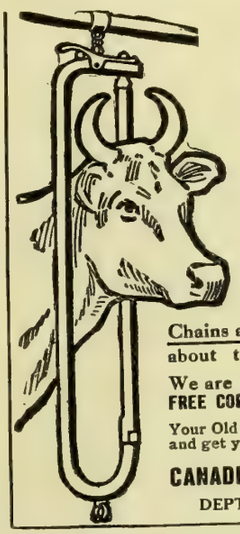


SAVE LABOR IN THE COW STABLE



This book will show you exactly what you can do with your present stable buildings to make them more sanitary and easier to clean and how much it will cost.

Wooden stalls rot out and make dirty stables. Iron and steel equipment is not expensive and it saves its cost many times over in labor.

Chains and Halters are out of date. Learn more about the stronger and simpler Stanchions.

We are willing to supply farmers with a **FREE COPY** of this clearly illustrated book.

Your Old Barns can be Re-fitted. Drop us a line and get your free copy of this illustrated booklet.

CANADIAN POTATO MACHINERY CO.
DEPT. H **GALT, ONT.** Limited
13

RAW FURS

Are you a trapper? Are you a dealer? Are you seeking a reliable firm to ship to? Many thousands of shippers say we give best returns, good reasons—we pay as we quote, give a square grade and send your money as quick as the return mail can bring it to you. We post you reliably.

No Commissions. No Express Charges.

Write at once for price list, tags, envelopes, invoices, etc.

BENJAMIN DORMAN, Inc.
RAW FURS, GINSENG, GOLDEN SEAL
147 West 24th Street, New York. (Mention this paper.)

References: Greenwich Bank, N. Y East River National Bank, N. Y.

$200.00 IN GOLD GIVEN AWAY FREE

LPAPE	NREOCA	UPML	ATSWRYPEBR
CPAHE	RCYREH	YBRAPRSRE	ERPA

Can you arrange the above sets of jumbled letters into the names of eight well known fruits. If so, YOU CAN SHARE IN THE DISTRIBUTION OF THE ABOVE PRIZE. It is necessary to [illegible] perseverence you can probably make out 5 or 6 of them. To the person who [illegible] we will give the sum of One Hundred Dollars. To the person making out the second largest number the sum of Fifty Dollars. To the person making the third largest number the sum of Thirty Dollars. To the person making the fourth largest number the sum of Twenty Dollars. Should two persons send answers containing the correct, the first two prizes will be divided between them, (each receiving $75.00). Should three send in correct answers, the first three prizes will have to be divided, (each receiving $60.00). Should four persons send equally correct answers, the whole sum of $200.00 will be equally divided (each receiving $50.00), and so on in like proportions, provided they comply with a simple condition about which we will write as soon as answers are received. WE DO NOT WANT A CENT OF YOUR MONEY WHEN YOU ANSWER THIS ADVERTISEMENT. If you cannot make out anything like a complete list, write us at once enclosing 2 cent stamp for our reply. DO NOT DELAY. WRITE AT ONCE, Address, CANADIAN MEDICINE CO., Dept. 81 MONTREAL, QUE.

Prize Winners at the Maritime Winter Fair.

(Continued from page 185.)

Bantams, A. O. V.—W. C. Black, 1 and 2r; 1 and 2p.

Collections Pigeons—1 and 3, Gordon Carter; 2, H. P. yards; 4, 5 and 6, Maritime Poultry & Supply Co.

LIVE UTILITY POULTRY.

Wyandottes, White, pr. cockerels—1, A. C. Read; 2, J. S. Thompson; 3, R. R. Black.

Wyandottes, White, pr. pullets—1 and 2, A. C. Read; 3, John D. Fraser

Wyandottes, Silver, pr. cockerels—1, E. S. Brown; 2, John D. Fraser.

Wyandottes, Silver, pr. pullets—1, E. S. Brown; 2, John D. Fraser.

Wyandottes, Buff, pr. pullets—1, Wm. Beazley; 2, H. P. yards.

Wyandottes, Columbian, pr. cockerels—1, C. R. McKay.

Wyandottes, Columbian, pr. pullets—1, Orchard Hill Farm; 2, C. R. McKay.

Plymouth Rocks, Barred, pr. cockerels—1, Chas. Etter; 2, W. B. Tait; 3, Craig Bros.

Plymouth Rocks, Barred, pr. pullets—1, Mrs. Geo. Ripley; 2, Chas. Etter; 3, Craig Bros.

Plymouth Rocks, White, pr. cockerels—1 and 2, Geo. A. Callbeck; 3, John T. Ives.

Plymouth Rocks, White, pr. pullets—1, Cooke McCallum; 2 and 3, Geo. A. Callbeck.

Plymouth Rocks, Buff, pr. cockerels—1, A. E. Simmons.

Plymouth Rocks, Buff, pr. pullets—1, A. E. Simmons; 2, L. H. D. Foster.

Orpingtons, Buff, pr. cockerels—1, John D. Robinson; 2, Thos. C. Latham; 3, E. S. Brown.

Orpingtons, Buff, pr. pullets—1, Jas. Retson; 2, W. H. Henry; 3, J. D. Robinson.

Oroingtons, A. O. V., pr. cockerels—1, Jas. Retson; 2, C. H. Wisener; 3, Carl Ripley.

Orpingtons, A. O. V., pr. pullets—1, Cooke McCallum; 2, C. H. Wisener; 3, Carl Ripley.

Rhode Island Reds, pr. cockerels—1 and 2, C. J. Cock; 3, W. H. Henry.

Rhode Island Reds, pr. pullets—1, W. H. Henry; 2 and 3, C. J. Cock.

First cross from any pure breed pr. cockerels—1, W. C. Black; 2, C. J. Cock; 3, R. R. Black.

First cross from any pure breed pr. pullets—1, C. J. Cock; 2, R. R. Black; 3, Carl Ripley.

UTILITY BREEDING PENS

Wyandottes, White—1, Kingsdale Poultry & Supply Co.; 2, J. S. Thompson.

Wyandottes, Golden—1, Hartland Poultry yards.

Wyandottes, Silver—1, John D. Fraser; 2, Thos. C. Latham; 3, H. P. yards.

Wyandottes, Buff—1, H. P. yards.

Wyandottes, Columbian—1, C. R. McKay; 2, H. P. yards.

Plymouth Rocks, Barred—1, Craig Bros; 2, E. C. Black; 3, L. H. D. Foster.

Plymouth Rocks, White—1, Albert Boswall.

Plymouth Rocks, Buff—1, L. H. D. Foster; 2, Arthur Simmons.

Orpingtons, Buff—1, E. S. Brown; 2, R. R. Black; 3, C. H. Wisener.

Orpingtons, Black—1, C. H. Wisener.

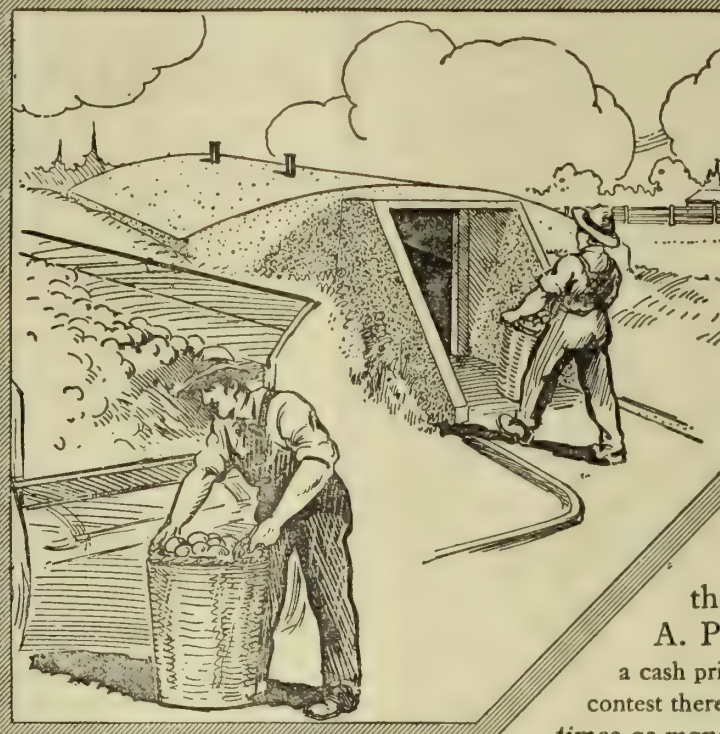
Orpingtons, White—1, Kingsdale Poultry & Supply Co.; 2, Carl Ripley; 3, C. H. Wisener.

Dorkings—1, Earl Roach.

A. O. Variety—Kingsdale Poultry & Supply Co.

MATING PENS.

Barred Plymouth Rocks, cockerel mating—1, Kingsdale Poultry & Supply Co.; 2, Watson Lutz; 3, Craig Bros.



A root cellar like this won a prize last year.

THE drawing was made from a photograph of the root-cellar with which D. A. Purdy, of Lumsden, Sask., won a cash prize in last year's contest. In that last contest there were 36 prizes. There will be *three times as many prizes* (108) in the

1912 FARMERS' PRIZE CONTEST

THUS you will have three times as many chances of winning a cash prize. You do not have to use any certain amount of Canada Cement to win a prize. There are absolutely no "strings" to this offer.

There are twelve prizes for each Province (three of $50; three of $25; three of $15; and three of $10) and you compete only with other farmers in your own Province and not with those all over Canada.

It makes no difference whether you have ever used cement. Many of last year's winners had not used it until they entered the contest. When you write for full particulars, we will send you, *free*, a book, *"What the Farmer Can Do With Concrete,"* which tells everything you need to know about concrete. It is absolutely free, and you are under no obligation to buy "Canada" Cement or to do anything else for us.

WRITE your name and address on the coupon, and mail it, or use letter or post card, and we will send you at once the book and full particulars of the 1912 Prize Contest.

Address Publicity Manager

Canada Cement Company Limited 504-561 Herald Building, Montreal

CANADA CEMENT COMPANY LIMITED PORTLAND CANADA CEMENT MONTREAL

Style 70

A Piano is no better than its hidden parts. That's why we so confidently ask you to compare the Sherlock-Manning 20th Century Piano with the best makes.

MARK you, we do not urge you to buy a **Sherlock-Manning Piano**—we simply ask you to **compare** the **Sherlock-Manning** with the world's best.

We know that the **Sherlock-Manning 20th Century Piano** is

"Canada's Biggest Piano Value"

and we believe that **your** judgment or the judgment of any **unbiased** master musician, will confirm our opinion.

But, before you decide, find out the essentials of a perfect piano—the features that make for lasting tonal beauty.

The piano **you** buy **shou'd have**

—**The famous Otto Higel Double Repeating Action**
—**Poehlmann Wire,** the best piano wire made.
—**Weickert Felt Hammers,** the hammers that endure
—**A Full Iron Plate,** and
—**Billings Brass Action Flange,** the latest improvement.

There are other essential features, but ask to be **shown** these—**the most essential.** You will find that only **high-grade, first quality** instruments possess these. Now **Sherlock-Manning 20th Century** is the **embodiment of quality.** It possesses **every** feature that makes for **piano excellence** and the **lasting** life of the instrument. Yet—**you can save money**, a considerable amount of money, if you buy a **Sherlock-Manning Piano**. Ask us to **show you** where and how the saving comes in. Write for **inside information** anyhow.

Sherlock-Manning Piano & Organ Co.

London (No Street Address necessary) Canada 22

Note the Color of *your* flour—
And the Bread it makes for you.
Delicately *creamy* is FIVE ROSES flour.
Because it is *not bleached*, don't you see.
Clear—Immaculate—Desirable.
A *pure* Manitoba wheat flour—FIVE ROSES.
And the healthy sun-ripened spring wheat berries are *naturally* of a *golden* glow.
And the meaty *heart* of the polished kernels is *creamy*.
Milled from *this* cream, FIVE ROSES is delicately "creamy."
The only *natural* flour from Manitoba's prime wheat.
Which gets whiter and whiter as you *knead* it.
And *your* bread is most appetizing, *unusually* attractive in appearance.
Looks good.
And *is* good.
Bake this purest *unbleached* flour.

Five Roses Flour

Not Bleached Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED MONTREAL

Barred Plymouth Rocks, pullet mating—1 and 2, Craig Bros.; 3, Watson Lutz.

Brown Leghorns, cockerel mating—1, Hartland Poultry yards.

Brown Leghorns, pullet mating—1, H. P. yards; 2, W. H. Henry.

TURKEYS, DUCKS AND GEESE.

Bronze Turkey, 1 yr. male—1, J. Titus Barnes; 2, T. J. Etter; 3, Hartland Poultry yards.

Bronze Turkey, 1 yr. female—1, Albert Boswall; 2, J. Titus Barnes; 3, H. P. yards; 4, T. J. Etter.

Bronze Turkey, 1912 male—1, J. Titus Barnes; 2, H. Lawrence; 3, A. Boswall; 4, T. J. Etter.

Bronze Turkey, 1912 female—1, A. Boswall; 2, J. Titus Barnes; 3, H. Lawrence; 4, R. R. Black.

White Holland, 1 yr. male—1, Hartland Poultry yards.

White Holland, 1 yr. female—1, H. P. yards; 2, A. Boswall.

White Holland, 1912 male—1, H. P. yards.

White Holland, 1912 female—1, H. P. yards.

A. O. V. Turkey, 1 yr. male—1, H. P. yards.

A. O. V. Turkey, 1 yr. female—1, H. P. yards; 2, T. J. Etter.

A. O. V. Turkey, 1912 male—1, A. Boswall; 2, Hartland Poultry yards.

A. O. V. Turkey, 1912 female—1, A. Boswall; 2, H. P. yards.

Tolouse, 1 yr. male—1, Hartland Poultry yards; 2, A. Boswall.

Tolouse, 1 yr. female—1, A. Boswall; 2, Hartland Poultry yards.

Tolouse, 1912 male—1 and 2, A. Boswall; 3, H. P. yards; 4, Watson Lutz.

Tolouse, 1912 female—1 and 2, A. Boswall; 3, Watson Lutz; 4, Hartland Poultry yards.

Bremen, 1 yr. male—1, J. E. Baker & Son; 2 and 4, A. Boswall; 3, J. Titus Barnes.

Bremen, 1 yr. female—J. E. Baker & Son; 2, H. P. yards; 3, A. Boswall; 4, J. T. Barnes.

Bremen, 1912 male—1 and 4, A. Boswall; 2, Carl Ripley; 3, H. P. yards

Bremen, 1912 female—1 and 3, A. Boswall; 2, Carl Ripley; 4, H. P. yards.

Geese, A. O. V. 1912 male—1, H. Lawrence; 2, H. P. yards; 3, A. G. McLellan; 4, A. Boswall.

Geese, A. O. V. 1912 female—1, H. P. yards; 2 and 3, A. Boswall.

Geese, 1 yr. male—1, H. P. yards; 2, Courtney Lusby; 3, Robt. Chapman 4, A. Boswall.

Geese, A. O. V. female—1, Courtney Lusby; 2, H. P. yards; 3 and 4, Robt. Chapman.

Ducks, Pekin, 1 yr. male—1 and 3, Maritime Poultry & Supply Co.; 2, Albert Boswall.

Ducks, Pekin, 1 yr. female—1 and 3, Maritime Poultry & Supply Co.; 2, Albert Boswall.

Ducks, Pekin, 1912 male—1 and 2, Albert Boswall; 3, Maritime Poultry & Supply Co.

Ducks, Pekin, 1912 female—1 and 2, Albert Boswall; 3, Maritime Poultry & Supply Co.

Ducks, Rouen, 1 yr. male—1, T. J. Etter; 2, Albert Boswall; 3, A. H. Boswall.

Ducks, Rouen, 1 yr. female—1, Albert Boswall; 2, A. H. Boswall; 3, H. P. yards.

Ducks, Rouen, 1912 male—1 and 2, Hibbert Lawrence; 3, Albert Boswall.

Ducks, Rouen, 1912 female—1, H. P. yards; 2, Albert Boswall; 3, A. H. Boswall.

Ducks, Muscovey, 1 yr. male—1, F. W. Pickles; 2, H. P. yards; 3, F. M. Merritt.

Ducks, Muscovey, 1 yr. female—1, F. W. Pickles; 2, H. P. yards; 3, F. M. Merritt.

Ducks, Muscovey, 1912 male—1, F. W. Pickles.

Ducks, Muscovey, 1912 female—1, F. W. Pickles.

Ducks, Indian Runner, 1 yr. male—1, H. P. yards; 2, Chas. Symes.

Ducks, Indian Runner, 1 yr. female—1, H. P. yards; 2, Chas. Symes.

Ducks, Indian Runner, 1912 male—1, J. T. Barnes; 2, H. P. yards; 3, Maritime Poultry & Supply Co.

Ducks, Indian Runner, 1912 female—1, H. P. yards; 2, J. T. Barnes; 3, H. P. yards.

Best 2 Barred Plymouth Rock A. O. V. cockerels—1, W. H. Henry; 2, Cooke McCallum.

Best 2 Barred Plymouth Rock A. O. V. pullets—1, H. P. yards.

Best 2 White Wyandotte cockerels—1 and 4, J. S. Thompson; 2, R. R. Black; 3, Cooke McCallum.

Best 2 White Wyandotte pullets—1, R. R. Black; 2, H. P. yards.

Ducks, Cayuga, 1 yr. male—1 and 2, Maritime Poultry & Supply Co.

Ducks, Cayuga, 1 yr. female—1 and 2, H. P. yards.

Ducks, Cayuga, 1912 male—1 and 2, H. P. yards.

Ducks, Cayuga, 1912 female— 1 and 2, H. P. yards.

DRESSED POULTRY.

Best 2 turkeys, over 1 yr, males—1, H. P. yards; 2, T. J. Etter.

Best 2 turkeys, over 1 yr. females—1, H. P. yards; 2, T. J. Etter.

Best 2 turkeys, 1912 males—1, R. R. Black; 2 and 3, T. J. Etter; 4, L. H. D. Foster.

Best 2 turkeys, 1912 females—1 and 3, R. R. Black; 2, J. McCully Pipes; 4, H. P. yards.

Best 2 geese, white—1, R. R. Black; 2, L. H. D. Foster; 3, Carl Ripley; 4, H. P. yards.

Best 2 geese, colored—1 and 2, R. R. Black; 3, L. H. D. Foster; 4, H. P. yards.

Best 2 ducks, white—1 and 4, R. R. Black; 2, H. P. yards; 3, L. H. D Foster.

Bset 2 ducks, colored—1, J. McCully Pipes; 2 and 3, E. C. Black; 4, T. J. Etter.

Best 2 Barred Plymouth Rock cockerels—1, Mrs. Geo. Ripley; 2, J. R. Harrison; 3, Jack Thompson; 4, Craig Bros.

Best 2 Barred Plymouth Rock pullets—1, Jack Thompson; 2, John R. Harrison; 3, Cooke McCallum; 4, Carl Ripley.

Best 2 White Wyandotte A. O. V.

(Continued on page 193.)

"Hello, Tommy! Chores done already?"
"Yep! Aint you seen our new Litter Carrier?
It's a cinch—You should write to
Dillon's for their book—same as Dad did."

You can if you work hard enough, and if you have the time and patience, keep stables perfectly clean with the help of fork, broom and wheel barrow.

But those were ways of twenty years ago —before labor was so high and hard to get.

Stable Cleaning by the Dillon Method can be cut down to less than half the time, and a quarter the labor formerly required,

Your man's time is valuable — then cut down the time he spends cleaning the stables.

Your stock is valuable—then give them cleaner and healthier surroundings.

DILLON'S Litter Carrier

Figure it out for yourself.
Get our free book.

Dillon's sell direct to the Farmer. There are no Agents and no Agents' profits. The price is the same to all, and lower than you would expect for such substantial and well-built equipment. DILLON'S BOOK ON CLEAN STABLES gives you an exact idea of what you can accomplish for a small outlay. Write for a free copy. 2

R. DILLON & SON
OSHAWA, ONT.

Gid, Sturdy or Turn-Sick.

The sheep is subject to a very serious malady that causes severe illness called gid, sturdy or "turn-sick." The first and the last names are descriptive of the trouble, because the animal suffering becomes very giddy and often turns about in a circle in an aimless sort of way. Some animals are simply dull and stupid, but generally unsteady on their feet, while the head is carried on one side. Sometimes blindness comes on, but in nearly every case the poor creature is unable to feed, and if a remedy is not applied it soon becomes exhausted, wastes away and dies.

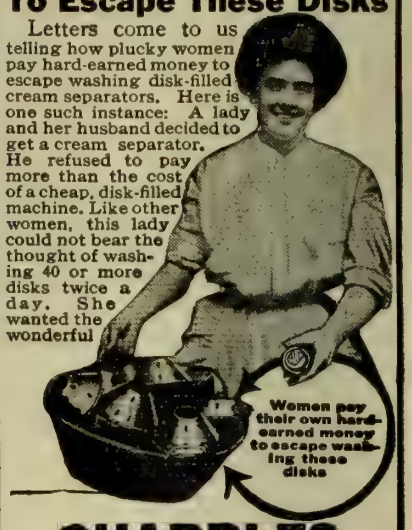
Now the cause of this illness is the development of a cyst or small bladder on the brain. It is a little bag, so to speak, varying in size, but sometimes as big as a hen's egg, and contains a liquid, while on its surface is a large number of little white spots, each of which contains the head of what will in due course become the tapeworm of the dog. They remain in this stage until the sheep dies or is killed or the cyst is removed by surgical means, and this is how the trouble comes about. The cyst is thrown away, and often attracts the notice of the dog, always in search of food, who promptly swallows it. In the dog the full tapeworm is developed, and thus the poor animal suffers also. In due course portions of the tapeworm are voided, and if the dog runs about the pastures, as dogs on farms generally do at some time or other, they are deposited on the grass where the sheep graze. They are, of course, minute in size, and are swallowed by the sheep in the act of feeding. They bore their way through the wall of the stomach, and are carried by the blood vessels to the brain and to other parts of the body. They develop once more into the cysts, and so it goes on from year to year unless a stop is put to it.

What are the measures to take then? Obviously, if the dog is found to be infested with tapeworm he should be confined until, by means of medicine, the worm is got rid of, and this—all portions of it—should be burnt. Remember that the head of the worm is the narrowest portion, and the work of destruction is not finished until this has been voided and dealt with. If the sheep are suffering from gid, when they are killed or when they die let the cysts be treated in the same way. By this means the cycle will be broken, and neither animal will be troubled. But there is danger from stray dogs running in the fields, so that watch should always be kept and decided measures taken as soon as there is evidence of the presence of either cyst or worm.

The dog suffers greatly from the presence of the tapeworm, but this is comparatively a small matter when set against the loss and suffering in the case of the sheep, because, owing to the position of the cysts in the brain, it is very difficult to apply any remedy. Some shepherds are very skillful in the operation of piercing the skull and puncturing the bladder, parts of which they manage to remove, thus giving relief to the sheep; but this, as may be imagined, is a very difficult and indeed a dangerous operation, and few people who are not trained veterarians can carry it out successfully. Moreover, the value of the average sheep does not permit of the payment of high fees for skilled assistance of this kind, so that the general course is that the animal suffers until it dies, or—if at all fit for killing—it is sent to the butcher. Even in the latter case there is distinct loss, for a good price cannot be obtained for an unfinished animal, and all that can be said of this method is that it is making the best of a

SHE PAID
To Escape These Disks

Letters come to us telling how plucky women pay hard-earned money to escape washing disk-filled cream separators. Here is one such instance: A lady and her husband decided to get a cream separator. He refused to pay more than the cost of a cheap, disk-filled machine. Like other women, this lady could not bear the thought of washing 40 or more disks twice a day. She wanted the wonderful



SHARPLES
Tubular Cream Separator

because Dairy Tubular bowls contain only the little piece shown in this girl's left hand. She knew Tubulars have twice the skimming force of others and skim twice as clean, thus paying more every year in extra profits than could be saved through buying any cheap machine. So she added her own hard-earned money to what her husband was willing to pay and bought a Sharples Tubular. Now she is one of the happiest, most contented separator users you ever saw. What higher praise could be given Tubulars?

Do you want a free trial? Do you want to exchange your old separator in part payment for a Tubular? You can do either. Ask for Catalog No. 194

THE SHARPLES SEPARATOR CO.
TORONTO, CANADA. WINNIPEG, CANADA.

To The Public

We beg to announce that we have purchased the good will and interest of the EMPIRE LINIMENT CO. Ltd. and will supply the trade for this excellent Liniment from our factory at Middleton, where all orders should be addressed.

C. GATES SON & CO.

What Says C. H. Purdy, of Bear River, Warden of Digby County, N. S.?

"I was a complete cripple with Rheumatism saw

EMPIRE LINIMENT

advertised and tried it, after every known Liniment and Rheumatic cure. Here I am to-day, sound and well, after using only a few bottles. I recommend it to all sufferers. Don't be without it.

C. H. PURDY.

Minard's Liniment Co., Limited.

Gentlemen,—Last winter I received great benefit from the use of MINARD'S LINIMENT in a severe attack of LaGrippe, and I have frequently proved it to be very effective in cases of Inflammation.

Yours,
W. A. HUTCHINSON.

Columbian Wyandottes

THE LATEST AND BEST OF THE WYANDOTTE FAMILY

Combining the great utility qualities of the White Wyandotte with the beautiful markings of the Light Brahma.

Beatiful Birds Great Layers Splendid table fowl

We can supply you with prize winners or choice utility brids at prices you can afford to pay. Write us anyway.

We also have for sale, 1 cockerel, 3 pullets, Rose Comb R. I. Red; 4 pullets, S. C. R. I. Red; and a new Peerless Incubator, that we will exchange for stock or sell very cheap.

Also a 30 acre Fruit Farm, bargain for someone

Orchard Hill Farm *Brown's Flats, N. B.*

Butter Parchment

Write us about our co-operative scheme.

We can save you just half of the money you pay now and remember we sell nothing but Pure Parchment.

The Maritime Pub. Co., Ltd.
Direct Parchment Importers, Sussex, N. B.

COULD NOT LET ANYONE TALK TO HER

SHE WAS SO NERVOUS.

Diseases of the nervous system are very common. All the organs of the body may be sound while the nervous system is all upset, on account of the troubles and worry which fall to the lot of one who has to look after the troubles incident to housekeeping, and when the nerves become unstrung the heart is also affected.

In Milburn's Heart and Nerve Pills is combined a treatment that will cure all forms of nervous disorder as well as act on the heart itself, and for this reason we would highly recommend them to all run down women.

Mrs. Wm. Smith, Terra Nova, Ont., writes:—"I wish to tell you that I have used Milburn's Heart and Nerve Pills. I was so nervous I could hardly let anyone talk to me until a neighbour told me to try your Milburn's Heart and Nerve Pills. I got three boxes, and did not have to get any more as they completely cured my nervous system."

Milburn's Heart and Nerve Pills are for sale at all dealers, or mailed direct on receipt of price, 50 cents per box, 3 boxes for $1.25.

The T. Milburn Co., Limited, Toronto, Ont.

HIGH CLASS

JEWELRY

18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....**68 cents**

18k Rolled Pendants, worth $3.00, our price..... ....**99 cents**

Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....**$1.36**

Boys Watch..... .....**69 cents** nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
Box D.
Sussex, New Brunswick.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

bad job. If the disease is at all advanced and the animal has become emaciated, the flesh is of course unfit for food.

As a dog may suffer from tapeworm for some time before the signs are noticed, it is a good plan to tie up every dog for a few days in the spring while a dose of medicine is operating. Various rough and ready methods of trying to get rid of the cysts are adopted, but as they involve somewhat brutal treatment and are absolutely ineffective, no good purpose would be served by detailing them.

WATER FOR SHEEP.

While it is quite true that sheep drink very little water, the notion entertained largely that they require none is quite erroneous. It should be remembered that in ordinary conditions the sheep consumes a large amount of liquid with its food. Roots, for example, contain some 80 to 90 per cent. of water, sometimes even more. That is to say, in 100 lb. of turnips, between 80 and 90 lb. will be water, and this is equal to over 8 gallons. Again, the grass in this country is generally, during part of the day, coated with moisture, and, when grazing, the sheep then obtains a supply of liquid sufficient for its modest needs. But in times of drought, when the earth is burnt up, or when a large proportion of dry food is given to them, sheep need a direct supply of water and they suffer without. At one particular season, also, when the ewes are suckling their lambs and the demands upon the mothers are very heavy, a supply of water is urgently required, and it is cruelty to withhold it. The careful flock master will see that it is provided, and if it is kept available where they may run to it at will, he may be sure that the animals will not drink more than is good for them, and they may safely be left to satisfy their own needs. The water for the ewes and for the sheep generally should always be the purest and best obtainable, but indeed, the use of impure water for any kind of stock is strongly to be condemned.

The Dog and the Sheep.

The dog is without doubt the most intelligent of all the domestic animals, and he shows a capacity for understanding what he is expected to do by his master which is astonishing to those who are not well acquainted with his ways. Those who have watched the sheep-dog trials at Tring and elsewhere—arranged it is true largely with a view to the spectacular, but including nothing which is not part of the work ordinarily carried out by the shepherd's four-footed assistant in his task—have noted with admiration how skillfully he will guide his charges through an intricate labyrinth or "puzzle arrangement" of hurdles and bring them eventually to the desired spot, and this without any better guide than the signs of his master.

On the farm the dog is invaluable, and we should be the last to depreciate the services of the animal who is the constant companion of man and who has the knack of worming himself into the affection of his owner to an extent that is sometimes embarrassing. But it is well to point out that the dog, while an excellent servant if well trained, may, if badly trained, or not trained at all, which comes to the same thing, be not only a nuisance but a source of positive danger to the animals of the farm. And it is a common experience that on many a holding there is "too much dog," particularly among the sheep. Sheep are very timid animals, provided with very little in the way of defensive weapons, and when a dog is used to round them up they are often in a frenzy of excitement, and rush about in all directions, knocking against each other and, in the case of

The COLONIAL FERTILIZER CO.

OF

WINDSOR, N. S.

To supply the increasing demand for commercial fertilizer, in the Maritime Provinces, we have erected at Windsor, N. S., the LARGEST AND MOST COMPLETE FERTILIZER FACTORY IN THE DOMINION OF CANADA. We are confident that the quality of our goods, the results they will give and our business methods, will give us a good share of the fertilizer business in New Brunswick and Nova Scotia.

OUR FERTILIZERS are made of the very best materials that it is possible to obtain. The base of our goods is animal matter—bone, blood and tankage—which return to the soil, the materials which the growing animals have removed. To these we add Potash—of which we are direct importers,—and enough chemical salts to give the crops an early and vigorous start.

OUR PLANT is equipped with the most up-to-date machinery for mixing, grinding and screening our fertilizer which insures good mixing of all the different materials, and its ***arrival in your hands in perfect mechanical condition.***

OUR MANAGEMENT is thorough and capable and we have at the head of our sales department and factory, an experienced fertilizer man who has been associated for many years with the largest fertilizer companies in the country. This means that our materials will be the best, our brands what the crops require and every care will be taken to turn out the best goods that careful and efficient management can give.

We offer a large number of brands varying in analysis and price from the lower grades to be used with stable manure, to the very highest grades which require no other dressing of any kind.

We want a good man to sell our fertilizers in every district in New Brunswick and Nova Scotia.

Write for prices and terms to this office or to our general agent for New Brunswick. JAMES M. McLEOD, Wilmot, N. B.

COLONIAL FERTILIZER CO., WINDSOR, N.S.

John Richards, BIDEFORD, P. E. Island

BREEDER AND IMPORTER OF

Clydesdale Horses

of the highest quality and breeding

The stud includes the noted show and breeding horse

"Baron Kelvin"

Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand.

Shetland Ponies of the smallest type and best breeding

Polled Angus Cattle of the most fashionable strains

Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

Friesian Holsteins

WHEN starting Friesian Holsteins, start right and buy your stock from the prize winning herd of the Sea View Stock Farm, Buctouche, N. B., which herd carried off 30 prizes from St. John and 26 from Halifax Provincial Fairs (1912) including firsts and seconds for Males and Females as well as the lion's share of the best prizes throughout. All animals from this herd will be sold at the right figure on account of scarcity of room. The following is a list of some of the stock I have to offer: 4 cows; 2 bulls, 15 months old; 2 heifers 1 year old and several Heifer and Bull calves, all prize winners and from prize winning stock. If you intend buying the right kind of stock do not delay as my herd is dwindling down rapidly. When buying, buy the right kind of stock with the right blood, at the right place and at bargain prices.

Sea View Stock Farm

J. D. IRVING, Prop.

BUCTOUCHE, N. B.

Wish-Ton-Wish Stock Farm

BREEDERS OF

High Class Holstien, Friesian Cattle, and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Sir Mercena Laforit Lad, who won first prize where ever shown.

Can spare a good Berk sow or two ready to breed, am also booking orders for young pigs for spring delivery.

HARDING BROS.

PROPRIETORS

Welsford, New Brunswick

in-lamb ewes, a vast amount of damage is done in what may be only a few minutes pleasureable excitement to the canine animal.

Far too often the dog, accompanying his master or some member of the family, runs about the fields and indulges in a little scamper on his own account, and the mischief done in these journeys may be incalculable. We remember an old farmer of experience declaring that he would never allow a strange dog near his in-lamb ewes, and that he restricted the use of even the shepherd's dog. And it is hardly necessary to state that the shepherd's animal, which is probably well known to the flock and is in the work, is much less harmful than the majority of cases trained for his chance and irrepressible dog who takes a delight in barking and yelping at the heels of the frightened sheep, not biting them perhaps, but putting them into a fever of excitement which, in the special case referred to, may result in a loss of many pounds to the owner of the flock. A demonstrative dog may give a serious fright to a child, or even to an adult, before his playfulness becomes manifest, and naturally this is true in a greater degree where such a timid animal as the sheep is concerned.

The dog found guilty of chasing sheep on its own account should be immediately banished. Great losses have been reported from time to time to have been caused by the "driving" of ewes, who in their fright have rushed hither and thither and, falling into ditches on top of each other, have been smothered- A heavy ewe is particularly prone to accidents of this kind, and has very little power to extricate herself when turned over in a ditch or stream; and whatever good points such a dog may have, he is out of place near a flock, and should be removed from temptation. What may be merely sportiveness to him is death to the ewe. There are dogs, of course, who hunt sheep for the purpose of worrying them, and sharp measures of repression are needed in their case.

But there is another way in which the dog, even the shepherd's well trained animal, may be a source of danger to the sheep, and the facts show the curious connection that exists between various forms of animal life.

Extensive Additions to I. C. R. Rolling Stock.

Although the rolling stock has been largely augmented during the past year, the tremendous increase of the Intercolonial Railway has made it necessary for further additions, and arrangements are now under way for large orders for both cars and locomotives.

The development of the freight business on the Government line during the past two years is one of the healthy signs of the growing industrial development of the Maritime Provinces.

The total tonnage carried during the past year has largely exceeded all past records and is steadily increasing.

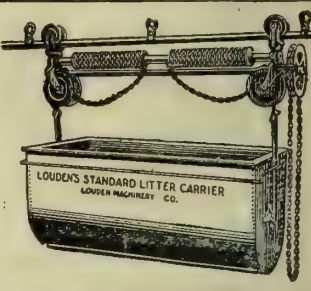
Various products are now being rushed through by the fast freights to the West that a few years ago were only handled in limited quantities. Large shipments of fresh and cured fish are being made from Mulgrave and from Halifax, and there is this year a very heavy movement in Nova Scotia apples to the Canadian West.

Plaster and gypsum are also being shipped extensively while the lumber shipments are very heavy. The past year has been a record breaker in the I. C. R. freight business.

SASK-ALTA STEEL RANGE

guaranteed by McClary's--the largest stove and range makers in the British Empire. We also guarantee the "Sask-Alta" to give complete and lasting satisfaction.

McClary's



The Carrier For You

IN choosing a litter carrier, one should consider all of the equipment necessary for a complete outfit: **Carrier, Track, Hangers, Switches, and Swing Pole fittings.** Do not place an order before learning of the many distinctive features to be found in Louden Equipment.

LOUDEN Litter Carrier

—is simple in construction, and easily operated. Carrier box is made of heavy galvanized steel, strongly reinforced with angle iron. Worm hoisting gear insures maximum speed and power. Track is of high carbon steel and is easily installed.

Write to-day for Illustrated Catalogue.

Our architectural department will supply free Barn plans.

The LOUDEN MACHINERY CO.
Dept. 68 GUELPH, Ont.

100 CHRISTMAS AND NEW YEAR'S POST CARDS FOLDERS AND BOOKLETS, SEALS, TAGS, LABELS, ENCLOSURE CARDS **50c**

Works of art beautifully printed in most handsome colors and gold embossed. This BIG 100 piece Christmas Set is the greatest value ever offered for only 50c. Agents can double their money selling these sets to their friends. With every order we send a handsome

24 PAGE POST CARD ALBUM FREE

The actual value of these goods is $1.25 if bought in a store. The Booklets alone sell for 50c. We send EVERYTHING mentioned all POSTPAID to any address for 50c. We will include premium list. Money returned if not delighted. Order now. Address.
International Emporium, Beebe, Que.

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

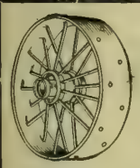
THE CASHIER SAID—"I notice your Butter Checks have been getting bigger lately. Did you buy another cow?".

THE FARMER SAID—"No, I'm using WINDSOR SALT. It makes better butter and I am getting better prices. It certainly does pay me to use Windsor Dairy Salt."

THE CASHIER SAID—"I should say it does. Do you mind if I let some of my friends in the secret?"

THE FARMER SAID—"Go ahead. Tell them all to use WINDSOR DAIRY SALT if they want to get the 'top' price for their butter" 67D

WINDSOR DAIRY SALT



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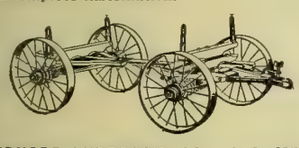

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Farmer Ads. will Bring Results.

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(Continued from page 189.)

cockerels—1, C. R. McKay; 2 and 3, Cooke McCallum; 4, H. P. yards.

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Best 2 Buff Orpington cockerels—1, 3 and 4, Cooke McCallum; 2, W. H. Henry.

Best 2 Buff Orpington pullets—1, Cooke McCallum; 2, W. H. Henry.

Best 2 Rhode Island Red cockerels—1, C. J. Cock; 2, W. H. Stiles; 3, W. H. Henry; 4, H. P. yards.

Best 2 Rhode Island Red pullets—1, Cooke McCallum; 2, W. H. Henry; 3, C. J. Cock.

Best 2 A. O. V. Yellow Legged cockerels—1, Carl Ripley; 2, C. J. Cock; 3, H. P. yards.

Best 2 A. O. V. Yellow Legged pullets—1, C. J. Cock.

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Best 2 A. O. V. White Legged pullets—1, Carl Ripley.

Best 6 chickens, any variety, all of one breed—1, John R. Harrison; 2, Jack Thompson; 3, J. S. Thompson; 4, Cooke McCallum.

Best 12 chickens packed for export—1, Jack Thompson; 2, H. P. yards.

Heaviest and best dozen white eggs—1, J. N. B. Harrison; 2, M. E. Goodwin.

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Heaviest 12 dozen case—1, C. J. Etter; 2, M. B. Harrison.

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Best 1 doz. Jars Honey, light—1, Julia A. Corbitt; 2, Craig Bros.; 3, B. W. Barker; 4, W. G. Asbell.

Best 1 doz. Jars Honey, medium—1, B. W. Barker; 2, Craig Bros.; 3, W. G. Asbell; 4, Julia A. Corbett.

Best 1 doz. Jars Honey, dark—1, B. W. Barker; 2, Craig Bros.; 3, Julia A. Corbett; 4, J. Titus Barnes.

Best Section Honey in comb, light—1, W. B. Wallace; 2, Craig Bros.; 3, 1, W. G. Asbell; 4, J. Titus Barnes.

Best Section Honey in comb, medium——1, W. G. Asbell; 2, Craig Bros.; 3, J. Titus Barnes; 3, B. W. Barker.

Best section honey in comb, dark—1, W. G. Asbell; 2, J. Titus Barnes; 3, Julia A. Corbett; 4, W. B. Barker.

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Albert—1, Allan A. Colpitts; 2, W. B. Colpitts.

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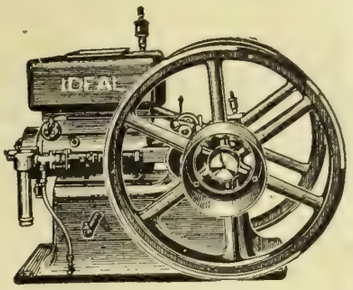

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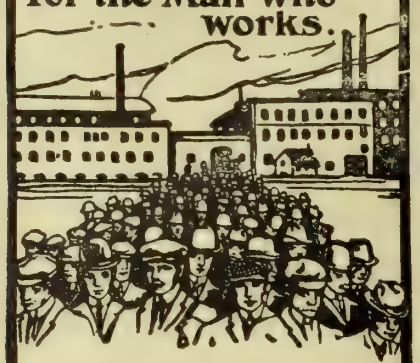

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From Canada's famous Breeder's Stock (Bells, Ont) (Tom 38 lbs.) young Toms $6.00, hens $5.00. Apply,
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THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

Winter Protection of Young Apple Trees.

INJURY FROM VERMIN.

Precautions must be taken to prevent injury from mice, rabbits, etc. Many failures in apple growing here and elsewhere are caused by these pests and a large annual toll in the form of dead trees is annually exacted by them. As far as possible crops harboring and attracting such pests should be avoided and the accumulation of litter, trash, weeds, long grass, etc., which furnish suitable winter quarters for these animals, prevented. Mice work under the snow and damage from them may be prevented by tramping the snow solid round the tree after the first few snowfalls. This method of protecting is, however, somewhat dependent on the weather. The cheapest and safest protection is secured by wrapping the trunks cylinder fashion with paper, wood veneer or some such material. Good strong building paper, as light as possible in color gives good satisfaction. This may be placed round the trees in the fall, not tightly, but leaving an inch or so of space between the inside of the paper and the bark of the tree. The soil should then be mounted up around the bottom of the paper to a height of six inches or so. Veneer tree protectors, made of thin material one-eighth inch thick, 12 inches wide, 18 inches long, and costing about one cent each will last three or four years and afford good protection. The paper or veneer as the case may be should be removed in the spring, about the middle of April.

SUN SCALD.

This form of damage is very common in some localities, so common, in fact, that a tree which escapes it is a rarity. The greater part of the damage occurs in late winter, or during the warm spring days when the snow is going off. During the warm afternoons the sun, reflected from the snow against the south-west sides of the tree trunks, becomes very warm. The trunks are thoroughly warmed on that side. They are thawed out, and the bark becomes soft, sappy and pliable. Then, when the sun goes down and the temperature falls again to zero, the bark is again frozen tignt. The next day the same thing happens, and so day after day the young bark freezes and thaws, and by this means is torn to shreds. When spring arrives the bark is killed and broken open. Then various kinds of fungi get in and the damage which begins by freezing and thawing ends with spread of canker and other troubles all round the trunk of the tree. The best preventives of sun scald are low heads and veneer and paper cylinder protectors. High-headed trees, which are of doubtful value anywhere, are altogether undesirable in places where sun scald is bad The protectors of paper or wood veneer recommended above for mice and rabbits will also give practical immunity from sun scald. This trouble is a very serious one. It is not uncommon to find entire young orchards ruined by it. In sections where this trouble is prevalent great pains should be taken to protect young orchards from it. For the benefit of the fruit growers the Fruit Growers' Association has secured about 3000 veneers and will fill orders for them at cost price. Apply to the Secretary N. B. F. G. Association, Fredericton, N. B.

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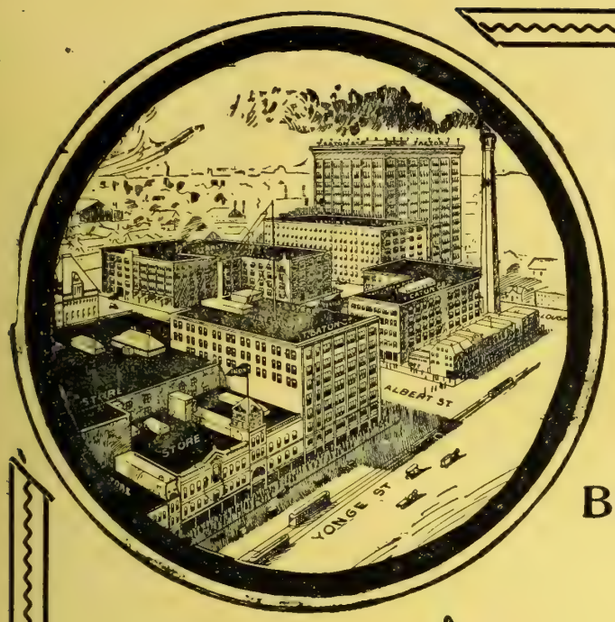

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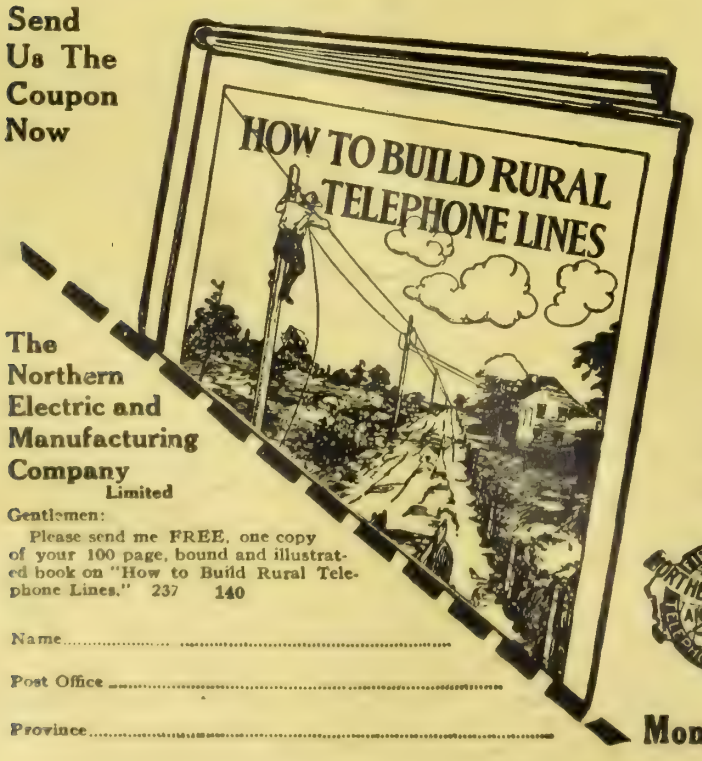

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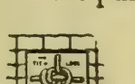

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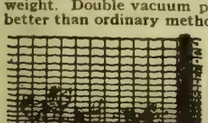

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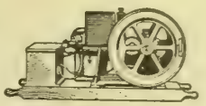

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5-40-0 Has 5 line wires 40 in. high 9 stays to the rod, all No. 9 hard steel wire. Spacing 10, 10, 10, 10, Price per rod if ordered before Jan. 15th	17c	Price after Jan. 15th	19c
6-40-0 Has 6 line wires, 40 in. high 9 stays to the rod, all No. 9 hard steel wire. Spacing 7, 7, 8, 9, 9, Price per rod if ordered before Jany. 15th	19c	Price after Jan. 15th	21c
7-40-0 Has 7 line wires, 40 in. high 9 stays to the rod, all No. 9 hard steel wire. Spacing 5, 6, 6, 7, 7 1-2, 8 1-2. Price per rod if ordered before Jany. 15th	21c	Price after Jan. 15th	23c
8-34 Has 8 line wires, 34 in. high 12 stays to the rod, all No. 9 hard steel wire. Spacing 3, 3 1-4, 3 1-2, 4 3-4, 5 1-2, 6, 8. Price per rod if ordered before Jany. 15th	25c	Price after Jan. 15th	27c
8-40 Has 8 line wires, 40 in. high 12 stays to the rod, all No. 9 hard steel wire. Spacing 3, 4, 5, 6, 7, 7, 8, Price per rod if ordered before Jany. 15th	26c	Price after Jan. 15th	28c
7-48-0 Has 7 line wires, 48 in. high 9 stays to the rod, all No. 9 hard steel wire. Spacing 5, 6, 7, 9. 10, 11, Price per rod if ordered before Jany. 15th	22c	Price after Jan. 15th	24c
8-48 Has 8 line wires, 48 in. high 12 stays to the rod, all No. 9 hard steel wire. Spacing 4, 5, 6, 7, 8, 9, 9, Price per rod if ordered before Jany. 15th	27c	Price after Jan. 15th	29c
9-48-0 Has 9 line wires, 48 in. high 9 stays to the rod, all No. 9 hard steel wire. Spacing 3, 4, 5, 5, 6, 8, 8, 9, Price per rod if ordered before Jany. 15th	27c	Price after Jan. 15th	29c
9-48 Same as 9-48-0, with 12 stays to the rod, Price per rod if ordered before Jan. 15th	29c	Price after Jan. 15th	31c
10-50 10 line wires, 50 in. high 12 stays to the rod, all No. 9 hard steel wire. Spacing 3, 3 1-4, 3 1-2, 4 3-4, 5 1-2, 6, 8, 8, 8. Price per rod if ordered before Jan. 15th	31c	Price after Jan. 15th	33c
11-54 Has 11 line wires 54 in. high 12 stays to the rod, all No. 9 hard steel wire, spacing 3, 3 1-4, 3 1-2, 4 3-4, 5 1-2, 6, 6, 6, 8, 8, Price per rod if ordered before Jan. 15th	35c	Price after Jan. 15th	37c
15-50P Stock and Poultry Fence, Has 15 line wires 50 in. high 24 stays to the rod top and bottom, No. 9 filling No. 12. Spacing very close for poultry, Price per rod if ordered before Jan. 15th	35c	Price after Jan. 15th	37c
Staples galvanized 1 3-4 in. per box 50 lbs. if ordered before Jan. 15th	$1.40	Price after Jany. 15th	$1.50
Brace wire (soft 25 lb. coil each) if ordered before Jan. 15th	75c	Price after Jan. 15th	85c
Barb wire, galvanized (two point), 80 rod spools, each, if ordered before Jan. 15th	$2.00	Price after Jany. 15th	$2.25
STRETCHER—An all iron stretched, top and bottom draw, very heavy chain. Extra single wire stretcher and splicer, freight paid with fence orders only, if ordered before Jany. 15th	$7.50	Price after Jany. 15th	$7.50

Farm Gate, made of 1 3-8 tubing, filled with all No. 9 wire, 12x48. Each	$4.00	Farm Gate 13x48, Each..	$4.25	Farm Gate, 14x48, Each..	$4.50	Walk Gate, 3½x48, Each..	$3.00

The above prices include freight prepaid by us to any railroad station (electric and boat lines not included), south of North Bay in old Ontario. We do not prepay freight on gates, stretchers, barb wire, brace wire or staples, except when ordered shipped with fence. ALL FENCE IN 20, 30 AND 40 ROD ROLLS ONLY.

Customers in New Ontario, Quebec, Maritime Provinces, and the North-West may deduct 2c per rod from the above prices of fence, 25c from the gates, stretcher and barb wire, 10c from the brace wire, and 15c from the staples; customer to pay his own freight from Sarnia. Remember, after January 15th the higher prices must be used. Write us, tell us what style you want, and we will tell you what your fence will cost you after paying your freight. We have never yet found a locality in the Dominion of Canada where our price with the freight added was not less by a good margin than your local or agent will ask you. We urge you to get your order to us before January 15th, in order to save the advance. Remit cash with order and we will guarantee the price. **ORDER TO-DAY.**

These prices on fence are less than the actual cost of the wire on the open market to-day, and in order to prevent speculators from ordering large quantities thus depriving the farmer of this benefit, we reserve the right to refuse any orders which in our judgment would come under this head.

The SARNIA FENCE COMPANY, Limited, Sarnia, Ont.

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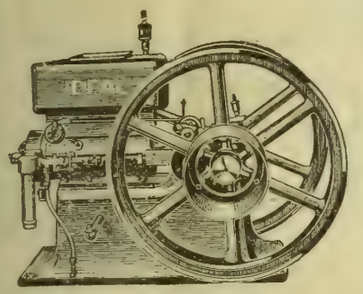

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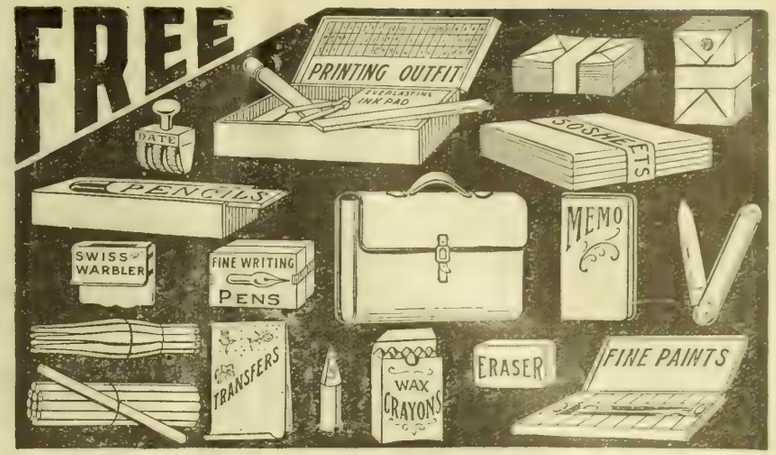

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Try. If you can't sell the Marvel Bluing send it back to us.

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Volume 18. SUSSEX, NEW BRUNSWICK, DECEMBER 24, 1912. Number 6.

How I Build a Reinforced Concrete Silo

By J. H. Manchester, Sussex, N. B.

A SILO is a tank built to preserve certain crops, such as corn and clover, which can be successfully grown on the average farm, keeping them in a succulent form to be fed to all kinds of farm stock at a time, such as the winter and during the shortage of pasture in the summer months when sufficient seed of this nature is otherwise not available and without an abundance of which, stock and particularly the dairy herd can not give satisfactory financial returns.

In order to have this succulent feed at all times a silo in most cases is absolutely necessary, for although we can grow a large weight of roots per acre it is almost impossible to raise sufficient for the full season and the labor in connection with the root crop is nearly double that of handling the corn crop.

Silos are built of nearly all kinds of building material, such as slate, wood, stone or concrete, but before deciding on any particular kind it is well to consider for oneself which in his own particular case would be the best. Of course, the representatives of each make claim perfection for theirs.

I had planned on building a silo for a number of years, and considered the different makes from every standpoint and then came to the conclusion that a reinforced concrete silo had every good point claimed for other makes, and that, while the initial cost of a wooden silo might be less, the repairs that would surely follow would more than cut out the original saving, while the concrete one would never need a cent for repairs and would keep on improving.

We built our Reinforced Concrete Silo in August, 1912, using Canadian cement. It is circular, 12x30 ft., 8 in. walls, 10 of the 30 ft. below the ground with a square pitched shingled roof, built at the west end by a 30x100 stock barn. It is joined to barn by a chute 3 ft. wide, the doors from the silo opening into it, and chute door opening into gangway between two rows of cattle. There are three windows in chute on south side and windows in gable of silo roof to receive blower pipe when filling.

We used Canada cement, sand, gravel and broken stone for the floor and foundation a 1, 3, 7, mixture, for the walls 1, 2½, 4½, for finishing floor 1,2; and for painting silo inside and out 1,1. The forms were made by a local wheelright, the inner and outer rings built in four sections or quarters, were made by bolting a 1x5 in board 3 ft. long to ⅜x2 flat iron bent in a circle placed six inches from each end of board, forms to be adjusted either to tighten or loosen by nuts on a connecting bolt with endless threads.

Our mixing board, 12ft.x12ft. wasdouble boarded and level built close to the excavation. We first put on sand 2½ bbls. (by wheelbarrow means) spread it out and put on four bags cement and mixed together dry, then opened out and filled centre with water and worked it together into a paste, then put 4½ bbls. broken stoneand gravel and when stone and gravel was covered with mixture it was ready to place. After we had about 9 inches in moulds, we put in 4 strands of No. 8 coiled wire twisted together, letting it come on the outside of the vertical reinforcement which consisted of the same number of wire and placed every 30 inches, about 3 inches from the outside mould, the horizontal wires were placed every 9 inches for the first 21 feet and every 12 for the last 9 feet. Had the silo been built all above ground more steel would have been necessary for the first 20 ft. A ten quart galvanized pail was used for handling cement and we used a spade for working and keeping stones from side of forms. Four men mixed and placed concrete for each ring of 3 ft. in five hours. We left it in position for three days, before raising forms, for which we used four double blocks, one man at each. It took as long to raise form and build staging etc. as to do the actual concrete.

The only tools used were two shovels, one spade, two hoes and one wheelbarrow and when completed the silo cost me, considering the building itself, the moderate amount of $304.87 made up as follows:—

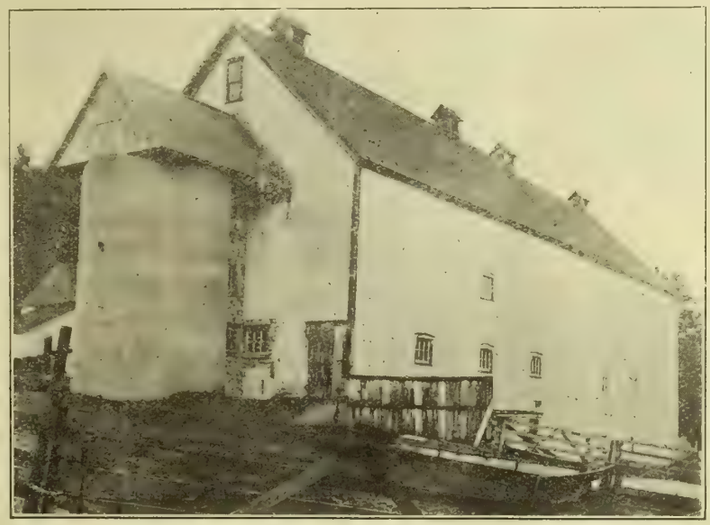
35 lbs. Canada cement, $1.95	$68.25
9 loads sand, $1.00	9.00
20 loads gravel, $1.00	20.00
4 cwt. wire, $2.60	10.40
4 windows, 2nd hand, $1.00	4.00
5 M 2in. shingles, $2.25	11.25
Boards, scantling, nails,	31.37
Labor for concrete work 256 hours at 15 cts.	39.30
Raising form and staging	39.30
Cost of form,	45.00
Excavating,	10.00
Building chute, roof and shingling	12,00
Matched 2in. pine for doors,	5.00
Total,	304.87

We had had no experience with conconcrete work, neither had we seen a silo of the kind and if any farmer wishes to undertake to build one I believe he can do so for the amount named, as we did. If we were doing the like again it is possible to cut our expenses considerably, as we have about $100.00 worth of lumber left, and the forms that cost $45.00 are as good as ever.

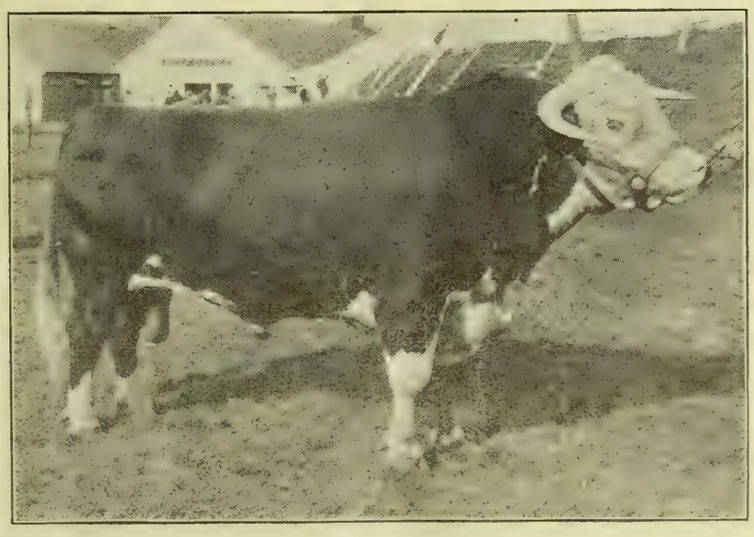
Editor's Note—Mr. Manchester has given our readers a concise statement of facts in regard to the manner in which he built his concrete silo. There are quite a number of silos in the Maritime Provinces and there is room for a great many more. Their owners find that they can carry their herds through the year much mor economically by using ensilage than they can with any other feed. Corn does exceptionally well in a great many districts in Maritime Canada and even in an off season a greater quantity of feed can be grown per acre by growing ensilage corn than can be grown from any other crop.

In order that the corn crop may be saved and fed to the best advantage it is necessary for the farmer to have a silo in which to store it.

Ensilage may be fed at all seasons of the year and is especially valuable in tiding over the seasons of short pasturage. A well filled silo is a guarantee against unsucculent rations.



J. H. Manchester's Reinforced Concrete Silo.



Hereford Bull

W. W. Black's Prize winning herd breeder

THE CARE OF MARKET EGGS.

By W. A. Brown, B.S.A., Dept. of Agriculture, Ottawa.

EGGS are a perishable food product. They do not improve with age and no amount of handling or manipulation will enhance their quality. The poor quality of the average market egg has been attributed by many persons to its retention in cold storage. This is an erroneous idea, for while the quality will not improve, yet if the eggs are full and fresh and sweet when placed in a well equipped and properly managed cold storage, there is not, during the time they are ordinarily held, sufficient change in quality to render them unfit for food.

Marked improvement has been made in the method of handling other kinds of food stuffs. The same old, antiquated methods of handling eggs that prevailed many years ago, prevail to-day. This article is a preliminary attempt to analyze the situation and point out ways and means of improvement.

EXTENT OF LOSS RESULTING FROM CARELESS METHODS.

So great is the shrinkage and loss in the egg trade and so inferior the quality of the average egg on the market, that the consumption of eggs would, no doubt, be seriously curtailed were it not for the fact that eggs are a staple in the general routine of household economy. They are prized as a high-class breakfast dish by practically everyone and are valued as a tonic, stimulant and almost perfect food for invalids, convalescents and children.

Gross neglect, carelessness, dishonesty and a general lack of appreciation of the perishable nature of an egg are causing to the Canadian egg trade a loss of several million dollars annually.

THE USUAL METHOD OF HANDLING EGGS.

Eggs under average conditions take a very circuitous course in reaching the consumer. Someone on the farm gathers the eggs whenever convenient, sometimes once a day, sometimes two or three times a week. They are carried to the house and held until such time as is convenient to take them to market. Then if the number available seems small, a hasty search, by the children, will usually reveal some hidden nests, the contents of which are added to those in the basket without question as to their condition or state of incubation.

These eggs are for the most part traded for merchandise at the country store and there, as a rule, their quality does not improve since they are often held for varying lengths of time and stored in questionable places. The egg buyer receives them next and, if working for the big packing firms, he hurries them on with all possible speed. If working for himself, he is apt to hold them, particularly on a rising market. From observation one might infer that the common carriers, the railways and the express companies are, at times, rather too prone to forget that the egg is perishable and the shell fragile, if one is to judge by their frequent lack of care in handling and in leaving them exposed to extreme heat on station platforms and in hot express cars.

Of course, there are careless dealers and commission men who allow the eggs to deteriorate in their hands, but as a whole the eggs receive better treatment in this section of trade than in any other. The dealers know that they cannot improve the quality of the individual egg any, and the large majotity of them honestly endeavor to prevent further deterioration in the shipments as received. By candling they remove the bad, the shrunken, the broken, the dirty eggs, etc., from among the good eggs, and place them in the grades where they belong. Many firms nave established regular purchase days and their buyers make regular rounds and shipments. Some firms even retain, for their own use, a number of refrigerator cars, which are dispatched regularly to receiving points. Eggs thus received are candled and some may be placed in storage. The dealer sells the eggs to the jobber or may sell direct to the retailer. As a rule, the jobber does not hold them long, and can and should improve his methods in fact may never see them.

Miss McKay

One of W. W. Black's prize winning Clydesdale mares at the 1912 Fall fairs.

The average retailer or city grocer considerably. It is business to advertise his goods, but he seems to forget that, while eggs will not melt and run away like butter or readily sour like milk or cream, they are nevertheless perishable. Many a grocer has lost good customers through unduly exposing his eggs behind a plate glass window in a heated store or by leaving them for a period of days close to a stove, a refrigerator or some other source of heat. The customer, in turn who is justly irritated at finding only eight or ten good eggs in a dozen, has no more justification than has the farmer's wife for placing the eggs on the top shelf in the kitchen cupboard, when the proper place for them is in a refrigerator or in a cellar where they will not come in contact with any mustiness, foul odors or other sources of contamination.

THE PRESENT SYSTEM OF TRADING AT THE COUNTRY STORE, CONDUCIVE TO A CONTINUATION OF CARELESS METHODS.

A great many bad eggs find their way to the market through the old-time practice of exchanging eggs for merchandise at the country store. Many a merchant would gladly give up the egg trade if he could. It places him in a very awkward position. He knows that to buy eggs is to sell goods. Therefore, it is not good bdsiness to refuse eggs and if he bids low his customer will go to his competitor across the street. He does not have the means to detect the bad eggs and some farmers knowing this take undue advantage of him. In fact the merchant has not time to candle eggs and buy on a loss-off basis, in the rush of the summer season. Many farmers put off their marketing until Saturday afternoon or evening and in the course of five or six hours the merchant may take in several thousand dozen. In the state of Kansas, where it has been made a criminal offence to offer, for sale, eggs unfit for food and the dealers have agreed to buy on a loss-off basis only, the country merchants have had a very good excuse for relinquishing their share in the trade. The eggs now go direct to the dealers and the result is a marked improvement in quality.

THE RESULTS OF LACK OF CARE

In order to secure some evidence on the lack of care, the resultant losses, causes of loss and the distribution of same throughout the year, a series of questions were sent out to over two hundred egg dealers in Canada. The first question was:—

"With reference to your own experience, do you consider the suggested figure of seventeen per cent for total shrinnage too high."

The answer from those engaged in handling eggs, direct from the farm or the country store, has been invariably "No" and some have indicated that the figure is not high enough. In fact the sum total of the estimates given in the subsequent pages slightly exceeds seventeen per cent.

I.—The Loss Through the Sale of Heated Eggs or in which the Germ has Commenced to Grow.—As a result of the heating of fertile eggs, from four to six per cent. of all eggs marketed are unfit for human food. A temperature of 70 degrees F. or a little higher will start the germ to grow. The greatest loss is apparent between the months of June and September although such eggs are often held until later.

In nature the purpose of an egg is to hatch a chick, but when man intends an egg for food he should aim to defeat that purpose. He must distinguish between an egg for hatching and an egg for market and eliminate the fertile eggs from the marketable product by excluding the male bird from the pen at all times except during the breeding season.

II.—The Loss Through the Sale of Shrunken, Held and Stale Eggs.—Sixty-five per cent of the contents of an egg is water; the shell is porous and evaporation takes place whenever the egg is surrounded by a temperature above freezing. The higher the temperature and the more rapid the air circulation, the greater will be the evaporation.

An egg will grow stale in the nest, if the house is hot and ill-ventilated or if broody and other hens sit on it. The water content will evaporate just as readily in the consumer's cupboard as in the farmer's kitchen and the country merchant has no right to keep his eggs near the stove than the city grocer has to place his behind the plate glass window.

Eggs in cold storage are held at a temperature of about 30 degrees and the fact that the average merchant or buyer has not similar facilities is ample reason why the eggs should not be held. Notwithstanding this, however, the practice of holding eggs for higher prices is so common that a shrinkage of not less than five per cent results. This is most apparent in the fall months, but has to be taken seriously into account from June until January inclusive.

III.—The Loss from the Sale of Rotten Eggs.—Rotten eggs like rotten apples find their way into the trade. They are not so readily detected, however, and for this reason are even a more serious menace. Common rots are the result of decomposition. The germ dies in a fertile egg. And under certain conditions rapid decomposition takes place and hydrogen sulphide gas is liberated. Eliminate the fertile egg and this repulsive form of loss will disappear.

Other forms of rotten eggs occur. The albumen of an egg constitutes an excellent culture medium for the growth of bacteria. An egg is moist when laid, and in the foul, unsanitary condition of many nests readily becomes infected. The porous shell offers little or no restance. The tough inner membrabe is, however, practically bacteria proof unless brought in contact with excessive dampness or even exposed to moist conditions for some length of time. It is for this and other reasons that interested dealers send out the instructions, "Under no conditions wash eggs." If a washed egg is placed in the consumer's hands without delay little trouble may result; but if the bacteria once enters into the albumen of an egg and that egg is held and exposed to conditions of moisture and warmth favorable to bacterial development, the different forms of spot rot readily appear. Some continue to grow even in the low temperature of a cold storage house. About three per cent. of all the eggs are discarded on account of loss in some form and the loss is apparent throughout the year, with the exception, possibly, of the months of March and April.

IV.—The Loss Due to Breakage.—Broken eggs are found in all sections of the trade. Accidents will occur, but carelessness and thoughtlessness account for a great deal of the breakage.

Broken eggs are known to the trade as leakers, dents or checks (blind checks). Leakers are not only a loss in themselves but they produce smeared eggs. Dents are eggs in which the shell is broken, but in which there is

no rupture of the inner membrane apparent. Blind checks are the faint cracks not readily apparent to the eye. They are only detected by the use of the candle or by clinking two eggs together.

Many eggs are broken in transit either through the jolting of loose or poorly packed eggs over the rough country roads or through careless handling by the cartage and express companies. Broken eggs, no matter how slight the break, should not be placed in any egg case intended for shipment. They not only constitute a loss themselves, but they soil the fillers and make them unfit for future use. At least three per cent. of all eggs marketed show breakage in some form and broken eggs are apparent at all seasons of the year, particularly in the spring.

V.—Loss and Shrinkage Through the Sale of Dirty Eggs.—Dirty eggs are of three kinds:—

1.—Plain dirties, those to which soil and manure adhere.

2.—Stained eggs, i. e. dirty eggs that have been washed.

3.—Smeared eggs, those that become covered with the contents of broken eggs.

The producer is largely to blame for the first two classes of dirty eggs. A dirty egg is a disgrace to the person who sells it. The hen should not

Albert Boswall, Sr.

"The Noted Shepherd." Pownal, P. E. I.

be blamed for the appearance of dirty eggs. They almost invariably lay clean eggs and they prefer to lay them in clean, cool places.

Dirty eggs should never be marketed. They are repulsive to the trade and they seriously detract from the appearance of good eggs and cause the entire shipment to sell at a lower price. This may not be apparent at the country store where severe competition forces the merchant to take all or lose a customer, but the dealer is obliged at considerable expense, to remove most of them and must therefore discount the price he pays accordingly.

It is not wise to wash market eggs. Washing removes the natural bloom and gloss and makes the eggs appear old and stale. Clean nests should be provided, thereby reducing the number of dirty eggs to the minimum. About three per cent. of all eggs marketed show contamination and it is particularly apparent in the wet seasons, spring and fall.

VI.—Loss Due to the Sale of Mouldy and Bad Flavored Eggs.—So readily do eggs absorb odors that in the early days of artificial refrigeration many packers incurred heavy financial loss through having stored their eggs in chambers containing citrous fruits, etc. In all modern cold storage houses large separate rooms are provided in which eggs alone are stored.

Musty eggs are very common, due no doubt to their having been collected in pails or baskets containing damp, musty straw or litter or to their having been placed in egg cases containing old, soiled fillers. Eggs are often held in damp, musty cellars where decaying vegetables, kerosene, etc., are also stored. The different forms of mould appear in eggs just as in cheese and, while desirable in the one, are repulsive in the other. Care should be taken to eliminate all possible source of contamination in this way. It is difficult to estimate the amount of loss caused by the above stated factors because they influence the flavor rather more than the appearance and as such their effect is not apparent until the eggs are consumed. Dealers estimate that at least one per cent of all eggs are affected in this way, but the experience of the housewife indicates that this figure should be much higher.

VII.—Loss from Frosted Eggs.—While it is unfortunate that only a small proportion of farm hens lay in the winter, it is even more so that a large percentage of these eggs are allowed to become frosted. Frozen eggs are not only undesirable in themselves, but when they thaw they often, through leakage cause smeared eggs. Frozen eggs and dirty eggs should be kept at home.

VIII.—Loss from the Sale of Small Eggs.—Some small eggs will no doubt always be produced, but there is no excuse for the large percentage found on the market at the present time. Pullets, commencing to lay, produce small eggs at first and old hens at the moulting time are prone to do likewise. The great majority af small eggs, however, come from the mongrel, nondscript, stunted stock found on such a large proportion of our farms. Some of the small sized, light weight, pure bred stock is undesirable for the same reason. Eggs ought to weigh a pound and a half to the dozen or forty-five pounds, net, to the thirty dozen case. No figures are available at the present time to indicate the percentage of small eggs that are marketed, but anyone who has had experience in the egg trade must readily appreciate the extent of this difficulty.

SUGGESTIONS FOR GENERAL IMPROVEMENT IN METHODS FOLLOWED ON THE FARM.

It is evident from the foregoing discussion that, while all parties engaged in the egg trade are more or less to blame for the present lack of quality, yet the conclusions reached from our inquiry indicate that the great difficulty centres about the methods employed in handling eggs on the farm. Present conditions surrounding the production and marketing of farm eggs show distinct evidences of lack of care and appreciation of the fundamental considerations underlying the trade and, while it is the intention later, to point out some specific instances in which all can make improvement, the following suggestions deal directly with general conditions on the farm:—

1.—Keep only pure bred stock of the larger general purpose varieties.

2.—Discard all stunted, nondscript and all diseased stock.

3.—Give the poultry-house a thorough cleaning every spring and keep it clean; spray often, and whitewash walls, roosts, etc., regularly.

4.—Feed the flock on pure and wholesome food and provide pure water in clean utensils.

5.—Hatch the chickens early; keep them separate from the old stock and give them every opportunity to grow into strong, healthy, vigorous, well matured birds before the cold weather comes, in the fall and early winter.

6.—Give the poultry the care and attention they deserve and, if the farmer has not the time or inclination to do the work himself, let him delegate it to some responsible member of his family.

SPECIFIC SUGGESTIOES IN REGARD TO THE PROPER CARE OF MARKET EGGS.

To the Farmer.—Remove the male birds from the flock immediately after the breeding season and market no fertile eggs.

Provide roomy nests and plenty of clean nesting material, preferably dry shavings or cut hay.

Keep the nests clean and sanitary.

Collect the eggs at least once, better twice, a day in moderate weather and more frequently in very warm and very cold weather.

Remove at once in clean utensils to a cool, dry cellar.

Cover with clean cloth to prevent dust from settling upon them and also to prevent evaporation and fading.

Do not pack loose in a box when taking them to market, but rather secure a suitable egg case and thus avoid breakage.

Market as frequently and as directly as possible.

To the Merchant.—Buy on a loss-off basis, if possible, and encourage other merchants to do the same.

Insist that the farmers furnish first quality eggs only.

Keep in mind the perishable natute of the product and do not hold eggs on a rising market without proper facilities for storing them.

Realize that fresh eggs at any season of the year are much more valuable than stale eggs, when prices are higher.

When shipping, pack carefully in strong, clean fillers.

To the Egg-Buyer.—If buying direct from the farmer, make regular and frequent collections.

Pay a premium for quality and do not hesitate to condemn bad, dirty, small and broken eggs.

Encourage the farmer to keep better poultry and more of it.

If buying from the country merchant, encourage frequent shipments and if possible buy on a quality basis.

To the Railway and Express Companies.—Handle eggs with care.

Provide suitable accomodation.

Guard against undue exposure to heat and cold.

Deliver with all reasonable dispatch to the consignee.

To the Dealers and Packers.—Indicate to the producer that financially, quality counts for more than quantity.

Adopt without delay a basis of "quality payment." The system of "average payment" on a case count basis permits of a great deal of the carelessness and dishonesty that exists in the egg trade.

If the packers were to adopt the method of "quality payment" in its fullest sense the store-keepers and collectors could not afford to take eggs from producers regardless of quality.

To the Retailer.—Buy eggs of assured good quality. If it is necessary to handle inferior eggs, sell them for what they are.

Encourage producers to forward their shipments direct.

Establish if possible, a brand of eggs, which will, in itself be a guarantee of good quality.

Every city retailer must realize how quickly the buying public of the better class proportions its consumption of eggs to the quality of the product. In fact, there is hardly any class of consumers, however careless, but which will increase consumption when the product is improved.

To the Consumer.—Demand new laid eggs of good size and colour.

Insist that they be clean.

Learn to distinguish between a new laid egg and a stale egg; a fresh egg and a storage egg.

If bad eggs are furnished, demand retribution.

Be willing to pay a premium for good eggs.

Having purchased eggs do not overlook their perishable nature and give them proper care.

Many consumers use the product of poor, unhealthy stock, kept in unsanitary surroundings rather than pay a cent or two more for clean, wholesome eggs. This is a direct bid for poor eggs.

The responsibility for present conditions rests in part therefore with the consumer and the whole trade will reap the benefit when the latter insists that he be supplied with nothing but first class eggs.

CONCLUSION.

Improvement in the care of eggs is important from a financial point of view; in fact it is a business proposition. There is an enormous financial waste resulting not only from the absolute loss of thousands of dozens and the shrinkage in millions of others, but also from the cost of handling, packing and transporting so much worthless or practicly worthless product. If the manufacturers and business men in Canada

Geo. L. Boswall

One of the men who is making a success of Sheep Breeding." French Fort, P. E. I.

were to take no more care of the articles manufactured by them and no more pains in advertising and in placing first quality goods on the market, than is taken by farmers in handling aad marketing eggs; now long would the average business be prosperous?

As a result of an investigation of the egg industry in the state of Kansas, seventy-four buyers, handling over nine hundred thousand cases of eggs annually, state that if the farmers of the State of Kansas would deliver eggs to the buyers in first class cindition, they could pay two cents a dozen more the year round. Even greater advances have been made by Canadian dealers to the members of Egg circles in the Province of Ontario.

It is deplorable that a product, like eggs, so uniform when produced, in quality and composition, is allowed to deteriorate so seriously through gross neglect, carelessness and a lack of appreciation of its perishable nature.

It is evident that, if the eggs are to reach the consumer's table in a fresh and palatable condition, the present antiquated system of handling and marketing them will have to be largely discontinued and more modern business-like methods adopted.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said :—"I saw" your adv. in the MARITIME FARMER.

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THE MARITIME FARMER, or
R. D. Robinson Publishing Co., Limited
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

DECEMBER 24, 1912

DATES OF ISSUE.

January 7-21
February 11-25

SUCCESSFUL FARM STORIES

We know that there are a good many of the average farmers of the Maritime Provinces who are carrying on a successful farming business, making good homes and a ssuccess of their lives. We know also that there are a good many farmers wno are just getting along and would welcome a release from an agricultural life and labor. There are many others who have left the farm, or who have perhaps been brought up in the city, who would like to work and live in the country, if they could only believe that the farm would afford them any of the pleasures, comforts and luxuries of life which they believe they have been having in the city.

It is for the benefit of these who would leave the farm and these who would leave the city if they dared that we delight to print these stories of profitable and pleasant farming. It is perhaps more especially for the benefit of those who are not making a success of their farming that we like to print these stories of the accomplishment of agricultural results, for they show what may be done, and we hope in some small measure they show how things may be done. What one farmer can accomplish and does accomplish. others may accomplish.

We need to keep the men and women who are now on the farm more than we need to bring others out from the cities to the farms. We need to keep the boys and the girls upon the farms, and it is right that we should tell them of the possibilities of accomplishment upon the farm; of the results that others have obtained; of the kind of farming that some of their neighbors are doing.

SUCCESS BREEDS SUCCESS

We have printed from time to time in the columns of the Maritime Farmer such stories of successful and enterprising farming as we are able to discover and investigate in the Maritime Provinces, we have purposely made it possible for it to be said that we have selected only from the instances of best farming. It may be said truly that we have chosen to tell only of the successful farming enterprises, the profitable and satisfactory farm businesses; that we have purposely avoided telling about the failures in farming; and perhaps some will say that this is not right, because it has made the farming business appear too prosperous, too successful and too felicitious; much more so than it really is.

We believe, however, that we have done just the right thing in telling about the prosperous and thriving farmers, and neglecting to tell about those who have made a failure of the business for various reasons and are ready to quit the business and go to the city or to the West. We know that there are too many failures in the business of farming, too many instances of poor, unsatisfactory and unsuccessful farming We have not neglected to tell about the trials and difficulties in the business of farming, but we need to be told of the possibilities of accomplishment in agriculture, stock raising, fruit culture, dairying, the poultry business, and all the other departments of farming, more than about the failures, the difficulties, the hindrances to success.

The readers of the Maritime Farmer will notice that most of our stories of successful farmers and good farming are descriptions of the moderate-sized farms of the provinces, of the average farmers rather than the big fancy farms. It is the average and small farm that the Maritime Farmer is most interested in because there are more of them than of any other sort, and it is in their improvement that it is most needed for the good of the farming business of the whole state.

We are most certainly interested also in the big farms where the business of raising stock or crops is carried on on a large scale, for they show how successful the business of farming can be made. The degree of success which may be attained in any business, however, is not measured by the size nor the amount of business done; nor is it necessarily measured entirely by the degree of profits gained. Success is not necessarily one thing nor another. A man may have money in the bank and still not be a successful farmer, while another may have achieved splendid success and still be the part owner of a mortgaged farm.

We are interested even in the fancy farms, where men of wealth farm for amusement or for personal satisfaction. We are interested in farms of this sort because they are often valuable object lessons of what may be accomplished, not necessarily by the expenditure of a good deal of money simply but by scientific cultivation and by wise and judicious operation.

RESULTS THAT COUNT

We need enterprising and brainy boys and girls upon the farm, the kind of boys and girls who are looking for opportunities in life. If they can be shown that the farm offers opportunities, we need have no fear of their leaving. It is not hard work that drives the boys and girls away from the farm so much as the lack pf opportunity to accomplish in the present and lack of a vision of results in the future.

As we have said before, the Maritime Farmer is not only willing but anxious to print all the stories of successful farming achievement that we can secure, and will be glad to receive them from anyone who may be able to secure the necessary information—stories of general farming; of good crop raising; of excellent stock and profitable stock raising; of special enterprise.

We will be glad to receive from any farmer a description of any good thing that his farm has produced and his method of producing it; of the results of his dairy work, of his hog raising or sheep growing; of the egg-laying records of his poultry. We shall be glad to use all such reports as these which may be of interest to other farmers. The mere telling of what some have accomplished is likely to be the means of encouraging others to better efforts and larger achievements.

FOR A MARITIME AGRIDULTURAL COLLEGE

At the Maritime Stock Breeders Association banquet held on Monday night of the Winter Fair week, we are pleased to hear the Premiers of New Brunswick and Prince Edward Island express themselves as being very much in favor of Maritime union so far as the maintainance of a college of agriculture is concerned. They expressed their views that while they deemed it advisable to open agricultural schools and short courses in their respective provinces, it was their intention that these schools and courses would act as feeders to the N. S. A. C. at Truro. We trust that ere long something more tangible than mere expressions will be made to bring about the establishment of a Maritime Agricultural College.

FOR BETTER ROADS

Realizing the benefits accruing to all country districts through the building and maintenance of good roads, the executive of the Nova Scotia Agricultural College has decided to add a coarse of instruction in road building to the curriculum of the Short Courses, which will be held at Truro, N. S. from January 7th to 17th, 1912.

One of the crying needs of the day is for good wagon roads evesywhere. The tax imposed on the farmers through the wear and tear to their machinery and teams by roads, which even in the most favorable seasons are no better than they ought to be, is the heaviest tax they pay.

Time is money and every extra hour that the farmer and his team are obliged to spend on the road, because the physical conditions of the road do not permit him to travel faster is a great drain on his resources.

We need better roads in order to make the fullest use of the rural mail delivery.
rural mail delivery.

Consolidated schools will not be the success they were destined to be until our roads are in a less objectionable condition for fast travel.

Social life on the farm will not be at its flood tide until our roads are the best that can be made with the material and means at our disposal.

Bad roads are not conducive to social life, better schools, live churches, pleasant rides, good markets—in fact, bad roads are not infrequently driving, directly and indirectly, the cream of the country out of the country—the very class of people we wish to retain—the class of people whose presence in a country district means the upbuilding of everything that tends to good citizenship.

We hear a great deal of the cry "back to the land." But the cry falls on deaf ears, because the people who have left the rural districts for very definite reasons. Restore or create in the country the congenial conditions that are being sought in town and the population will very soon go back of its own accord.

Just as water seeks its level, so a free people seek those conditions and environments that suit them best.

Good wagon roads are more essential to the country than river and harbor improvement that not infrequently has been a "pork barrel" proposition for the good of the few.

We have the material and labor necessary for the building and maintenance of good roads, but too often, through lack of "know how" on the part af the persons in charge of the work both material and labor is misapplied. Too often we see men in charge of road making who do not possess the most elementary rudiments of mechanical ingenuity—men who allow their own work to run at loose ends. The best available, mechanically inclined men in the district should have charge of the roads and then both material and labor would be economically utilized.

The lectures on road making at the College Short Courses means the insertion of the thin end of the wedge that will be the means of bettering our road conditions. We trust many of our young men will take advantage of the training opportunity thus offered.

NOTES

Prof Landells of the N. S. A. C. was kept busy at his booth at the Maritime Winter Fair answering questions re Land Drainage. The college is doing a grand work in interesting farmers in the proper drainage of their farm lands.

The wool exhibit made by the Dominion Live Stock Department, at the Maritime Winter Fair, was a feature that interested a great many of the visitors. Every kind of wool from the very finest quality to the coarsest kinds and various kinds of wool fibre and silk were on exhibition and Messrs. Telfer and Arkell were always on hand to answer questions.

Christmas is again with us and the New Year will soon be here. We trust the good old year has brought our readers a fair share of prosperity and that the new year, 1913, may further crown with success the efforts of the industrious. The New Year season is generally the season for making new resolutions. Make a resolution right now to attend the Short Courses at the N. S. A. C on January 7th to the 17th, 1913.

The Maritime Farmer wishes all its readers and patrons a Happy and Prosperous New Year.

Agricultural Matters in the Ancient Colony

While on a recent visit to Newfoundland the Editor of the Maritime Farmer had the pleasure of meeting not a few of the Ancient Colony's agricultural enthusiasts.

The St. John's Agricultural Board is at the head of matters agricultural. The various agricultural societies are doing ground work in assisting the farmers of their respective districts to overcome some of the difficulties with which they are confronted.

While at Harbor Grace we met the men who are so successfully carrying on the good work in their district.

A year or two ago our readers may have noticed in the press that the Potato Canker Disease had put in an appearance in Newfoundland and it was only less than a year ago that the Dominion Department of Agriculture sent out warning bulletins and posters throughout Canada warning the people against planting potatoes that had been imported from Great Britain as they had been found to be, in some cases, seriously infected with the disease.

Every effort is being made to prevent Canadian Soil from becoming infested with the germs of this disease. Once the disease gets a foothold it is no easy matter to stamp it out. In order that this may be accomplished it is necessary that there be united efforts.

Some of our Newfoundland friends are alive to the gravity of the situation in their Island Colony and as will be seen by the following rhyme and paragraphs from the columns of the Harbor Grace Standard the members of the Harbor Grace Agricultural Society are going to unite their efforts in eradicating the disease and are seeking the assistance of the Newfoundland Agricultural Board—an assistance which we sincerely trust will be forth coming. Every good minded citizen of the Colony should join in the fight—it means dollars and cents to the present generation and to generations yet unborn.

The Potato Canker Fight.

Arise, ye that grow the potato,
And fight the deadly Rot.
That dreadful plague, the Canker,
A hold on the crop has got.

CHORUS:

Will you yield, or will you fight it?
Say, are you that way built?

Like many another evil,
Its beginning is but small;
But the havoc it can render
The boldest must appal.
Chorus: Will you yield, etc.

Its thousand tiny seedlets
Spread the disease like mad,
And if it gathers headway
'Twill be very very bad.
Chorus: Will you yield, etc.

'Twill spread all o'er the country,
'Twill ruin the potato crop,
You must fight it now or never,
If you'd its ravage stop.
Chorus: Will you yield, etc.

Notice the eyes all warty
Which bigger, bigger grow,
And change the spuds to shapeless lumps
Which soft and rotten go.
Chorus: Will you yield, etc.

Don't throw the stuff out careless,
Don't sell a single one,
If you feed them to your cattle,
Thru manure the harm is done.
Chorus: Will you yield, etc.

Delay not a single minute,
A sample send to the Board,
Who'll send a man to help you,
To destroy the dangerous hoard.
Chorus: Will you yield, etc.

Destroy stalk, root and tuber,
Wipe even the dust from your feet,
For fear you'd spread infection,
You've a foe that's hard to beat.
Chorus: Will you yield, etc.

Don't plant any more potatoes.
In that ground at least six years,
Other crops may be sown in safety,
And you be free from fears.
Chorus: Will you yield, etc.

You'll be paid for your lost potatoes,
Have a conscience free from guilt.
Will you yield, or will you fight it,
Say, are you that way built?
Chorus: Will you yield, etc.
Potato Grower in Harbor Grace Standard.

The Potato Canker Peril.

We had prepared an article for insertion in this issue lamenting the loose dealing on the part of the agricultural authorities and people generally with respect to the Potato Canker, and urging that steps be taken to find out the extent of the plague, and to take thorough-going measures to deal with it. Since that the Agricultura' Society here at its meeting on Monday last which we attended, appointed Mr. H. H. Archibald, its president, and Mr. John Tapp to proceed forwith to St. John's to interview the Government on this matter of immense importance. They have not yet returned. We trust, however, that their representations of the grave need of sparing neither pains nor money in endeavor to arrest its progress will be attended with complete success before it obtains a firmer foothold. Even now, it will be a tough task to exterminate it. What will it be if left unattacked longer? The disease is insidiously making progress. Other countries are exerting gigantic efforts and spending thousands upon thousands of dollars to root it out. We are doing very little effectively. In this neighborhood our Society has done more than we think any other society or community has done; but it needs a government in arms to grapple with this peril, as we have repeatedly warned. We summarize today as much as possible of the law on the subject, which with the regulations that we trust His Excellency in Council has made or will immediately make, will bring into force and which should be published widespread.

The Government by the Potato Act of March 29th, 1911 has power to make regulations, of which those affecting growers of potatoes are mainly these:

It has power (a) to prevent anyone removing infected potatoes from his premises or from any one place to any other; (b) to prohibit their sale; (c) to confiscate them or any container of them; (d) to grant compensation for any potatoes and the container destroyed to the extent of two-thirds of their value; (e) to require that the occupier of any premises on which is discovered potato canker to forthwith notify the Minister of Agriculture and send samples to him.

Every person contravening these and other regulations to be liable to a penalty of $100 or less or to 6 months' imprisonment or less, or to both fine and imprisonment.

We hope all persons having canker in any potatoes they have in their possession will attend to section (e). We have no doubt our Agricultural Societies or any public functionary would be ready to assist them. The Government would do well to send a person around the fields in any section where canker exists with full power to help the people to carry out the law.—Harbor Grace Standard.

Practical Agricultural Chemistry.

"The achemist of old tried in his mysterious ways to produce gold from the elements; the modern scientist points out the way for every farmer to produce gold. The chemist takes into his laboratory the soils from the fields and analyses them; he learns what elements the fertile fields contain—what elements are present to make them productive. He also leaens that elements of fertility are lacking or are present in small quantities only in the fields which produce small crops. He finds that by supplying the missing or deficient elements a fertile and well balanced soil may be made; that the four elements most likely to be lacking are phosphorus, potassium, calcium (lime), and nitrogen.

"The phosphorus, if deficient should be supplied in the form of steamed bonemeal or ground rock phosphate, the potassium in the form of kainit or some other of its commercial forms, the calcium in the form of ground limestone, while the nitrogen may be obtained through the application of barnyard manure, or from the air through the proper use of the legumes. To buy a complete commercial fertilizer is on a par with giving a sick animal a shotgun dose of all the remedies in the office when the doctor does not know what the trouble is. Common sense and economy would seem to require that when the soil is sick the sickness should be properly diagnosed and only the needed remedy applied.

"The chemist takes into his laboratory animal tissue; through inspection he finds that some is fat and some is lean while the bone is of a composition quite unlike either. He analyzes the various parts and finds that the fat meat contains larger quantities of carbon and he calls its carbohydrate. The lean meat contains large quantities of nitrogen and he designates it as nitrogenous. He finds that bone contains large quantities of calcium or lime. He analyses wheat, oats, barley, timothy hay, clover and oilmeal. He also analyses corn, for corn is king, and alfalfa because alfalfa is one of nature's best gifts to man. He finds that these products contain varying amounts of nitrogenous and carbohydrate elements, some rich in one and some the other. The ratio between the nitrogenous elements and the carbohydrates he calls nutritive ratio.

"The chemist found that timothy hay had a nutritive ratio of 1 to 20 —that is in simple terms, one part of the leans to 20 parts of the fats. He found that corn has a nutritive ratio of 1 to 10 and that alfalfa has a ratio of 1 to 3.5. By experiment and observation the chemist found that young animals fed on timothy hay and corn, or any ration containing large quantities of carbohydrates exclusively, do not do well; so too, an animal fed entirely on oilmeal or alfalfa hay did not do well because of the excess of nitrogen. He found that somewhere between these two extremes there is a happy medium which he called a balanced ration.

"The chemist found by investigation that for most young animals a ration containing 1 part of the nitrogenous elements to 6 of the carbohydrates made a balanced ration, or a nutritive ratio of 1 to 6 gave the most satisfactory results. He also found that when an animal was fed on a ration with a nutritive ratio of 1 to 10, when its system required a food ration of 1 to 6, the difference between 6 parts and 10 parts of carbohydrates was wasted. It is evident then, that when a horse is fed corn which has a ratio of 1 to 10, and timothy hay which has a ratio of 1 to 20, while its system requires a food ratio of 1 to 6, the waste must be enormous.

"Many good farmers who feed carefully so there is no apparent waste at the manger or on the feeding floor are wasting much of their feed because of its not being balanced. The extravagant waste of material fed carelessly by boys and hired men— feed tramped in the mud at the feed rack—is not one-hundredth part of the waste caused by feeding an unbalanced ration.

Feeding the Soil Through Dairy Cows.

Of all animals kept on the farm the dairy cow is the most eminent. She is the farmer's highest trump card in build up the fertility of the soil. Many eastern dairymen have attempted to set the milk producing end of the business over against the crop growing end and from the unwelcome results have come the growing recognition of the fact that plant and animals—dairy cows and grain and forage cross—are economically inseparable. In its best estate the dairy farm produces the food for the cows. One cannot neglect the growing of forage and grain crops and find his largest returns through a highly specialized dairy business.

The greatest question before the dairy farmer today is that of growing suitable food crops and its reciprocal effect upon the fertility of his farm. The great need of a wider growth of forage crops is shown by the present tendency toward the depletion of available fertility. In many cases we are growing too little and buying too much, both of feed and fertility.

Many dairymen buy tons of commercial feehstuffs, not to supplement but to piece out the home-grown supply. To buy feeds which will balance up the deficiency of protein in the home-grown supply is entirely proper, providing the right kind is purchased. Feeds like cottonseed meal, oil meal and gluten which possess a high fertilizing value are the real supplements as they usually supply the compounds that are deficient on dairy farms.

Soils must be fed a balanced ration in order to yield large crops. Variety is relished by soils as well as by animals. The growing of dairy foods compels crop rotation. The legumes, clover, alfalfa and cowpeas figure prominently in the best dairy rations and are valuable when grown in rotation with other farm crops. Having the ability to take their nitrogen supply from the air they not only furnish highly nutritious hay and pasturage for the cattle, but at the same time they supply nitrogen to the soil.

By growing these crops in rotation with corn, oats and field peas and converting them into dairy products, it is possible to retard more than two-thirds of the plant food removed by these crops to the soil. This solves the nitrogen problem.

Stable manure and the roots and stubble of the legume and grain crops turned under will liberate sufficient potassium. Phosphorus is the one element that is likely to be deficient. It is supplied in limited quantities by stable manure, but that source is inadequate. Acid phosphate mixed with manure before it is applied will make up the deficiency on this element. Its use pays handsomely on the average dairy farm.

If we are going to raise a large proportion of our feed it is necessary that we adopt a short system of crop rotation and follow it up year after year. Roots, clover and timothy, oats and peas and perhaps a cash crop, make an ideal rotation to supply food for the cows and leave a balance to buy supplemented feeds with. In this way a man can run his herd well through the year without buying very much grain, and that only of the most concentrated sort. We must follow up this system, and if one crop fails put in another. If we can get started with alfalfa, all the better.

HORTICULTURE.

Nova Scotian Apples

There are still in our midst some venerable folk who remember the days when apples were scarce in the winter. A few home grown specimens were carefully put away in the fruit room, and used with ever increasing economy as the season advanced. But even with the greatest parsimony they could not be made to last from one year to another, and at length there came the time when apples were not only out of season, but unobtainable. Such a state of affairs nowadays is gltogether unthinkable. Apples are always with us, and the public do not stop to consider such barriers as the season, which in regard to supplies may be said not to exist.

Evidently the British have earned a reputation as lovers of the apple, otherwise the growers in the great producing districts would not study so carefully the conditions that rule our markets. Canada, American, and the Australasian Continent cultivate apples on an enormous scale, and it is quite obvious all have the same objective—the British demand. Production is ever on the increase, and to judge by the present state of affairs it will be necessary before long for the entire populace to eat large quantities of apples daily if the fruit is to be consumed.

New districts develop with astounding rapidity. At first they send a few sample boxes of apples by way of experiment, to try the carrying quality of the fruit, and to see what kind of a reception it meets with on this side. Of course, a new fruitarian venture on a small scale is always successful; satisfactory prices are realized and lo! and behold, next year the fresh district consigns its thousands of packages to the ever open market. Even with strict adherence to the old and familiar saying "An apple a day," modern shipments would tax the powers of the most vigorous pomaceous appetites.

ANNAPOLIS VALLEY.

In the midst of so many modern ventures it seems a pity to ignore the older ones, especially when they are still useful and fulfil the same objects as of yore. With a continuous stream of novelties people are apt to let pass unnoticed the work of some of the best contributors to our comforts. Thus it has been with Nova Scotia, a region to which all British fruit lovers owe a debt of gratitude. California, Oregon, and Wenatche have monopolized the attention of those who chronicle matters connected with apple supplies. Even in this weekly column it is four years since the Colony has received any but passing notice, and it is, indeed, time to make amends.

Whilst other places having been going ahead it must not be assumed Nova Scotia has stood still. The infectious habit of "hustling" spreads rapidly on the other side of the Atlantic, and the Nova Scotians have all the while been improving the cultivation, grading, packing, and marketing of apules. Mr. J. N. Chute, the representative in England of the United Fruit Companies in Nova Scotia, reports great progress in all directions since the formation of the first co-operative association founded at Berwick in 1907. Before dilating upon the headway that has been made, it is as well to state that the famous apple growing district of Nova Scotia is known as the Annapolis Valley, which is a continuation of the Valley of Annapolis, Cornwallis, Gaspereau and Windsor. This territory about 100 miles long, varies in breadth from six to ten miles, and is very favorably situated between the North and South Mountains, two parallel ranges that afford excellent shelter to the fruit trees.

"THE OLD ORDER CHANGETH"

Although apples have been grown in that part of the world for close upon two centuries, the commercial part of the enterprise is comparatively modern. Thirty-two years ago there was great rejoicing because the exports had exceeded 41,000 barrels. Last year the yield all but reached 2,000,000 barrels. Quantities, of course, cannot be regulated closely, Nature still being triumphant over the best efforts of man, but the conduct of the industry can and has been improved in most marked manner during the past ten years, more especially since the co-operative system has gained ground. At one time anything that had grown on a tree was considered good enough to ship to England, provided the best fruit was always on the top layer. It is easy to understand that such ill-considered practices do not rank even as clever roguery, the fraud being palpable and easily discovered.

Very soon it was realized that for the Nova Scotain apple industry to be prosperous the work must be condurted on straightforward and honest lines. In other words the top layer of fruit shall be a fair indication of the entire contents of the barrel, and not a mere decoy for the unwary and inexperienced purchaser. A Fruit Marks Act was passed, with the result that genuine packing took the place of false and careless methods, and confidence in the Colonial fruit was quickly established. That was the first move in the right direction, and any more have followed since a large number of growers have joined forces. The association known as the United Fruit Companies handles about half the entire output of Nova Scotian orchards, and has done more than legislation to improve the lot of the grower, and, incidentally, to satisfy the consumer.

STORAGE AND CO-OPERATION.

Belonging to the association are frost proof warehouses for storing the fruit during the cold season—10 deg. below zero not being an uncommon occurence in those parts. In former days farmers who were not possessed of sufficient means to build these warehouses (at a cost of about $3,000 each) were compelled to sell their fruit to local speculators, astute gentlemen, who took special care to leave an ample margin of profit for themselves, even assuming the market to be unfavorable in England. To do away with the unnecessary middleman there arose the twenty-nine associations now merged into the one company, which, by the way, must not be confused with the United Fruit Company of Boston, that vast and wealthy organization which provides Europe with bananas and Jamaica oranges.

London is the chief market for Nova Scotia apples, and for many years it has fallen to the lot of the Colony to provide cheap and good varieties for the middle classes and the poor of the capital. It has been said of the poor that they do not make new friends. Well, in regard to apple supplies they want no better friend than Nova Scotia, especially since the co-operative system of marketing has been worked with such good efffect. Growers send their fruit loosely packed to one of the association's depots. Upon arrival it is standardised and sorted into "ones" "twos" and "threes"—the chief grades used to designate the size and quality of the fruit. There are also "fancy" and "extra fancy" apples for specially fine lots. Fruit deemed unsuitable for shipment is set aside; the rejected ones being described as "culls." Growers receive no credit, financial or otherwise, for any apple sent to the packing house which are ranked among the unworthy.

FAVOURABLE CONDITIONS.

Apple warehouses in Nova Scotia are visited by Government inspectors, but the standard of work required by those who examine on behalf of the company is higher than that insisted upon by the official of the law. So universal is the confidence in the work of the co-operative body that fully 30,000 barrels of apples were sold this season before the fruit had been gathered. It was guaranteed to be in accordance with the company's rules of grading and packing, and that was sufficient. In all the important centres there are foremen and export packers, who watch carefully the entire process of preparing fruit for shipment. Orchard requisites, which include spraying materials, are provided, and the fruit is tended in every possible way. Every grower is compelled to subscribe at least $100 capital sum to his local association.

Many are the advantages over other apple growing districts claimed by Nova Scotia. Farmers are enabled not only to produce, but also to despatch more cheaply than in America. Land costs about one-fifth of the money demanded in the Western and North-Western States of America, and a farm labourer will work for 5s to 6s a hay, as opposed to 8s paid in the United States. Furthermore, the apple growing districts of Nova Scotia are conveniently situated, being within 100 miles of the shipping port. Some American centres are 3,000 miles distant. Being comparatively close to England, the apples are carried at an ordinary rate of freight, as against the enhanced charges incurred on fruit conveyed in specially constructed cool chambers. The freight from port to port is usually 3s 6d a barrel, and the cost of a barrel and packing amounts to 1s 8d; so that, despite all advantages, the fruit has to be a fair share of expense before the grower gets any return for his produce.

Only apples technically described as "clean" are shipped in the first two grades; that is to say, the fruit must be free from blemish or spots. Unfortunately these disfigurements sometimes develop on the voyages especially in the case of an early variety, the Gravenstein. This year the crop is estimated to provide about 1,000,000 barrels, the equivalent of 3,000,000 English bushels of apples, of which a large proportion will be Ribston Pippins, Blenheims, Spitzenbergs, Baldwins, and Greenings. Of fine handsome Kings there are not many. Prices range from moderate to low, for, although the crop in Nova Scotia is much smaller than that of last year, there are on the market enormous quantities of apples from other parts of the world, thus lowering the value all round.

It may safely be said that the community of Nova Scotian apple growers is a prosperous one. Every season, of course, is not entirely successful. Nor is uninterrupted success to be expected in regard to crops in any part of the world; but by taking the average results of fat and lean years, there isn't much reason to complain at the generosity of Nature in the Annapolis Valley, "the land of Evangeline."—London, Eng., Telegraph.

The Cutworm.

Cutworms cause more widespread injuries and are responsible for more injuries on the part of farmers, market gardeners and others who cultivate the soil, than most classes of injurious insects. Taking them as a class, with such well-known pests as the San Jose Scale, the Codling Moth and the Hessian Fly—all of which are among our most destructive insect enemies. There are certainly few insects which, year after year, do such widespread damage to garden and field crops as the various caterpillars known commonly as cutworms. The annual loss occasioned by these insects in Canada amounts to hundreds of thousands of dollars. In one year (1900), the Variegated Cutworm alone destroyed in British Columbia crops to the value of $168,-000, and, if we add the losses in the same season in Manitoba and Ontario, the figures could easily reach $200.000. Ctirrenden has estimated that the total damage caused by this cutworm in the above year in the United States and Canada amounted to the enormous sum of $2,500,000.

Injury by cutworms is mostly effected in spring, when plants are young and succulent, but there are a few species which occur in destructive numbers as late as the middle of summer. As a rule, however, cutworm injury ceases before the end of June. As their popular name indicates, these caterpillars have the habit of cutting off the plants, during the night, near the surface of the ground or a little below it. When they are present in numbers in a garden or field, the plants will soon be seen to have been cut or eaten off and when an examination is made, the cutworm will most likely be discovered in the soil, coiled up and just below the surface. In many instances the young plant will be found to have been drawn partly into the ground. Not all cutworms, however, feed in this manner; some climb up into the fruit trees or such plants as currants, gooseberries, tomatoes, etc., and feed upon the fol age or the fruit.

In fact, when they are excessively abundant, they will attack anything green and juicy. In such years some kinds assume the marching habit, so characteristic of the army-worm. In seasons of severe infestations it is often necessary, unless the proper precautions are taken, to resow, or replant a second or even a third, time before a crop can be secured.

A cutworm vary considerably in the time of their appearance in the different stages—egg, larvae, pupa and adult—and as such appearance, too, is often irregular from year to year, it is not possible to state their life-history in general. Some pass the winter in the pupal state, or as half-grown caterpillars, and others in the egg or adult state. The months of the chief injurious species appear in June, July and August.

The eggs of cutworm moths, as a rule, are laid in clusters or masses on the leaves of trees, shrubs, weeds and grasses, etc. They have even been found on window panes and on the putty, as well as on clothes which had been hung out to dry. In the case of the Variable Cutworm, "Mamestra Atlantica" Grt., we have found the eggs on the upper surface of the honeysuckle leaf, in a compact heap of three layers. Another species (in confinement) laid eggs singly or in clusters of from 3 to 20. The number of eggs laid by a female varies considerably. In some clusters there will be less than one hundred eggs, in others, over 700; in fact, a female of one species is koown to have laid over 1,000 eggs. The eggs of most of these moths are laid in early or mid-summer. Those of some species, however, may be deposited as early as the end of April.

When a cutworm becomes full-grown, it enters the earth and makes an earthen cell in which it changes to a browinsh or dull reddish pupa, and when this happens in June or July the moth usually emerges in about two weeks' time. Some cutworms, however, do not change to pupae immediately they complete their earthen cell, but remain as larvae for some days, the actual period often varying, and the moths in such

cases do not emerge for three or four, or even more, weeks from the time the caterpillar became full-grown and entered the earth.

There are many different kinds of beneficial insects which prey upon cutworms and help very materially to keep these pests in check. Some of these are parasitic insects, laying their eggs upon the bodies of the cutworms. These eggs hatch and the young maggots or grubs feed internally upon the living cateroillar until they nave ultimately destroyed it. Others are predaceous and are constantly hunting after cutworms to devour. One of the most important of these latter is the Fiery Ground Beetle, "Calosoma calidum" Fab., the brub of which is known as the Cutworm Lion. This beetle, both in the adult and the grub state, destroys large numbers of cutworms. It is brownish-black in colour with three rows of coppery-red pits on each wing cover. In length it is about seven-eights of an inch. Another important enemy is the black Ground Wasp, "Ammophila luctuosa" Smith. This wasp digs the cutworms out and stores them in its nest as food for its young grubs.

In addition to the parasitic and predaceous insects which destroy cutworms, some of the native birds are very fond of these fat, juicy caterpillars. The value of many of our wild birds as insect destroyers, should be more and more recognized, and farmers, gardeners, etc. should do all they possibly can to prevent them from being shot and their nests from being robbed. The Meadow Lark, Blue Jay, Catbird, House Wren, etc., destroy every year large numbers of cutworms Even the much abused crow is extremely valuable, as insects constitute its principal food during spring and early summer, and of the insects eaten cutworms form a most importtant part.

Parasitic fungous diseases, such as species of "Empusa," help to reduce outbreaks of cutworms. These caterpillars are also subject to bacterial diseases.—Arthur Gibson, Chief Assistant Entomologist, Division of Entomology, Department of Agriculture, Ottawa.

Work of the N. B. Fruit Division.

During the past summer the horticultural division of the provincial Department of Agriculture continued the work started in 1911, of conducting orchard surveys in different parts of the province. These surveys consist of a farm to farm census of fruit culture and conditions in certain sections, and are being conducted with the object of gathering information of value to the fruit growing industry and of carrying information on varieties, cultivation, insect and fungous pests and their control, etc., directly to the individual fruit growers. All the farms fronting on the western bank of the St. John River from Fredericton to Woodstock, a distance of 62 miles, were surveyed in this manner and records of each property are now on file in the office at Fredericton. A systematic survey of the chief fruit sections of Charlotte County, of the section around Hart Lake, Queens County, and of considerable territory in the Parishes of Shediac, Moncton and Dorchester, Westmorland County was conducted. In this orchard survey work over 800 properties were examined and recorded. Assistance in planting orchards and in examining bearing orchards and orchard sites was given on about 80 farms which were visited at the special request of their owners. The twenty-one illustration orchards, which were fully equipped last winter with spraying machinery and materials, were inspected twice and found to be making good progress. The three demonstration orchards started by the Department of Agriculture in 1911 were operated again this year together with the orchard of C. R. McKenzie, of Lingley, Kings County. These orchards are responding well to the treatment and the financial returns are very encouraging.

Mr. R. P. Gorham, Assistant Horticulturist, accompanied the Better Farming Special through New Brunswick from June 8 th to the 26th as lecturer in horticulture. In addition to his regular work in fruit growing, Mr. Gorham spent a week in October in tracing the whereabouts of the European potatoes imported into St. John last spring, and known to have been more or less affected with potato canker. Some of these potatoes were sold locally and used for seed purposes, hence the possibility of a spread of the disease. This matter has since been taken up by the Dominion authorities.

With a view to opening up a market in the British Isles for New Brunswick fruit, a number of trial shipments of Duchess apples, in both boxes and barrels, were made to London, Liverpool, Manchester, Birmingham and Glasgow. The gross prices received for such early perishable fruit were very satisfactory, the boxes fetching as high as $1.85 and the barrels as high as $3.90. The returns realized indicate that if adequate steamship transportation direct from St. John to ports in the United Kingdom is provided, a considerable amount of early apples may be sold there annually at a good profit to our growers. Officials of the fruit division are now assisting some of the growers in the Long Reach district to prepare 200 boxes of Wealthy, Bishop Pippin, Bethel and Canada Baldwin, and this consignment will be shipped to Glasbow very shortly from St. John. This will give us much needed information as to the probable selling values of these varieties of New Brunswick apples.

Thirty boxes of apples were recently sent to the New Brunswick Emmigration Office at London, for advertising and display purposes, and, Mr. A. Bowder, the agent there, has reported that they arrived in splendid condition and were superior to those then available for display purposes at the Dominion Office. There are now in cold storage at St. John nearly 360 boxes which officials of the fruit division selected and packed for exhibition purposes during October. One hundred of these are to be purchased by the Dominion Government to represent the apple growing possibilities of New Brunswick at the exhibition to be held next summer at Ghent, Belgium. Another one hundred boxes will be sent to Mr. Bowder and by him distributed over the United Kingdom to the various emmigration officers. The balance of these apples will be used for advertising purposes in Canada.

An illustrated leaflet on "Forest-tent Caterpillar," a reprint of Bulletin No. 2. and a 32 page illustrated pamphlet on the "Orchard Opportunities in New Brunswick," were prepared, printed, and distributed during the year, and copies of the same may be had on application. All details of the work referred to above will be published in the report on Horticulture which should be off the press in February.

The Department now considers the time ripe for the holding of short courses in fruit growing of two, three or four days duration, in various parts of the province and are planning to hold a number of these during the coming winter. The interest in fruit growing is rapidly increasing and the indications point conclusively to the setting of many new orchards and to better care of the old orchards. This is well evidenced in the increasing orders for trees received by the Fruit Growers' Association, and in the fact that the number of spraying outfits and amount of spraying material used during 1912 show an increase of 1,080 per cent. over those in use in 1910. The province of New Brunswick is beginning to be known and sought after for its fruit lands as the presence here during the past summer and fall of a number of prominent English capitalists, fruit growers from British Columbia, and representatives of leading apple buyers of the Old Country, indicates, and we look forward with confidence to the rapid creation and enlargement of our fruit industry.

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DAIRYING.

Yarmouth Creamery Promises Success.

MANY signs are evident that dairying is on the increase in Nova Scotia, but perhaps none more noticeable at present than the success that is already being attained by The Yarmouth Creamery,Ltd., of Dayton, Yarmouth Co. The company was organized late in the fall of 1911, in time, however, to get the outside of their building up before winter—thus being able to carry on the building operations during the winter—and were ready for the early spring business opening about the 1st of April of this year.

It is com posed of good business men who foresaw the advantages of such an institution in the community. A site was selected two miles from Yarmouth town, in the centre of a good farming community, and where proper drainage and water supply were already available. A beautiful fresh water pond in the rear only a few rods distant which gives a supply of water and ice and adds materially to the appearance of the place.

The building was erected with an eye to business and as can be seen by the illustration. It is not a large or an elaborate affair but possesses every requisite that is needed in a successful creamery. The main building is

Yarmouth Creamery, Dayton, Yarmouth Co. N. S.

about thirty by sixty-five feet. The foundation is of concrete—with a wall of concrete, two feet higher than the floor of the make room, which is also concrete—making the building very sanitary. The building proper is built of wood, shingled on the outside and sheathed on the inside, with an ell to one side for boiler and engine rooms. The office is situated in the corner nearest the street and next back of that the make room. Then back of that the make room, then storeroom and a refrigerator built on the plans furnished by the Dept. of Agriculture at Ottawa, and where the temperature can be readily controlled at about 40 degrees F. during the summer months. The ice house is in the extreme end of the building and all under one roof.

The power is supplied by a 12 H. P. boiler and 10 H. P. steam engine. The machinery is all new and up-to-date.

The output for the first year promises to greatly surpass the expectations of the management and they will be able to continue operations all through the winter months. The farmers are giving it great support for they already realize that it will be a permanent market for their cream at a better average price than what they have been accustomed to and a great saving in labor. One man who used to make over 100 lbs. of butter per week and supplied about 25 customers commenced using the creamery about the first week of its existence.

There are a lot of good dairymen in Yarmouth and a lot more interested that will become good dairymen, and with continued good management on behalf of the management and a hearty co-operation with perhaps some friendly rivalry among the patrons we may look forward to it being one of our strongest co-operative dairy centres in a short time.—W. A. McK.

The Five Champion Cows

Jacoba Irene has held first place among the Jerseys, for yearly production of milk and fat, for almost four years. Her third yearly record of 17,253.2 pounds of milk, containing 954.1 pounds of fat, completed January 24th, 1909, at the age of ten months, surpassed all previous records by 104.48 pounds of fat. Her production of three successive years of 42,900 pounds of milk containing 2,366.1 pounds of fat makes her one of the greatest long distance cows of the world.

She was bred by J. M. Shrader of Missouri but owned by A. O. Auten of Illinois while making her wonderful record, and can now be seen with three of her sisters and her mother in the Premier Jersey herd owned by F. B. Keeney of New York. A family of equal strength of constitution and producing ability is seldom seen. Pogis Irene 2nd, the dam of the world's champion, in her sixteenth year produced during the first 213 days of her period of lactation 5,800 pounds of milk containing 341.14 pounds of fat. The animals in the pedigree of Jacoba Irene for several generations are American bred, Ida of St. Lambert being her great great grandam.

Her great length and depth of body, magnificent udder, and the general indications of strength, should be borne in mind when contemplating her phenomenal production.

Jacoba Irene, as well as the other members of Mr. Auten's herd, was given an opportunity to do her best work, as is evidenced not only by her record but also by the fact that for the year 1907 the average for all the cows of this herd in milk was 389.9 pounds of butterfat.

Should the record of Jacoba Irene be surpassed she will never be forgotten, especially by those who have had the opportunity of seeing and studying her. She is worthy of all the praise and admiration she may receive.

Banostine Belle De Kol, the champion for yearly fat production of the Holstein breed, and likewise of all other breeds, is not the product of chance, but, on the contrary, stands in the honored position she now holds because of the careful applications of the principles of breeding and because of intelligent care and feeding. She comes from a line of producing ancestors. On the paternal side she traces back through Friend Hengerveld DeKol Butter Boy, and DeKol's 2nd's Butter Boy 3rd to DeKol 2nd. On the maternal side three generations removed is Euphrasia A. With the blood of such cows as these in her veins it is not to be wondered at that she is a phenomenal producer.

Banostine Belle DeKol was bred and developed on the Maplecrest Farm owned and operated by Dan Dimmick & Bro. of Ohio. She made her 365-day world's record of 1058.34 pounds of butterfat with her third calf, being five years two months and twenty-two days old when this calf was dropped. She gave milk up to the time of freshening and was not fattened in preparation for the test. Her milk yield was 27,404.4 pounds for the year with an average of 3.85 per cent. fat.

She is a cow with pronounced dairy temperament, large capacity and strong constitution. Her ration was well selected at all times, and was made up from a great variety of feeds. Mr. Dimmick is a very close student of his cows and endeavors to supply them with feeds such as they relish, and such as are suited to the requirements of milk production.

The test barn of the Maplecrest farm is excellently planned and constructed. In large, well ventilated, well lighted box stalls, with pleasant sanitary surroundings and the best of care, Banostine Belle DeKol and her two half sisters, Daisy Grace DeKol and High-lawn Hartog DeKol, have worked side by side with the result that the sum of their records, 74,715.2 lbs. milk containing 3,194.8 ,bs. fat, excels the combined records of any other three cows in the world.

Spotswood Daisy Pearl surpassed all other Guernseys in production of fat for a period of 365 days, when she completed her record on Jan. 7, 1912. At the age of 7 years and 5 months she was put on test and produced, between Jan. 6, 1911, and Jan. 7, 1912, 18,602.8 lbs. milk containing 957.38 lbs. fat, the average per cent. of fat being 5.15. Although she has not been dry but 53 days since she freshened with her first calf, her extraordinary ability as a producer was not recognized until she came to her third home, the Anna Dean Farm of Ohio, owned by O. C. Barber. Here, under the direct care of Carl Gokerell, she was given an opportunity to do the best work she was capable of doing. Her persistency is largely responsible for her large record, as she never exceeded 57.6 lbs. of milk in one day, and 365 days after freshening she was producing 48 lbs. Her test was continued for 632 days with a total production for that time, 30,097.40 lbs. milk containing 1,536.97 lbs. fat.

As would be expected she has a very large barrel, is quite angular in conformation and has a wide-awake disposition. She displays a great deal of quality as indicated by her hide, hair and horns, but in many ways does not conform to the present day show ring type.

In connection with a conformation permitting a large consumption of feed, Spotswood Daisy Pearl inherited her dairy tendencies from lines of producing blood. Her pedigree contains a great many A. R. animals, and the number is rapidly growing. May Rose 2nd is removed only three generations on her dam's side, and both her sire and grandsire on the paternal side have a number of A. R. daughters.

The feeding of a cow doing work such as that done by Spotswood Daisy Pearl is an important and difficult task. It can only be done by one who through vigilance, training and natural love for animals is able to translate into requirements the slighest variations in the tenor of the cow's actions from day to day.

Spotswood Daisy Pearl received just such attention and her ration consisted of a great variety of feeds which were changed slightly from time to time, the object being to supply the nutrients required in feeds most palatable to her and that contained the least possible indigestible material.

To both the cow and the caretaker is honor due for the making of such a record.

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that holds the highest record of the breed for yearly production, stands with 31 other Swiss cows that have been admitted to the Record of Production, as a confirmation of the faith in the breed, displayed some six years ago when the Brown Swiss Association forsook the dual-purpose standard for one classifying the Brown Swiss as a dairy breed. With the record of production only a little more than a year old, it stands to reason that the breeders are not as familiar with the most efficient methods of securing maximum production as they will be. Notwithstanding this fact, however, the average productian of the first 32 cows, of all ages, to qualify for registration in the Register of Production is 10,860.7 pounds of milk containing 429 pounds fat. Kalista W. stands at the head of this list with a record of 16,609.2 pounds of milk containing 650.32 pounds butterfat. This record was completed January 29th, 1912, when she was 7 years, 4 months and 17 days old.

Kalista W. was bred by Fernando Wheeler of Connecticut but was owned at the time she made her record by Tracy Dows of New York. She is by Lamont and out of Kalista who in turn is by Lamont thus making Kalista W. closely inbred. Her superior producing ability may be attributed to the intensifying of the blood of Lamont as may also her size be charged to inbreeding, she being somewhat small for the breed, weighing perhaps 1100 pounds.

With so commendable a record made during the first year of official testing, greater things may be expected for the Brown Swiss in the future.

Lily of Willowmoor, owned by J. W. Clise, of Washington, will have completed within a few days a new Ayrshire record for yearly production of both milk and butterfat. Up to date of going to press she has completed 331 days of her test with a record of 20,951 lbs. milk containing 842.06 lbs. fat. Mr. Clise makes a conservative estimate that her record for the year will be near 22,227 lbs. milk, containing 902 lbs. fat. She was born October 15th, 1906, being bred and developed by her present owner on Willowmoor Farms.

She calved at the age of 2 yrs., 294 days and an official test that year produced 9,211 lbs. milk, containing 348.92 lbs. butterfat. Calving again after a seven weeks' rest at the age of 3 yrs., 363 days, she produced that containing 479.56 lbs. butterfat, losing the benefit of a few days by being shipped to the National Dairy Show at Chicago. She milked over year in official test 12,730 lbs. milk, the year, not going dry until in December, and her actual season's production was 13,629 lbs. milk, and 521.82 lbs. butterfat. After a five weeks' rest she calved again at the age of 5 yrs., 92 days. Her three calves are all heifers, named Willowmoor Lily 2nd, 3rd, 4th. Her last calf was sired by Willowmoor Robin Hood, son of the former world's champion, Netherhall Brownie 9th, thus the two nearest dams af this calf. are two of the world's champions. Lily of Willowmoor is an individual of sufficient excellence of conformation to warrant the risk of shipping her several thousand miles with the Willowmoor Farms' show herd when she was almost dry and within three months of calving. Her

first two years' work was done without any special attention, running with a large herd and under adverse rather than favorable conditions for large production.

Her sire, Drummondine, is an advanced registry sire but with only a few daughters, as he was always used in a small herd until placed at the head of Willowmoor herd, where there are only a few daughters left. His full brother Nox'emall, on the other hand, has more advanced registry daughters than any other sire; some of which have held world's records for their ages. The dam of Lily of Willowmoor is a first class cow with a herd production last season of 11,458 lbs. milk, containing 414.90 lbs. butterfat. Two other daughters of this cow, one in two-year-old and the other in yearling form, bid fair to become large producers.

Lily of Willowmoor has developed wonderfully this season under the care given her. She is a large cow, weighing in her present condition. practically 1400 lbs. In view of her age development this season, and staying qualities, it is believed, barring accidents, that she will increase her record in future.—Hoard's Dairyman.

Comparative Feeding Value of Cotton-seed Meal.

On practically every farm where the feeding of live stock is carried on it is necessary that some form of concentrates be purchased to balance the home grown feeds that may be available. There is no difficulty in growing enough carbohydrate food on the average farm. The most expensive element of food to purchase and the one most generally needed is that of protein origin. It is therefore important to consider which foodstuff can be bought at the least cost and will most nearly fulfill the needs of the situation.

The true feeding value of cotton seed meal is not fully appreciated in some sections of the country where it should be largely utilized. This is not surprising, because it is in many respects a comparatively new foodstuff as compared with such old and standard concentrates as bran, middlings, gluten meal, etc. Then, it has not been pushed as vigorously as the foregoing and farmers who are not familiar with it are afraid to use it extensively. Briefly, it is the by-product in the manufacture of cotton-seed oil. The hull of the cotton seed is removed, the kernel cooked and subjected to pressure to remove the oil. The residue or cotton cakes are then pulverized, in which form they are placed on the market.

At present cotton seed meal is selling locally, in ton lots at $35.00. Doubtless, some are of the opinion that they cannot afford to pay this, and instead, are purchasing bran at $28.00 or other foodstuffs at current prices. That this is an erroneous idea is borne out by the following table, giving the digestible protein, carbohydrates and fat contained in 100 pounds of cottonseed meal, wheat bran, gluten meal, linseed meal and brewers' grain:

	Pounds of Digestible Protein	Carbohydrates	Fat
Cotton seed meal	37.2	16.9	12.2
Wheat bran	12.2	39.2	2.7
Gluten meal	25.8	43.3	11.0
Linseed meal	28.2	40.1	2.8
Brewers' grains	15.7	36.3	5.1

These constitute the principal concentrates bought and used on the farm, and those having the highest content of digestible protein.

From this statement it appears that 100 pounds of cotton seed meal contains three times as much digestible protein as 100 pounds of wheat bran, or in other words, when the farmer feeds three pounds of cotton seed meal he is giving the protein equivalent of nine pounds of wheat bran. Observe that cotton seed meal furnishes more than twice as much digestible protein as brewers' grains, one-fourth more than linseed meal and one-third more than gluten meal. Also note that it is considerably richer in fat than any of the others. These figures establish its high feeding value and clearly demonstrate that for the money paid out it holds the premier position for the largest amount of digestible protein to be had in any concentrate.

As a milk producer cotton seed meal is unexcelled. Owing to its concentrated nature, however, it must be fed with care or unsatisfactory results will be likely to follow. It is better to begin with, say one pound a day and increase gradually. As a rule it is not advisable to feed more than three pounds a day to a dairy cow, although in the case of large milkers as much as five pounds may some times be given. Of course, it is understood that this meal must not be fed alone; it is too strong. Feed it mixed with the home-grown foodstuffs, such as corn meal, oat chop, etc., reducing the amount of such feed each day as the amount of cotton seed meal is increased. Better results will generally follow where the meal is fed with silage or some other succulent cooling food. In fact where silage is used cotton seed meal can be fed without any grain feed, and a balanced ration formed, by sprinkling the meal over it.

FEEDING FOR BEEF.

In feeding beef cattle it should also be given consideration. It is a common practice of many farmers to persist in using an exclusive fattening ration, such as corn provides, believing that it will make cheaper beef and a larger number of pounds per head per day than one consisting of part corn and a concentrate rich in protein. Experiments show, however, that a combination ration of the character indicated will prove more satisfactory in every way, giving as it does a greater variety to the food and producing an animal that kills out better owing to the better blending of the fat and lean throughout the carcass.

For growing yearlings and other young stock it is unequalled if fed moderately. It should not be fed to calves under six months of age or be included in a ration for young pigs. A small quantity may be fed to ewes after parturition with advantage. Not more than a handful a day should be added to a ration of corn, oats and bran, and this amount will not be sufficient to injure young lambs. Some animals do not eat it readily at first, but after they become accustomed to it grow very fond of it.

Like practically every other foodstuffs on the market to-day, cotton seed meal is frequently adulterated. If one is familiar with the genuine article the difference can be easily detected. The pure meal is a light golden color and should be free from black and brown specks. Hulls are generally used to adulterate the meal. When pure it contains from 41 to 48 per cent. of total protein and the farmer can protect himself by demading a guarantee of this analysis from dealers.—By J. Hugh McKenney, Corinth, Ont.

A "Stocky" Meeting.

The Agricultural Society at its special meeting on Monday last spent a very busy four hours till midnight. It finished the Exhibition prize list, fixed on October 28th and 29th for Exhibition days, appointed Mr. H. H. Archibald, its President, and Mr. John Tapp, one of its directors, to proceed without delay to St. John's to urge on the Government more stringent measures for the extirpation of Potato Canker, which is gaining some headway in this and other localities, and also to secure its assistance towards getting a supply of hay to have on hand to mitigate the hay famine and prevent as much as possible the destruction of live stock; it likewise reduced the stallion fees, and ordered his "keep" for the next 12 months to be put up to tender; and distributed the fine looking young rams that arrived here the other day from Port-au-Basques, obtained by the Board for stock purposes.—Harbor Grace Standard.

The dairyman who will sell off each season two or three of his poorest cows will soon improve his herd if he replaces them by heifers raised from his best cows.

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SEED OATS!

If the farmers of the Maritime Provinces, Quebec and Ontario want to make sure of getting the highest possible grade of seed oats for the Spring of 1913 apply to us at once. To prevent a repetition of the disaster that befell so many farmers last year by sowing devitalized grain, we have stored at Point Du Chene and Pictou 50,000 bushels of **large, selected, separated White Seed Oats, true to name and free from noxious weed seeds.** It will be the farmers own fault if they do not procure good seed as the extra yield of these oats pays twice over cost of the seed.

Our firm name is stencilled on every bag. Do not allow the dealers to give you other than Read's oats for seed.

JOSEPH READ & CO., LTD., Summerside, P. E. I.

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto: also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

LIVE STOCK.

Wintering Brood Sows.

The time was, not so long ago, when the hog-raisers of these provinces were quite satisfied to raise one litter each year from their brood sows. The market offered no particular inducements to raise more, and the object was more to supply pork for the family table than to attempt raising hogs on a commercial scale. The past few years have brought about a change. Hogs this year have been hovering between $8 and $10.50 per hundred on the market, and the supply has been far short of the demand. The breeders of purebred hogs have certainly had their innings, too. The problem is to find hogs for the customers, rather than customers for the hogs.

This condition of the industry makes the hog a particularly valuable commodity to the farmer. He can no longer afford to content himself with one litter a year from each sow; nor can he afford to lose many of the young pigs from the various troubles which are common in this country.

It may be quite truly said that the point upon which success or failure in the hog business hinges is the care of the brood sows, particularly during the winter months. With our short summer season it is a difficult matter to get two litters of pigs and have them arrive when the weather is comparatively warm and still have them brought to maturity mainly on green feed. The cost of production is reduced considerably by utilizing such crops as rape, peas and oats, alfalfa or clover as pasture, and lessening the need for grain. The breeder of pure bred pigs is desirous of securing early spring litters for show purposes and also to have large, strong boars to meet the fall trade. Other things being equal, size denotes early maturity, and such is always at a premium whether in show ring or sale yard. The breeder of commercial hogs is also after the March or April litters so that he can have his second litter ready for the market with the shortest period of grain feeding the following winter.

The matter of properly caring for the brood sow throughout the year is therefore, of paramount importance. During the summer, when she can run at large and have all the grass and exercise that she cares for, there is little to trouble about as she can take care of herself. During the winter she has none of these natural conditions to supply her with the proper nourishment and support a litter of young pigs, and, consequently, the feeder has to supply these conditions as nearly as possible. That is the whole problem. Now, what is more unnatural than to shut a sow in a pen where she can take very little excise, and to feed her on concentrated grain feeds that she never tastes during the summer. F. W. Stevens, Live Stock Commissioner for Alberta has done considerable research work on the lack of exercise and heavy feeding of grain during the winter are largely responsible for the number of weak pigs, pigs bare of hair, and many other deformities quite common in this country. Many farmers will contradict this statement, but it is best proven from the experience of practical hog raisers. Our most successful breeders have best results where the sows are given free range during the cold weather and allowed to rustle considerably for their living.

SHELTER.

A straw pile is almost an indispensable shelter for brood sows. Many strong healthy litters of pigs have been born where the only shelter was a straw pile, but the secret is not that alone. The grain ration was a suitable one and fed only in limited quantities. The feeding trough was placed at some distance from the straw pile, which made the sow exercise in going to and from her shelter. There are also other ways of providing cheap shelter. A Saskatchewan breeder puts a few poles about six feet high to form a roof and blows straw over this from the machine, which forms a house-like structure. Another successful stockman from Edmonton winters sows in an old log shed, completely open at the south end, and allows them free range outside.

THE HOG COT.

The A-shaped hog cot appears to be the last word in sucessful hog raising. Many of our best breeders are using them. One Alberta farmer prefers them without a floor, and uses no bedding, claiming that the sows root down in the dry soil and are perfectly comfortable. He strongly advises against the use of straw in these cots, claiming that the heating and rotting of the straw is very detrimental to the health of the sows.

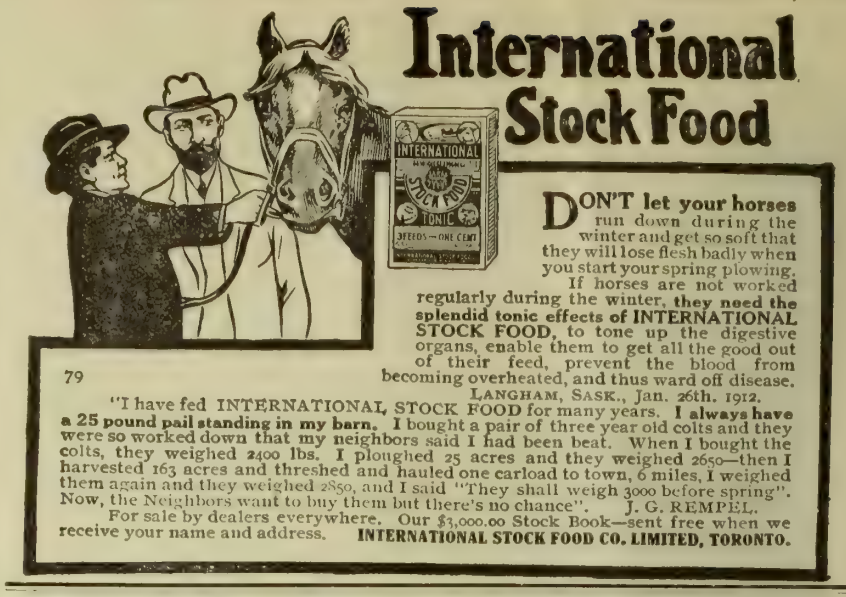
Oscar Miller, of Cheadle, Alta., has submitted to us an arrangement of hog cots, whereby he claims that sows may be comfortably wintered and early spring litters raised very successfully. We might say that this same plan is used at Manitoba Agricultural College and appears to be satisfactory. The scheme is to place several of these cots side by side and about three feet apart at the base. These are filled between and covered over with straw or manure. By placing the back end of the pens against the fence and nailing a few boards from one pen to the other in front the sows would not be able to get between the pens. Mr. Miller's strongest arguments in favor of this style of pen is that the heat is utilized to the best advantage, and the pen is cheap. Heat always goes upward in a room and in such a pen the space at the roof is minimized and the heat is thrown downward. He claims that a sow's own heat will reduce the temperature 25 to 30 degrees, and by putting manure over the sheds built in this manner, the temperature can be reduced practically 50 degrees. The full truth of this is realized when the difference in inside space between a square building and one of these A-shaped cots is considered.

Some breeders have a fully equipped piggery leading to a yard where the sows are turned out for exercise. Here the exercise is only voluntary, and if the weather is cold the sow is likely to take shelter and stand in the warmest corner of the yard.

OTHER ESSENTIALS.

While we firmly believe that plenty of exercise and only limited amounts of grain are the main essentials to success in hog raising; yet there are a few other essentials which must be given attention. A brood sow should have abundance of mineral matter and limited amounts of carbohydrates or heat-producing food. Sows will eat a surprisingly large amount of ashes. Shale also is good if it can be produced. Of the common crops that help form a complete food for sows, we may name mangels or sugar beets. Wheat and barley in large quantities are very injurious on account of their heating properties. Oats and some bran is the ideal cereal food, cooling in their nature and well-balanced in their composition.

In conclusion, we would say give exercise some way or other; feed as little grain as will keep the sows in reasonably good condition. Get in a pile of sods this fall to throw into the pen during the winter. Throw in at least some of the ashes from the furnace. Keep the pen free from draughts. Carefully guard against constipation, feeding roots as a corrective. Feed mineral matter in abundance. Keep the pens dry and clean, and success should follow.—The Nor'-West Farmer.



Age of Cattle.

For the purpose of settling any disputes at any time that may arise out of protests made against exhibitors who show animals out of their class, from the standpoint of ages, the International Live Stock Exposition management has adopted the following specifications as a basis for determining the ages of cattle:

Twelve Months—Any animal of this age shall have all of its milk (calf) incisor teeth in place.

Fifteen months—At this age, center pair of incisor teeth may be replaced by center pair of permanent incisors (pinchers,) the latter teeth being through the gums not yet in wear.

Eighteen months—The middle pair of permanent incisors at this age should be fully up in wear, but next pair (first intermediate) not yet cut through gums.

Twenty-four months—At this age the mouth will show two middle permanent (broad) incisors fully up in wear, and next pair (first intermediate) well up, but not in wear.

Thirty months—The mouth at this age may show six permanent incisors, the middle and front intermediate pairs fully up and in wear and the next pair (second intermediate) well up, but not in wear.

Thirty-six months—Three pairs of broad teeth should be fully up and in wear, and the corner milk teeth may be shed or shedding, with the corner permanent teeth just appearing through gums.

Thirty-nine months—Three pairs of broad teeth will be fully up and in wear, and corner teeth (incisors) through gums, but not in wear.

These specifications are based upon a large number of observations made upon animals of various ages, and may be used by those who purchase young animals to use permanently in their herds as a means of determining their ages should they be in doubt as to their being such as they are represented to be by the sellers. Of course, animals that are well fed and forced to early maturity from forced feeding frequently have their teeth appear considerably before the usual time that they make their appearance, but the above specification may be relied upon as a good guide, as they reasonably allow for such cases. A matter of a few months does not make much difference, except in very young animals.— Colman's Rural World.

Prize Winning Southdowns

Exhibited at St. John, Halifax and Charlottetown exhibitions by Ciphas Nunn, Winslow Road, P. E. I.

The Champion Steer at the Internarional

The honor of the big show came to Canada. Glencarnock Victor, the two-year-old grade Aberdeen Angus steer owned by J. D. McGregor, Manitoba, Canada, was the outstanding sweepstakes, winner of the 1912 International. The competitors were an illustrious line of bovine excellence, but Judge McKeen made no mistake in picking out the McGregor steer for the thirteenth of a brilliant line of Sweepstakes winners. The Manitoba steer was a bullock of such superb quality and general excellence that the decision met with unanimous ringside approval. Sired by a purebred Angus bull, Elm Park Ringmaster, and out of a grade cow without name, he was dropped in Brandon on April 20th, 1910, and was a precious calf with all the best traits of his predominating strain. He was fitted for the International by Robert Mr. McGregor's herdsman. When shown he weighed in the neighborhood of 1,630 lbs., perfectly distributed and in ideal shape. His victory is a triumph for Canada feeding methods. Glencarnock has never tasted corn, he being a product of grass and small grains—oats and barley. "He is a winner all over is the last that can be said of him. Carrying no surplus fat he will kill out superbly. McGregor is to be congratulated on his double honor in fitting a grand champion and fitting him in a province where it was asserted the conditions were adverse to the feeding of the Aberdeen-Angus cattle.

He was later sold for 50c. per lb. and bought in the neighborhood of $815. This is a much lower price than the 90c. letched last year, but there was nothing about Victor that influenced this fall off.

J. W. Calbeck's
Prize winning Yorkshire Boar.

A Deadly Dip.

Mr. W. F. Southey, a well-known sheepbreeder in Cape Colony, has suffered great loss among his 6 and 8 tooth sheep through dipping twice within fourteen days in caustic soda and sulphur. The sheep after the dippings were observed to waste away, and on examination it was found that the lungs were rotten and full of a yellow jelly-like matter. Many of the auimals have died, and it is expected that the loss will be quite 50 er cent. of the whole. It is a singular fact that the mixing of the dip was carried out by a sheep inspector with a high reputation, and there was a veterinary surgeon present at the time.

The veterinary surgeon condemned the dip in toto, and advised them to abandon it, but the inspector overruled him, declaring that it was a recognized Government dip, and had been well proved. This dip is strongly advocated by many farmers, and is fairly popular, and it is difficult to to have occurred to anybody that Southey's animals. It does not seem some poisonous substance may have account for the effect it had on Mr. inadvertently found its way into the ingredients used for mixing the dip.—The Pastoralists Review.

Canada's Honor at the International

To the Dominion of Canada came many of the honors of the International show in the following championships: Champion Fat Wether, by J & D. J. Campbell, Woodville. Champion breeding ewe, Shropshire, J. & D. J. Campbell. Peter Arkell, Teeswater, annexed the champion ram and ewe in Oxford Downs, and also owned the champion flock. Many other firsts came to Canada. The greatest honor of the show, the winning of the grand championship of the exposition also belongs to the Dominion, being annexed by James D. McGregor & Sons, Brandon, Manitoba, on Glencarnock Victor, a two-year-old grade Angus steer, Graham Bros., Claremont, owned by the grand champion Clydesdale stallion in Lord Gleniffer, the impressive, showy son of Sir Ronald. Many other honors of a lesser character are also Canada's.

Feeds Cidre Apples to Cows.

I note in a recent issue that F. G. C. asks for other peoples exoerience in feeding cider apples to cows. This has been mine: Meeting, one day, a neighbor who was drawing home a load of apple pumice from a cider mill, I asked him what he intended going with it. He replied that he was feeding it to his cows, and that it was as good for them as corn silage.

Having no pigs on my farm that fall, I began feeding windfall apples to my cows, using about four quarts daily per cow. I was then sending cream to a nearby creamery, and I found that while I fed the apples to the cows, not only was there an increase in milk, but also in cream,

J. W. Calbeck's
Prize winning Yorkshire Sow.

which increase fell off when the apples were all fed out.

Again, this year, having no pigs, I have fed windfall apples to my cows in the same proportion as before, and have noticed a decided increase in milk. I cannot judge as to the cream, as I am now selling milk. Again, I noticed a decrease in milk when the apples were all fed out. I don't think it would be a good policy to feed enough apples to make the cows drunk, because that is a bad habit in any animal.—P. R., Franklin County, Mass. in N. E. Homestead.

For Sale

A few young Hereford bulls, heifers and cows. Six choice White Wyandotte cockerels $2.00 each.

R. R. BLACK,
Amherst, N. S.

NEXT SHORT COURSES

AT THE

Agricultural College, Truro, Nova Scotia

JANUARY 7th to 17th, 1913

Special courses for MEN and for LADIES open FREE to all students from the Maritime Provinces. In the past, these courses have been attended by people of all ages from sixteen to over seventy.

In the men's Short Course instruction will be given in Judging, Feeding, and Management of Live Stock of all kinds, Soil Cultivation, Crops, Seeds, Horticulture, Dairying, Veterinary Practice, Poultry and, if requested, classes will be provided in Entomology, Botany, Chemistry, etc.

A special feature of these courses will be Instruction in Road Making. The best practical experts available have been secured for this course.

The LADIES COURSE will include Dairying, (especially Butter and Soft Cheese making) Poultry Gardening, Floriculture, and Domestic Science.

All railways in the Maritime Provinces will give single fare on Standard Certificate Plan.

Write for full particulars to

M. CUMMING, Principal, -- Truro, Nova Scotia

THE HORSE.

The Clydesdale at Home.

SCOTLAND is probably the only country that could have developed the Clydesdale breed of horses. A Clydesdale is a remarkable adaptation to environment in that land of heather, hill and hardness. A horse of any other draft breed would clash with the type and temper of the country and its people. Scotland reveals some of its most typical characteristics in its equine stocks. Its plants, animals and people give the appearance of interlocking relationships. They are independent.

Scotland has a climate that forces land-animals to grow hair and the hills to clothe themselves in heather and bracken. Shagginess characterizes its fauna and flora. One thinks of Carlyle's long, bushy eyebrows, of the Shetland's abundant mane and tail, of the Galloway's thick hair, of the black-faced ram's dense, heavy coat, of the Collie's handsome mantle of warmth, of the Clydesdale's flowing feather, of the mossy-coated Short-horns, of the heather-grown hills, of the thatched cottage and the kilted West Highlander with his ample beard. Nature sets no example of nudity in Caledonia. And hair is an index of strength. There was Samson, for example. He may have had Scotch in his pedigree.

However impressive the Clydesdale on this side may be in type and condition, he does not show so well against an American background as the same stamp of horse in a Scottish prize-ring, public road or turnip-field. To see several hundred Clydesdales at home, led, ridden or driven by men and lads whose fathers before them bred Clydesdales, is to get a fair idea of the solid qualities that distinguish the breed. It is more than probable that if the Scottish farmer could secure a better horse than the Clydesdale for his uses he would adopt him. He holds fast to his immemorial favorite because it meets his requirements. The breed has come to be a part of his life as a farmer. It has won the farmer's confidence and the nation's pride.

Clydesdales furnish the agricultural motive power of Scotland. They pull the machinery that grows and transports the crops. They draw the vehicles in which lads and lassies speed merrily along roads, hedged and walled. They play a prominent part in the commerce and social life of a people famed for brains and brawn. A visitor learns, if he talks with many Scots, what combination of characteristics it is that constitutes fundamental values in their heavy horses. He may begin his agricultural tour in Scotia with the notion that weight and substance outrank action and endurance in the list of draft virtues; he may harbor the opinion that the Scot makes altogether too much ado about the legs and feet of the Clydesdale. He may know things about the breed that a clase study of its native representatives will compel him radically to revise, and he will be compelled to listen with respect to the claims of suoeriority advanced by the informed adherents of the breed.

Uniformity in type and cleanness and quality of underpinning are the outstanding impressions that a student receives lrom exhibits and farm studs of Clydesdale in Scotland. He observes that the native farmer looks down most of the time when judging a Clydesdale, and yet those keen, blue eyes are trained to see a horse all over. The Scottish judge specializes in attention to the legs and feet; he knows that in building anything the ground work must be right if the superstructure is to serve the purpose in view. On this theory the Clydesdale has been bred for centuries from the ground up, and having been made enduring from the stifle and forearm down, the ends and middle pieces are undergoing improvement. Type in a clydesdale at home is not the result of feeding to fatnes; it is the issue of masterful breeding, guided by the increasing light of patient years. Fat will make any first-rate lot of pure-bred draft horses appear even in type; and it is the healthy form of a work horse that tells the most truthful story about type.

Selective breeding is a fine art among Scottish Clydesdale breeders. They have clearly-defined ideas toward which they have worked for many generations. Sons succeed their fathers, continually an unbroken and undeviating course. Many studs have been established for a century. Breeders are responsive to the demands of the export trade, but they refuse radically to modify their predominent native type. There are several types commonly bred, the object being to meet the requirements of the several countries which draw considerable numbers of Clydesdales from Scotland; but the horse that is best adapted to the service of local agriculture and industry is never lost sight of as an ideal among the generality of farmers, large and small. New Zealand is importing Clydesdales on an increasingly liberal scale, expressing a consistent fancy for the low-set, thick, weighty kind, for which good prices invariably are realized; and Australia buys the same sort. South Africa and Russia also are purchasing superior specimens. Canada remains the chief customer, however, importing about 1,000 last year, and the United States furnishes an outlet which is an important factor in the trade. In 1910 the total exports, apart from a small number of unregistered animals, were more than 1,400 head; in 1911 they exceeded 1,500.

Fashion is at war with utility and commercial popularity, as one may learn at the leading shows and sales; but the majority of breeders are not misled nor swayed by the caprice of that seductive dame. In recent years a so-called showyard type has gained sectional vogue, and partially nullified the work of the standard-setting exhibitions. Breeders are quick to detect even the slightest radicalism of judges. A type that the markets demand is steadfastly sought; showring preferences do not go, if they go against trade currents. Some men, like horses, will occasionally kick over the traces, aiming blindly at a fanciful object. Scottish breeders are strongly united in their common purpose, and harmony marks their progressive work; but among them there are makers of fashion who not only fail to influence the great mass of horsemen but by antagonism intensify the overwhelmingly larger opposition.

What agreeably surprises the American in attendance upon an exhibition of Clydesdales in Scotland is the extent to which the classes are filled by small breeders. To be sure the extensive estates contribute a large percentage of the entries, but the representation of humbler citizens is the most striking feature of the leading exhibits. At the Highland and Agricultural Society's show at Dumfries in 1910 most of the Clydesdales were owned by small breeders, many of whom were represented by individual entries. Several foals were led into the ring by unexcited lads, with downy faces. Big, deep-bodied mares, with sound feet and legs, were shown by farmers who obviously knew nothing about professional exhibiting as an art. Horses shown by such men usually receive a full measure of attention by the judges; it is the horses instead of the owner that is considered.

Nearly $400,000 is distributed among Scottish Clydesdale breeders every year by foreign buyers of their stock. A demand of that character maintains an active, discriminating interest in improvement and production. Breeding is encouraged in other ways, chiefly by shows with attractive prizes. A system of stallion-hiring is in operation which places within the financial reach of small breeders the services of the most celebrated stallions. Local societies are formed in different districts for the express purpose of hiring champions and noted breeding horses. In this way seed of the best quality is well distributed, and the owners of high-priced stallions are liberally rewarded. For most of the leading prizewinners a profitable hiring demand is promptly expressed. A valuable by-product of the hiring system is the road exercise which stallions are required to take in traveling their districts.

British cities and corporations keep in cart and dray service thousands of the best Clydesdales that they can buy. One of the largest users is the Caledonian Railway Co. Glasgow also demands a large number of high-class geldings, and whoever sees them in the streets, thereafter has a critical standard by which to judge drafters. But the geldings and mares that one sees in the fields and roads of Scotland make the deep impression which ever afterward is quickly revived upon occasion. We shall never lose from mind the impression made by a string of farm mares, fillies and young colts which farmers were leading in a road in Aberdeenshire on an afternoon in June two years ago. It was a rare opportunity to appreciate the Clydesdale at home.

Among the reigning popular sires

(Continued on page 220)

Horsemen Attention ! !

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevents the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
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ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
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After Using

Use this preparation thoroughly for alland every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR :--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

DEAR SIR :--I have used Dr. J Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.
W. A. C. RANDALL, M. D.

Hillsboro, N. S.

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POULTRY.

Prof. Staneburn Shows How to Compound Rations and Feed Poultry for Egg Production.

In the following article Prof. F. H. Stoneburn shows how to compound and feed different rations to poultry for egg production. He claims that liberal feeding is necessary if heavy yield is to be had from the layers. He says:

Feeding for egg production is far from being an exact science and it is impossible to lay down close and definite rules that will meet all conditions. However, there are some well established basic principles underlying the art, and a few feeding methods which are generally successful. If these are thoroughly understood and a fair amount of common sense used in adapting them to one's local conditions, the results will, as a rule, prove entirely satisfactory.

As previously stated, the well-balanced ration always contains one or more articles from each of the four great groups of poultry feed stuffs, which, for convenience, have been designated "grits. grains, greens and grubs." If the bill of fare lacks any one of these, the best results cannot be secured. In short, the birds must have a variety.

There is another point which is of equal importance. Liberal feeding must be the rule if heavy production is to be secured. It is plain that no regular output of a finished product can be had if there is a lack of raw material.

Many poultrymen fail to get a maximum egg yield because they fear to feed their birds heavily. Much has been said about the dangers of overfeeding, and it must be admitted that individual birds will occasionally break down under the strain, becoming over-fat and practically barren. This had led to the belief that heavy feeding makes the hens too fat to lay. As a matter of fact, they do not get too fat to lay; they get fat because they do not lay. Such birds should be sent to the block for which end they are eminently fitted.

Let it be understood that the above refers especially to the production of market eggs. The breeding stock should be handled differently, as in this case the desired object is eggs with strong fertilizing rather than a great output. The proper treatment to be accorded the breeding birds will be discussed in due time.

When deciding upon the exact ration to be adopted one may choose between purchasing ready-mixed commercial feeds or securing the various grains and mixing them at home. Each method possesses certain advantages, depending largely upon the section of the country and the relative local prices of the various feed stuffs.

There are on the market a number of proprietary mixtures of both whole grain and mash which are mighty satisfactory. Some of these are guaranteed under the pure-food acts and bear tags showing their composition and analysis. In a few cases they are sold with a clear guarantee that they will prove entirely satisfactory, failing in which the purchase price will be refunded. This is certainly a safe basis on which to proceed, as the poultryman runs slight chances of experiencing heavy loss.

The big advantage of ready-mixed rations lies in the fact that their use eliminates the bother of making up the feed at home, and also enables one to purchase in small amounts, as required. In limited quantities, at least, the cost of commercial mixtures is usually less, as the price of the several grains which go to make up the ration is decidedly high when purchased separately in lots of a few pounds each. As a result, the home mixture is rather costly when prepared in small quantities. The large operator who can buy in car lots and the farmer, possessing home-grown grains do not face this particular problem.

It has been clearly demonstrated that it is best to feed the layers both scratch feed and mash, the former being a mixture of whole and cracked grains, and the latter of ground grain and their by-products. Neither alone gives the results which may be secured from the combination of both. As a general rule, the heaviest production is secured where these mixtures are used in the proportion of two pounds of the scratch feed to one pound of the mash. It is not always possible to regulate this exactly, but as the birds eat the scratch feed more readily, the desired result may be secured by carrying the quantity of the scratch feed according to the necessities of the case. When this is reduced the amount of mash eaten will be correspondingly increased.

It is customary to keep grit, shell and similar materials in hoppers to which the birds have access at all times. These necessities do not rot or mould and are not eaten by rats, so this plan involves no loss from such sources. It also insures the fowls a plentiful supply and does away with the necessity of frequent feeding.

Green food should be given regularly and abundantly, each bird receiving as much as she will readily eat. However, none should be left over to freeze or spoil, as this frequently causes trouble.

The animals feed may be fed separately or mixed in the mash. There is a wide difference of opinion as to the relative merits of the two methods, but both are successfully used. When fed alone, this material is either placed in hoppers to which the birds may repair at any time, or definite amounts supplied daily in troughs. Milk is usually fed in open pans, but is excellent to use in the mash where the latter is fed moist.

As previously stated, there are no known grain mixtures which will produce the greatest possible number of eggs at all times and under all conditions. A few of those which have proved generally satisfactory are discussed below. When purchasing the various grains especial attention should be paid to their quality, and damaged or mouldy grain refused. Oats are particularly valuable, but, unfortunately, they vary greatly in quality. Plump, heavy oats, those carrying a large proportion of meat, should be used in all cases. Light oats are largely husk, and this fiber is difficult to digest. Commercial ground oats are frequently of inferior quality, and unless one is sure of the value of the particular brand offered, it pays to purchase heavy oats and have them ground to order.

A staple scratch feed mixture is made up as follows:

60 lbs. wheat.
60 lbs. corn.
40 lbs. oats.

These three grains should always be fed, and when the price is right variety may be secured by adding from ten to twenty pounds each of barley, buckwheat and corn, any or all of them.

An agricultural experiment station, prominent in the poultry work, recommends the following mixture for Leghorns.

Scratch feed for winter use:
60 lbs. wheat.
68 lbs. corn.
30 lbs. oats.
30 lbs. buckwheat.

For summer feeding the buckwheat is omitted.

Mash mixture, fed dry:
60 lbs. cornmeal.
60 lbs. wheat middlings.
30 lbs. wheat bran.
10 lbs. alfalfa meal.
10 lbs. oil meal.
50 lbs. beef scrap.
1 lb. salt.

Another experiment station which has devoted itself to producing eggs from Plymouth Rocks uses this ration:

Scratch feed. By measure:
4 parts corn.
2 parts oats.
2 parts wheat.

Mash mixture, fed dry:
200 lbs. wheat bran.
100 lbs. wheat middlings.
100 lbs. cornmeal.
100 lbs. gluten meal.
100 lbs. beef scrap.

On alternate months fifty pounds of linseed meal is added to the above.

A well-known New England breeder of Wyandottes has used for years the following feeds.

Scratch feed, by measure, equal parts of corn, wheat and oats:

Mash mixture. By measure:
3 parts wheat bran.
3 parts cornmeal.
1 part wheat middlings.
1 part gluten meal.
1 part ground oats.
1 part fish scrap.

Fine results have been secured from a large flock of Rhode Island Reds fed the following ration:

Scratch feed. By measure:
3½ parts wheat.
3½ parts oats.
4 parts corn.

Mash mixture, fed dry:
200 pounds wheat bran.
100 pounds wheat middlings.
100 pounds gluten meal.
100 pounds corn meal.
100 pounds ground oats.
100 pounds animal meal.

A flock of several hundred White Plymouth Rocks, noted for the production of unusually large eggs, receives this ration.

Scratch feed, by measure—Winter:
3 parts corn.
1 part wheat.
4 parts oats.

Summer:
2 parts corn.
2 parts wheat.
4 parts oats.

Mash mixture. Fed dry.
100 pounds wheat bran.
50 pounds wheat middlings.
100 pounds cornmeal.
100 pounds ground oats.
5 pounds powdered charcoal.
5 pounds salt.
Beef scrap in hoppers before the fowls at all times.

A comparison of the above rations discloses the fact that they are very much alike as regards the various ingredients, but that there are slight variations in the respective amounts used. Any one of these may be adopted and slight changes made, as experience and the market price of the different materials seem to warrant.

As a general rule, the scratch feed is thrown in a litter of hay, straw, leaves hens to take considerable exercise when searching for it. The accepted or planer shavings, which causes the custom to feed this grain at the rate of one quart per day to each ten hens. In some cases this amount is slightly reduced, in order to increase the consumption of the mash.

Ordinarily, the day's allowance of scratch feed is given at once, two or three hours before dark. In some cases it is the practice to give a light feeding of the grain in the morning and the balance of it in the afternoon The latter method does not seem to possess any material advantage, and the busy man will naturally prefer to adopt the single feeding as a matter of convenience. In case the attendant cannot look after the birds during the hours of daylight, an automatic feeder may be installed. When regulated according to the size of the flock, these appliances work splendidly.

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The addition of 5 per cent. of coarse beef scrap to the scratch feed is a very good plan, especially where beef scrap is used exclusively as the source of animal food. The scrap should be screened, the coarser portion being used in the grain mixture and the fine in the mash.

We would like to again emphasize the desirability of so feeding the grain mixture as to compel the birds to take plenty of exercise. The use of an ample supply of litter is the easy way of solving this problem. On some farms where the birds are given free range it is customary to scatter the grain broadcast over an extended area in order to keep the flock busy searching for it.

There exists a wide difference of opinion among poultrymen as to the relative merits of dry mash and wet mash feeding. The limits of the present article prevent a discussion of the matter, but it is of such importance that it will be fully considered later in the series.

In practice, the dry mash is more generally used. The dry mixture is placed in feeders and the birds permitted to eat of it at will. When fed wet, the mixture is mixed with milk or water until it is thoroughly dampened. It is then fed once daily in troughs, usually late in the afternoon.

Table scraps may be given at will, and they form a most desirable addition to the ration. Provision should be made to save them all, together with such of the kitchen waste that is suitable for feeding. In this way the grain bills for a small flock may be greatly reduced.

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THE FARM HOME.

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David Copperfield.

By Charles Dickens.

(Continued from last issue)

Long after it was dark I sat there, wondering whether anybody else would come. When this appeared improbable for that night, I undressed, and went to bed; and there, I began to wonder fearfully what would be done to me. Whether it was a criminal act that I had committed? Whether I should be taken in custody, and sent to prison? Whether I was at all in danger of being hanged?

I never shall forget the waking, next morning; the being cheerful and fresh for the first moment, and then being weighed down by the stale and dismal oppression of remembrance. Miss Murdstone reappeared before I was out of bed; told me, in so many words, that I was free to walk in the garden for half an hour and no longer; and retired, leaving the door open, that I might avail myself of that permission.

I did so, and did so every morning of my imprisonment, which lasted five days. If I could have seen my mother alone, I should have gone down on my knees to her and besought her forgiveness; but I saw no one, Miss Murdstone excepted, during the whole time—except at evening prayers in the parlor; to which I was escorted by Miss Murdstone after everybody else was placed; where I was stationed, a young outlaw, all alone by myself near the door; and whence I was solemnly conducted by my jailer before anyone arose from the devotional posture. I only observed that my mother was as far off from me as she could be, and kept her face another way, so that I never saw it; and that Mr. Murdstone's hand was bound up in a large linen wrapper.

The length of those five days I can convey no idea of to any one. They occupy the space of years in my remembrance. The way in which I listened to all the incidents of the house that made themselves audible to me; the ringing of bells, the opening and shutting of doors, the murmuring of voices, the footsteps on the stairs; to any laughing, whistling, or singing, outside, which seemed more dismal than anything else to me in my solitude and disgrace—the uncertain pace of the hours, especially at night, when I would wake thinking it was morning, and find that the family were not yet gone to bed, and that all the length of night had yet to come—the depressed dreams and nightmares I had—the return of day, noon, afternoon, evening, when the boys played in the churchyard, and I watched them from a distance within the room, being ashamed to show myself at the window lest they should know I was a prisioner—the strange sensation of never hearing myself speak—the fleeting intervals of something like cheerfulness, which came with eating and drinking, and weny away with it—the setting in of rain one evening, with a fresh smell, and its coming down faster and faster between me and the church, until it and gathering night seemed to quench me into gloom, and fear, and remorse—all this appears to have gone round and round for years instead of days, it is so vividly and strongly stamped on my remembrance.

On the last night of my restraint, I was awakened by hearing my name spoken in a whisper. I started up in bed, and putting out my arms in the dark, said:

"Is that you, Peggotty?f'

There was no immediate answer, but presently I heard my name again in a tone so very mysterious and awful, that I think I should have gone into a fit, if it had not occurred to me that it must have come throughthe keyhole.

I groped my way to the door, and putting my own lips to the keyhole, whispered:

"Is that you, Peggotty, dear?"

"Yes, my own precious Davy," she replied "Be as soft as a mouse, or the Cat'll hear us."

I understood this to mean Miss Murdstone, and was sensible of the urgency of the case; her room being close by.

"How's mamma, dear Peggotty? is she very angry with me?"

I could hear Peggotty crying softly on her side of the keyhole, as I was doing on mine, before she answered. "No. Not very."

"What is going to be done with me, Peggotty dear? Do you know)"

"School. Near London," was Peggotty's answer. I was obliged to get her to repeat it, for she spoke it the first time quite down in her throat, in consequence of my having forgotten to take my mouth away from the keyhole and put my ear there and though her words tickled me a good deal, I didn't hear them.

"When, Peggotty?-'

"To-morrow."

"Is that the reason why Miss Murdstone took the clothes out of my drawers which she had done, though I had forgotten to mention it.

"Yes," said Peggotty- "Box.-'

"Shan't I see mamma?"

"Yes," said Peggotty. "Morning."

When Peggotty fitted her mouth to the keyhole, and delivered these words through it with as much feeling and earnestness as a keyhole has ever been the medium of communicating, I will venture to assert' shooting in each broken little sentence in a convulsive little burst of its own.

"Davy, dear. If I ain't been azackly as intimate with you. Lately, as I used to be. It ain't because I don't love you. Just as well and more, my pretty poppet. It's because I thought it better for you. And for someone else besides. Davy, my darling, are you listening? Can you hear?"

"Ye—ye—ye—yes, Peggotty!" I sobbed.

"My own!" said Peggotty, with infinite compassiob. "What I want to say, is. That you must never forget me. And I'll take as much care of your mamma, Davy. As ever I took of you. And I won-t leave her. The day may come when she'll be glad to lay her poor head on her stupid, cross, old Peggotty's arm again. And I'll write to you, my dear. Though I ain't no scholar. And I'll—I'll—" Peggotty fell to kissing the keyhole, as she couldn't kiss me.

"Thank you, dear Peggotty!-' said I. "Oh, thank you! Thank you! Will you promise me one thing, Peggotty? Will you write and tell Mr. Peggotty and little Em'ly, and Mrs. Gummidge and Ham, that I am not so bad as they might suppose, and that I sent 'em all my love—especially to little Em'ly? Will you, if you please, Peggotty?"

The kind soul promised, and we both of us kissed the keyhole with the greatest affection—I patted it with my hand, I recollect, as if it had been her honest face—and parted. From that night there grew up in my breast a feeling for Peggotty which I cannot very well define. She did not replace my mother; no one could do that; but she came into a vacancy in my heart, which closed upon her, and I felt towards her something I have never felt for any other human being. It was a sort of comical affection too; and yet if she had died, I cannot think what I should have done, or how I should have acted out the tragedy it, would have been to me.

In the morning Miss Murdstone appeared as usual, and told me I was going to school; which was not altogether such news to me as she supposed. She also informed me that when I was dressed, I was to come down-stairs into the parlor, and have my breakfast. There I found my mother, very pale and with red eyes: into whose arms I ran, and begged her pardon from my suffering soul

"Oh, Davy!" she said. "That you could have hurt any one I love! Try to be better, pray to be better! I forgive you;)| but I am so grieved, Davy, that you should have such bad passions in your heart."

They had persuaded her that I was a wicked fellow, and she was more sorry for that, than for my going away. I felt it sorely. I tried to eat my parting breakfast, but my tears dropped upon my bread-and-butter, and trickled into my tea. I saw, my mother look at me sometimes, and then glance at the watchful Miss Murdstone, and then look down, or look away.

"Mastet Copperfield's box there!" said Miss Murdstone, when the wheels were heard at the gate.

I looked for Peggotty, but it was not she; neither she nor Mr. Murdstone appeared. My former acquaintance, the carrier, was at the door; the box was taken out of his cart, and lifted in.

"Clara!" said Miss Murdstone, in her warning note-

"Ready, my dear Jane," returned my mother. "Good bye, Davy. You are going for your own good. Good bye, my child. You will come home in the holidays, and be a better boy."

"Clara!" Miss Murdstone repeated.

"Certainly, my dear Jane," replied my mother, who was holding me. "I forgive you, my dear boy. God bless you!"

"Clara!" Miss Murdstone repeated.

Miss Murdstone was good enough to take me out to the cart, and to say on the way that she hoped I would re-pent, before I came to a bad end; and then I got into the cart, and the lazy horse walked off with it.

CHAPTER V.

Am Sent Away From Home.

We might have gone about half a mile, and my pocket-handkerchief was quite wet through, when the carrier stopped short.

Looking out to ascertain for what, I saw, to my amazement, Peggotty burst from a hedge and climb into the cart. She took me in both her arms, and squeezed me to her stays until the pressure on my nose was extremely painful, though I never thought of that until afterwards when I found it very tender. Not a single word did Peggotty speak. Releasing one of her arms, she put it down in her pocket to the elbow, and brought out some paper bags of cakes which she crammed into my pockets, and a purse which she put into my hand, but not one word did she say. After another and a final squeeze with both arms, she got down from the cart and ran away; and my belief is, and always has been, without a solitary button on her gown. I picked up one, of several that were rolling about, and treasured it as a keepsake for a long time.

The carrier looked at me, as if to inquire if she were coming back. I shook my head, and said I thought not. "Then, come up," said the carrier to the lazy horse; who came up accordingly.

Having by this time cried as much as I possibly could, I began to think it was of no use crying any more, especially as neither Roderick Random nor that Captain of the Royal British Navy had ever cried, that I could remember, in trying situations. The carrier seeing me in this resolution, proposed that my pocket handkerchief should be spread upon the horses back to dry. I thanked him, and assented; and particularly small it looked under those circumstances.

I had now leisure to examine the purse. It was a stiff leather purse, with a snap, and had three bright shillings in it, which Peggotty had evidently polished up with whitening, for my greater delight. But its most precious contents were two half-crowns folded together in a bit of paper, on which was written, in my mother's hand, "For Davy. With my love." I was so overcome by this, that I asked the carrier to be so good as to reach me my pocket-handkerchief again; but he said he thought I had better do without, and I thought I really had, so I wiped my eyes on my sleeve and stopped myself.

For good, too; though, in consequence of my previous emotions, I was still occasionally seized with a stormy sob. After we had jogged on for some little time, I asked the carrier if he was going all the way?

"All the way where?" inquired the carrier.

"There," I said.

"Where's there?" inquired the carrier.

"Near London," I said.

"Whay that horse," said the carrier, jerking the rein to point him out, ';would be deader than pork before he got over half the ground."

"Are you only going to Yarmouth, then?" I asked.

"That's about it," said the carrier. "And there I shall take you to the stage-coach, and the stage-coach that'll take you—wherever it is."

As this was a great deal for the carrier (whose name was Mr. Barkis) to say—he being, as I observed in a former chapter, of a phlegmatic temperament, and not at all conversational—I offered him a cake as a mark of attention, which he ate at one gulp, exactly like an elephant, and which made no more impression on his big face than it would have done on an elephant's.

"Did she make 'em, now?" said Mr. Barkis, always leaning forward, in his slouching way, on the footboard of the cart with an arm on each knee.

"Peggotty, do you mean, sir?"

"Ah!" said Mr. Barkis. "Her."

"Yes. She makes all our pastry and does all our cooking."

"Do she though?" said Mr. Barkis.

He made up his mouth as if to whistle, but he didn't whistle. He sat looking at the horse's ears, as if he saw something new there; and sat so for a considerable time. By-and-by. he said:

"No sweethearts, I b'lieve?"

"Sweetmeats, did you say, Mr. Barkis?" For I thought he wanted something else to eat, and had pointedly alluded to that description of refreshment.

"Hearts," said Mr. Barkis. "Sweethearts; no person walks with her?"

"With Peggotty?"

"Ah!" he said. "Her."

"Oh, no. She never had a sweetheart."

"Didn't she, though?" said Mr. Barkis.

Again he made up his mouth to whistle, and again he didn't whistle,

but sat looking at the horse's ears.

"So she makes," said Mr. Barkis, after a long interval of reflection, "all the apple parsties, and doos all the cooking, do she?"

I replied that such was the fact.

"Well. I'll tell you what," said Mr. Barkis. "P'raps you might be writin' to her, p'raps you'd recollect to say that Barkis was willin'; would you?"

"That Barkis was willing," I repeated, innocently. "Is that all the message?"

"Ye—es," he said, considering. "Ye—es. Barkis is willin'."

"But you will be at Blunderstane, again to-morrow, Mr. Barkis," I said, faltering a little at the idea of my being far away from it then, "and could give your own message so much better."

As he repudiated this suggestion, however, with a jerk of his head, and once more confirmed his previous request by saying, with profound gravity, "Barkis is willin'. That's the message," I readily undertook its transmission. While I was waiting for the coach in the hotel at Yarmouth that very afternoon, I procured a sheet of paper and an inkstand and wrote a note to Peggotty, which ran thus: "My dear Peggotty. I have come here safe. Barkis is willing. My love to mamma. P.S. He says he particularly wants you to know—Barkis is willing."

When I had taken this commission on myself prospectively, Mr. Barkis relapsed into perfect silence; and I, feeling quite worn out by all that had happened lately, lay down on a sack in the cart, and fell asleep. I slept soundly until we got to Yarmouth: which was so entirely new and strgnge to me in the inn-yard to which we drove, that I at once abandoned a latent hope I had had of meeting with some of Mr, Peggotty's family there, perhaps even with little Em'ly herself.

The coach was in the yard, shining very much all over, but without any horses to it yet; and it looked in that state as if nothing was more unlikely than its ever going to London. I was thinking this, and wondering what would ultimately become of my box, which Mr. Barkis had put down on the yard-pavement by the pole (he having driven up the yard to turn his cart), and also what would ultimately become of me, when a lady looked out of a bow-window where some fowls and joints of meat were hanging up, and said:

"Is that the little gentleman from Blunderstone?"

"Yes, ma'am," I said.

"What name?" inquired the lady.

"Copperfield, ma'am," I said.

"That won't do," returned the lady. "Nobody's dinner is paid for here, in that name."

"Is it Murdstone, ma'am?" I said

"If you're Master Murdstone," said the lady, "Why do you go and give another name, first?"

I explained to the lady how it was, who then rang the bell, and called out "William! show the coffee-room!" upon which a waiter came running out of the kitchen on the opposite side of the yard to show it, and seemed a god deal surprised when he was only to show it to me.

It was a large, long room with some maps in it. I doubt if I could have felt much stranger if the maps had been real foreign countries, and I cast away in the middle of them. I felt it was taking a liberty to sit down,with my cap in my hand, on the corner of the chair nearest the door; and when the waiter laid a cloth on purpose for me, and put a set of casters on it, I think I must have turned red all over with modesty.

He brought me some chops, and vegetables, and took the cover off in such a bouncing manner that I was afraid I must have given him some offence. But he greatly relieved my mind by putting a chair for me at the table, and saying very affably, "Now, six-foot! come on!"

I thanked him, and took my seat at the board; but found it extremely difficult to handle my knife and fork with anything like dexterity, or to avoid splashing myself with the gravy while he was standing opposite, staring so hard, and making me blush in the most dreadful manner every time I caught his eye. After watching me into the second chop, he said:

"There's half a pint of ale for you. Will you have it now?"

I thanked him and said "Yes." Upon which he poured it out of a jug into a large tumbler, and held it up against the light, and made it look beautiful.

"My eye!" he said. "It seems a good deal, don't it?"

"It does seem a good deal," I answered with a smile. For it was quite delightful to me to find him so pleasant. He was a twinkling-eyed, pimple-faced man, with his hair standing upright all over his head; and as he stood with one arm a-kimbo, holding up the glass to the light with the other hand, he looked quite friendly.

"There was a gentleman here yesterday," he said—"a stout gentleman, by the name of Topsawyer—perhaps you know him?"

"No," I said, ;'I don't think—"

"In breeches and gaiters, broad-brimmed hat, grey coat, speckled choaker," said the waiter.

"No," I said bashfully, "I haven't the pleasure—"

"He came in here," said the waiter looking at the light through the tumbler, "ordered a glass of this ale—would order it—I told him not—drank it, and fell dead. It was too old for him. It oughtn't to have been drawn; that's the fact."

I was very much shocked to hear of this melancholy accident, and said I thought I had better have some water.

"Why you see," said the waiter, still looking at the light through the tumbler, with one of his eyes shut up, "our people don't like things being ordered and left. It offends 'em. But I'll drink it, if you like. I'm used to it, and use is everything. I don't think it'll hurt me, if I throw my head back, and take it off quick. Shall I ?"

I replied that he would much oblige me by drinking it, if he thought he could do it safely, but by no means otherwise. When he did throw his head back, and take it off quick, I had a horrible fear, I confess, of seeing him meet the fate of the lamented Mr. Topsawyer, and fall lifeless on the carpet. But it didn't hurt him. On the contrary, I thought he seemed the fresher for it.

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Use Baby's Own Soap. It's "Best for Baby — Best for You".

Absolutely pure vegetable oils made fragrant by flower extracts, which help the skin, make Baby's Own Soap the best for toilet and nursery use.

Its fragrant, creamy lather delights all.

ALBERT SOAPS, LIMITED,
Mfrs., - MONTREAL.

5-12

Baby's Own Soap

SUSSEX WOOD CUTTERS

Made in Four Different Sizes

We are offering these machines to the public with the belief that they are the best wood cutting machines on the market for the money. The Frame is made of the best seasoned hardwood, and well bolted. The Arbor is of the best turned steel, and runs in bearings made of the finest quality babbit. The Balance Wheel is a solid web and weighs 180 lbs. The Table is of heavy Steel Plates and indestructable. Wood Cutters are shipped with 28 in. saws unless otherwise ordered.

Remember we manufacture the celebrated Little Giant Thresher, The Sussex Root Pulper, Farmer's Feed Boilers, Grain Grinders and Hay Presses.

The SUSSEX MANUFACTURING CO., Limited, SUSSEX, N. B.

"What have we got here?" he said, putting a fork into my dish. "Not chops?"

"Chops," I said.

"Lord bless my soul!" he exclaimed. "I didn't know they were chops. Why a chop's the very thing to take off the bad effects of that beer! Ain't it lucky?"

So he took a chop by the bone in one hand, and a potato in the other, and ate away with a very good appetite, to my extreme satisfaction. He afterwards took another chop, and another potato; and after that another chop and another potato. When he had done, he brought me a pudding, and having set it before me, seemed to ruminate, and so become absent in his mind for some moments

"How's the pie?" he said, rousing himself.

"It's a pudding," I made answer.

"Pudding!" he exclaimed. "Why bless me, so it is! What!" looking at it nearer . "You don't mean to say its a batter pudding?"

"Yes, it is indeed."

"Why, a batter-pudding," he said, taking up a tablespoon, "is my favorite pudding! Ain't that lucky? Come on, little 'un, and let's see who'll get most."

The waiter certainly got most. He entreated me more than once to come in and win, but what with his tablespoon to my tea-spoon, his dispatch to my dispatch, and his appetite to my appetite, I was left far behind at the first mouthful, and had no chance with him. I never saw anyone enjoy a pudding so much, I think; and he laughed, when it was all gone, as if his enjoyment of it lasted still.

panionable, it was then that I asked

Finding him so friendly and com-

for the pen and ink and paper, to write to Peggotty. He not only brought it immediately, but was good enough to look over me while I wrote the letter. When I had finished it, he asked me where I was going to school.

I said, "Near London," which was all I knew.

"Oh! my eye!" he said, looking very low-spirited, "I am sorry for that."

"Why?" I asked him.

"Oh, Lord!" he said, shaking his head, "that's the school where they broke the boy's ribs—two ribs—a little boy he was. I should say he was—let me see—how old are you, about?"

I told him between eight and nine.

"That's just his age," he said. "He was eight years and six months when they broke his first rib; eight years and eight months when they broke his second, and did for him.

I could not disguise from myself, or from the waiter, that this was an uncomfortable coincidence, and inquired how it was done. His answer was not cheering to my spirits, for it consisted of two dismal words, "With whopping."

The blowing of the coach-horn in the yard was a seasonable diversion, which made me get up and hesitatingly inquire, in the mingled pride and diffidence of having a purse (which I took out of my pocket) if there were anything to pay.

"There's a sheet of letter-paper," he returned. "Did you ever buy a sheet of letter-paper?"

I could not remember that I ever had.

"It's dear," he said, on account of the duty. Threepence. That's the way we're taxed in this country. There's nothing else except the waiter. Never mind the ink. I lose by that."

"What should you—what should I—how much ought I to—what would it be right to pay the waiter, if you please" I stammered, blushing.

a "If I hadn't a family, and that family hadn't the cowpock," said the waiter, "I wouldn't take a sixpence. If I didn't support an aged pairint, and a lovely sister,"—here the waiter was greatly agitated—"I wouldn't take a farthing. If I had a good place and was treated well here, I should beg acceptance of a trifle, instead of taking of it. But I live on broken wittles—and I sleeps on the coals—"here the waiter burst into tears.

I was very much concerned for his misfortunes, and felt that any recognition short of ninepence would be mere brutality and hardness of heart. Therefore I gave him one of my three bright shillings, which he received with much humility and veneration, and spun up with his thumb' directly upwards, to try the goodness of.

It was a little disconcerting to me, to find, when I was being helped up behind the coach, that I was supposed to have eaten all the dinner without any assistance, I discovered this, from overhearing the lady in the bow-window say to the guard, "Take care of that child, George, or he'll burst!" and from observing that the women-servants who were about the place came out to look at and giggle at me as a young phenomenon. My unfortunate friend the waiter who had quite recovered his spirits, did not appear to be disturbed by this, but joined in the general admiration without being at all confused. If I had any doubt of him, I suppose this half-awakened it; but I am inclined to believe that with the simple confidences of a child, and the natural reliance of a child upon superior years (qualities I am very sorry any children should prematurely change for worldly wisdom), I had no serious mistrust of him on the whole, even then.

(To be continued,)

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OR send your name and address for a free copy of the book that has opened the eyes of Canadian farmers to the possibilities of the "material-of-all-work"—concrete.

This book,

"What The Farmer Can Do With Concrete"

will be sent to you absolutely free. You do not place yourself under the slightest obligation to buy any "Canada" Cement or to do anything else for us.

YOU will find the book interesting, instructive, and its information will be of real cash value to you. It is not a catalogue. It gives in plain, simple language the directions for using concrete for every possible kind of farm construction. Scores of every day uses, fully described and illustrated.

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Mother and the Schools.

An editorial in the Chicago Examiner, published recently, closes with these words:

"Try to make your children realize that school is their opportunity. Make them to feel that when the school doors open it means more to them than if the door of some great mine of Aladdin's wealth were opened to them. Interest yourself in the school life of your children, in their studies, in their success, and especially in their disappointment and school sorrows—those sorrows are very real to little children.

"If you can do so become acquaintwork the teacher does—the greatest teacher feel that you appreciate the ed with the teacher in whose hands your children are placed. Make the work in the world.

"Make your children realize what they owe to the teacher—obedience, respect and gratitude."

Oftentimes it is worth a good deal of difficulty that a mother thus keeps in touch with the schools, but once she realizes that it is for the good of her children and she will overcome great obstacles. There are few mothers who do not earnestly desire to do the best possible for their children and who do not welcome help from whatever source it may come.

Many progressive communities of to-day have Parent-Teacher Associations. These organizatians are carried on by the parents with some representation from the teachers and are for the purpose of co-operating with the teachers in every way possible. They work along many different lines of activity; they do much in a material way, procuring equipment for which the board cannot provide, they encourage and often help to support various whole-activities such as the social life in a high 138.72.

school, athletics, debating and dramatic societies, but perhaps the most important work accomplished is the better understanding of the children and consequently the wiser treatment their problems which naturally results from the parents and teachers working together. At the meetings of these associations the problems peculiar to each school are considered, but also the broader questions connected with the education and home training of children, and in this way there grows up in a community a truer appreciation of what is really best for the children.

In many communities where such organizations do not exist, the Women's Clubs have departments that aim to meet this need. It is, however, much more effective to have a Parent-Teacher Association in connection with each school. Two or more such associations can profitably combine for certain meetings where a prominent speaker has been secured. The expense can thus be shared and a larger audience assured.

Is there an association in the school where your children go? If not, what can be done. A few enthusiastic mothers can make a beginning. Is it worth while?

ONTARIO WOMAN'S FORTUNE

Freed From That Weak, Languid, Always Tired Feeling, by Lydia E. Pinkham's Compound.

Thessalon, Ont.—"I cannot speak too highly of your medicine. When my appetite is poor and I have that weak, languid, always tired feeling, I get a bottle of Lydia E. Pinkham's Vegetable Compound, and it builds me up, gives me strength, and restores me to perfect health again. It is truly a blessing to women, and I cannot speak highly enough of it. I take pleasure in recommending it to others."—Mrs. ANNIE CAMERON, Thessalon, Ont.

Women who are suffering from those distressing ills peculiar to their sex should not lose sight of these facts or doubt the ability of Lydia E. Pinkham's Vegetable Compound to restore their health.

There are probably hundreds of thousands, perhaps millions of women in the United States who have been benefited by this famous old remedy, which was produced from roots and herbs over 30 years ago by a woman to relieve woman's suffering. If you are sick and need such a medicine, why don't you try it?

If you want special advice write to Lydia E. Pinkham Medicine Co. (confidential) Lynn, Mass. Your letter will be opened, read and answered by a woman and held in strict confidence.

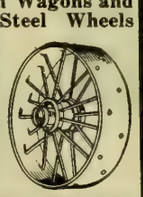
BUY A WAGON
YOU CAN DEPEND ON

For convenience, strength and durability, get a T-A Handy Farm Wagon. Designed especially for farm work, will give everlasting service under the roughest usage to which a wagon can be put. And besides—it is easy on horses.

T-A Handy Farm Wagons and Wide-Tire Steel Wheels

Carefully and strongly built of the highest grade material, these T-A Wide-Tire Steel Wheels will carry 25 to 50 per cent. heavier loads without the least danger of breaking down or getting stuck.

We will be pleased to send you descriptive catalogue. Write for it.



TUDHOPE-ANDERSON CO., Ltd. ORILLIA, Ontario.

A Des Moines man had an attack of muscular rheumatism in his shoulder. A friend advised him to go to Hot Springs. That meant an expense of $150.00 or more. He sought for a quicker and cheaper way to cure it and found it in Chamberlain's Liniment. Three days after the first application of this liniment he was well. For sale by all delaers.

Household Hints-

Plan meals several days ahead. There will be no waste then and bet ter combinations will be made.

Men doing heavy physical work need heavier and richer food than those whose work is sedentary.

Alcohol will quickly remove an obstinate porous plaster and also the leaves. ...

To dry a sweater coat nicely, tie a coat-hanger to the clothes-line and cover it with a clean cloth. Do not wring the sweater but hang it on this and let drip dry.

Do not let china become hot, as this harms it by making it brittle.

All measurements are level. Sift flour before measuring. Three teaspoons—1 tablespoon; 10 tablespoons—1 cup; 2 cups, 1 pint.

A band of surgeon's plaster around the thumb below the nail, will cure children of sucking their thumb.

As a protection against fire—a blaze from any source—you ought to keep a pail of sand handy about the house all the time.

Have the kitchen arranged so that utensils and food materials are close at hand. A cabinet, shelves, or hooks for small utensils—measuring cups, spoons, knives, forks and egg beaters; and cooking materials—salt, pepper, spices, baking powder, soda, sugar, etc., can be placed conveniently in any kitchen.

As a kitchen disinfectant salt has no equal. Pour the salt water from the ice cream freezer into pipes to disinfect them. Salt cleans iron, makes a good dentrifice, brightens the carpets, removes egg stains from silver spoons, will cause fruit stains to be more easily removed from linen; combined with acids will clean brass.

Do not lay silk waists away without taking out the shields, as the rubber is likely to crack the silk.

Beware of using celluloid combs in the hair. If they come near a gas jet, they will explode in the hair.

A bit of sandpaper tacked to the end of the ironing board will be found a great convenience for cleaning irons. Salt, too, will remove starch on irons.

It frequently happens that painters splash the glass windows when they are painting the sills. When this is the case melt some soda in very hot water and wash the glass with it, using a soft flannel. It will entirely remove the paint.

A simple cake icing is made by using orange juice or any other fruit juice and stirring in sufficient confectioners' sugar to have it the right consistency.

A man who has been camping is authority for the statement that an ordinary wax candle may be used to polish tan shoes. Rub the candle on the shoes and polish with a soft cloth.

When soot or ink falls on a carpet or rug never attempt to sweep it off at once, but cover it thickly with dry salt and let it stand for a day. Then you can brush off the salt and the stain will come with it.

As a rule, the folds of tablecloths are ironed very hard, and this, of course, will quickly wear out the cloth. There seems no sense in having the creases so very prominent, since the life of the cloth is lessened thereby. Few women need to be told that the position of the folds should be changed from time to time when ironing.

Clean up as you go along. Put things away immediately after use. Make use of as few mixing and cooking dishes as possible by rinsing or washing and using again. Put to soak in water dishes that can be cleansed easily. Do not make half an hour's dishwashing in preparing a meal. Work neatly—do not "clutter up" the kitchen.

Harvest Song.

Come to the meadow with me, dearie—
Come to the meadow and see, dearie—
The little green leaves have all turned red;
The autumn is here and the summer is dead;
The goldenrod's in the rose's stead—
And the harvest's for thee and for me, dearie.

Run to the orchard and stay, dearie—
The blossoms that bloomed in May, dearie—
The magic of fall
Has turned them all
Into fruit, to be gathered away, dearie.
The birds have flown to the eaves, dearie—
The trees have been robbed of their leaves, dearie—
The seed that was sown,
Has grown and grown,
And the grain has been piled into sheaves, dearie.

Come, gather it, all you can hold, dearie—
The harvest's grain is God's gold, dearie—
The squirrel has stored his nuts in the tree—
And someone is coming—oh, who can it be?
The little wind told 'em—I'll tell it to thee—
'Tis winter—he's bringing the cold, dearie.

—Montrose J. Moses in Good Housekeeping.

Poor Combinations.

Beef, macaroni and cheese, peas,—too high in protein.

Peasoup, meat, cheese, custard,—too high in protein.

Beef or mutton, baked beans, Indian pudding,—too high in protein.

Pork, fried potatoes, rich pudding with butter sauce,—too high in fat.

Pork, vegetable with butter sauce, salad with mayonnaise dressing, whipped cream hessert,—too high in fat.

Light meat, potatoes, sweet potatoes, corn, rice pudding,—too high in starch.

Combination rice and meat, potatoes, beets, blanc mange,—too high in starch.

Meat, candied sweet potatoes, jelly, kisses, and rich preserves,—too high in sugar.

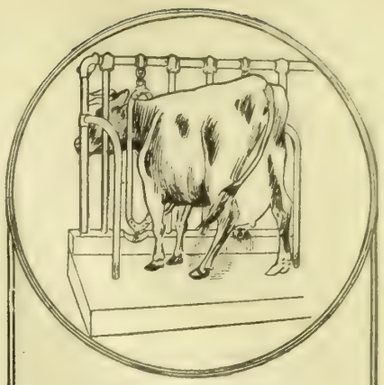
French Pickle.

1 pk. green tomatoes.
1 doz. green peppers.
2 qts. onions.

Cut all in slices and put three cups salt on them and cover with cold water. Let stand 24 hours, drain and rinse. Put in preserving kettle and pour over.

2 qts. cider vinegar.
2 cups tarragon vinegar.
2 tb. ground cloves.
½ lb. mustard seed.
2 tb. cinnamon.
2 tb. mace.

Boil until fruit is tend?r. Put in 'ars and seal.—Mrs. Fox.



A Contented Cow
is
A Profitable Cow

ARE your cows contented? Are they profitable? If not, make them so by doing away with your old-time wooden stalls. They gather dirt, harbour disease germs, and prevent the free circulation of life-giving air and sunlight.

LOUDEN'S

Tubular Steel Stable Equipment is easily and quickly installed, and insures cleanliness and ventilation. Its use means comfort for your cows and profits for you.

GET INTERESTED. WRITE TO-DAY.

Our book, "Perfect Barn Equipment," and the service of our architectural department, are free.

The LOUDEN MACHINERY CO.
Dep: 78 - GUELPH, Ont. 5

45 YEARS OLD AND THE LAST YEAR THE BEST OF THE 45

The same enterprise, earnestness, ability and devotion to students' interests which have given this college its present standing, will be continued and every effort made to be worthy of the generous patronage enjoyed.

Next term will begin Thursday, January 2nd.

Send for Catalogue.

THE St. JOHN Business COLLEGE. S. KERR & SON

S. KERR
Principal.

We wish to call your attention to the fact that most infectious diseases such as whooping cough, diphtheria and scarlet fever are contracted when the child has a cold. Chamberlain's Cough Remedy will quickly cure a cold and greatly lessen the danger of contracting these diseases. This remedy is famous for its cures of colds. It contains no opium or other narcotics and may be given to a child with implicit confidence. Sold by all dealers.

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

HE FEELS IT A DUTY TO RECOMMEND

VIGORA

Here is a testimonial which shows the merits of VIGORA:

"MR. J. B. MORIN:—I had a horse which for a year past suffered from difficult breathing. I have pleasure in saying that I have cured it completely with VIGORA and I believe it my duty to express my thanks to you. There is no need for me to say that I consider it my duty to recommend it. Frs. GENDRON, Lambton."

FOR SALE BY ALL GOOD DRUGGISTS AND GROCERS

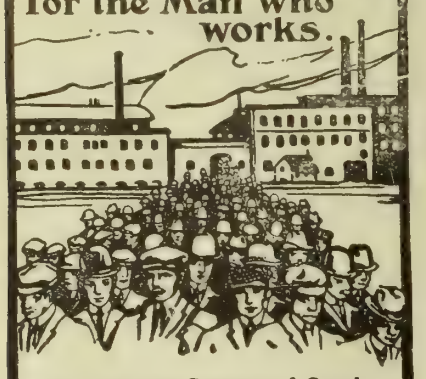
J. B. MORIN, Manufacturer, 318 St. Joseph St., Quebec

CHALLENGE BRAND WATERPROOF COLLARS

Look like linen—feel like linen, but outwear a dozen linen collars. No laundry bills—a little soap and water only required to keep them fresh and clean.

Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

For the Man who works.



The Arlington Company of Canada Limited TORONTO 2

Gold Watch Free

A Lady's or Gents' Solid Gold-filled Watch Free for selling 10 boxes of Dr. Marcil's famous Compound Pills at 25c. a box. They are the greatest remedy on earth for the cure of weak and impure blood, nervousness, constipation, stomach trouble, to stimulate the appetite, regulate the bowels, and clear the complexion. A grand tonic and life builder. You will sell them very quickly, as each customer buys a box from you at only 25c. can receive free from us a handsome present of a Broach or Gold-filled Cuff Links or Ring. Send us your name and address and we will send you post-paid only 10 boxes of our remedies to sell at 25c. a box. When you have sold them send us the money, $2.50, and we will send you a Lady's or Gents' Stem Wind and Stem Set Watch. We are giving these Watches to advertise our remedies. Don't miss the chance of your life. Write us to-day. Address, The Dr. Marcil Medicine Co., Toronto. Dept. 2 Dept.

A Windsor Lady's Appeal

To all women' I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Uterine and Ovarian Tumors or growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write teday. Address Mrs. M. Summers, Box H. 309 Windsor, Ont.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V.S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

Lengthening the Vegetable Season.

Here is the experience of an enthusiastic gardener: Our eggplants lasted until cold weather, treated as follows: They were picked with great care, the stems dipped in melted paraffine, carefully placed in paper bags and hung on nails in the attic. Our carrots lasted till August because we stored them in clean sand in a cool place, seeing to it that they were in good condition when stored. Parsley lasted till the next spring's leaves were ready by lifting into a flower pot in the fall and keeping in a sunny window all winter. Cutting back aggrees with it. Tomatoes lasted till the first week in January. In some cases whole vines were pulled up and hung in a protected shed where they ripened for several weeks. Others were picked off and kept in a cellar that was neither hot nor cold.

Faith and Courage.

There are times when it is well that you take the initiative, and not wait for others to set the good example. The proper spirit with which wrong is that it must be put down, even if you must do it yourself. You are only one; but that seemingly insignificant minority, through your efforts and influence, may later increase to many, all as eager, persistent and energetic as yourself. You are then assured that, when the real conflict comes, each one will do his full share toward changing that minority to a triumphant majority. But remember that it requires true courage to be a minority of one, and true faith to work on, against odds, with full confidence in successful achievement.

A Few Butter Notes.

Butter made in a clean room, with clean utensils, well worked and packed in a good tub, will keep a good deal longer than that which is made by careless hands.

When you go into your milk room do you notice any bad smell? Don't do another thing until you have hunted up the source of that odor and removed it.

Cream kept too long has a sharp acid taste that works against the making of the best butter.

Old butter-makers notice it quickly if the streaks are not all worked out, and they know the butter was not made by a careful person.

A little strainer under the hole when you draw off the buttermilk will save itself many times over in the course of a single season.

Ventilation.

Why ventilate? Why bring fresh air into a house or barn? One cannot stop breathing for even five minutes—we are so dependent on the oxygen that the lungs can take out of the air. If no fresh air is allowed to enter a room occupied by several people the air soon becomes foul from the air coming from the lungs. Often when one enters a room it will feel close. In that case ventilation is necessasy. Breathing air over and over lowers one's vitality, which results in taking cols easily and along with the cold other troubles often start. Pure air is fully as important as pure food.—W. C. Palmer, N. Dak. Agr. Col.

Says Dr. Pankhurst: Perhaps you have a great mind, perhaps you have an eloquent tongue; it may be you have a large purse, and can glorify God and bless mankind with that; but perhaps you have nothing in the world but a kind, sweet smile. Then let that fall upon some poor life that has no smiles upon it. Remember that dewdrops glistening in the sun are just as beautiful as a rainbow.

MAPLE EVAPORATORS

TO THE LIVE FARMER OUR PERFECT MAPLE EVAPORATORS AND A SUGAR BUSH CAN BE MADE TO PRODUCE A REVENUE WHEN IT IS MOST NEEDED.

With our Maple Evaporator, sap is easily and economically converted into the finest quality maple syrup.

The body of the perfect evaporator is made of heavy sheet steel thoroughly riveted and braced with steel angle and fitted with cast iron door and faame.

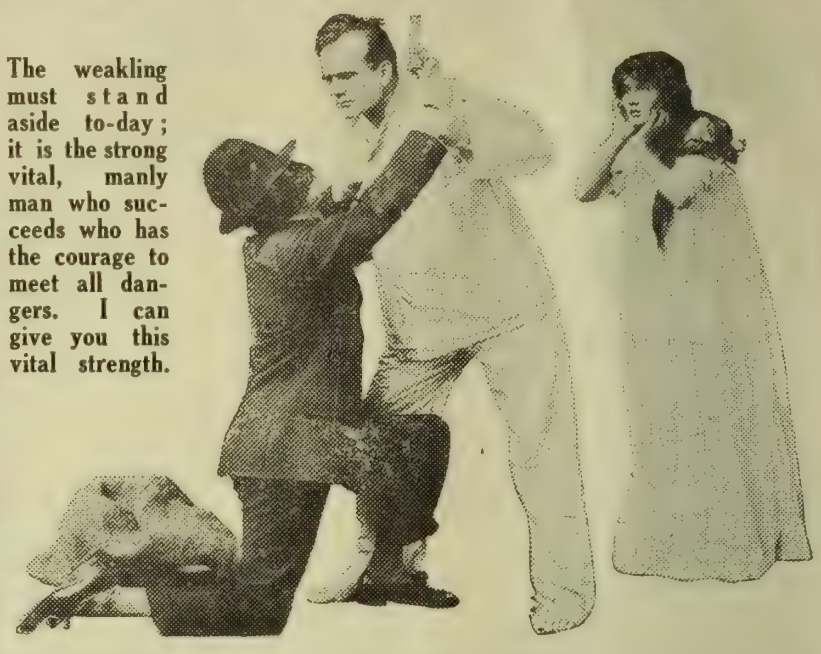
The working of the evaporator is very simple—put the sap in at one end and it comes out syrvp at the other.

Send for illustrated leaflet.

Steel Trough & Machine Co., Ltd., 9 James St., Tweed, Ont

Restores Men To Vital Vigor

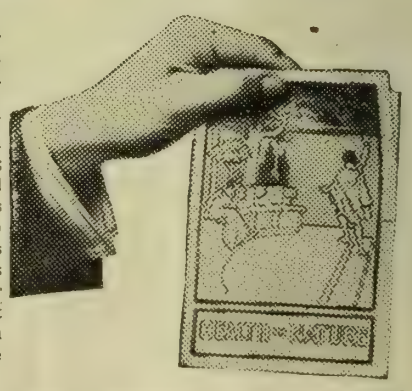
The weakling must stand aside to-day; it is the strong vital, manly man who succeeds who has the courage to meet all dangers. I can give you this vital strength.



Vitality is the thing which makes success; it gives men that compelling power which sends them forth eager and equipped to meet and overcome all obstacles; it is the thing which gives our young men courage to face death; it is the thing which inspires and holds a woman's love and faith. No matter what your age, I can give you this same vitality. I can restore the vigor you lost, no matter what early or later indiscretion may have sapped your streagth. I can make you "young" and keep you "young." From an intimate and studious observation of possibly 100,000 weakened men I say to you that vitality or the lack of it means all the difference between a manly man and a half man. The man who bubbles with vital power will exert a pleasing influence upon all with whom he comes in contact; women are naturally attracted to him, as are men. Lack of vitality is a negative condition, and it even repels. You wear my Health Belt and suspensory attachment all night; it sends a great, glowing, health-giving current of electro-vimut into your nerves, blood and organs; it takes all the "kink" out of your back and all the coward out of your makeup; it puts you right up in the "feeling fine" class and keeps you there. No stimulation, no false results; just a sure return to manhood and courage. Recommended also for rheumatism, pain in the back, kidney, liver, stomach and bladder disorders. It makes you feel young and keeps you feeling young forever.

Let Me Send You THIS BOOK Free

Here is my latest illustrated book, "Health In Nature, containing a fund of privrte information relating to weaknesses of men. All men, young or old, can read every word of this little publication with great profit. Sent to you in plain, sealed envelope by mail. The book is not written with the idea of compelling you to use my Health Belt; it is meant merely as a guide for men, and while my Belt is fully described, there is absolutely uo obligation on your part to purchase. I simply want you to read this book that you may know certain truths about all weaknesses, which have never been printed before. Vitality is the greatest thing in the world, and I can supply you with it. Please fill in the coupon for the free book.



DR. M. F. SANDEN, CO., 140 Yonge St., TORONTO, ONT.

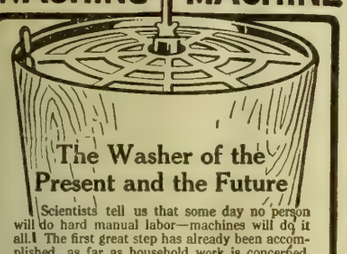
Dear Sirs:—Please forward me your Book, as advertised, free.

NAME.....

ADDRESS.....

An advertisement in the Maritime Farmer will sell your surplus stock---Try it!

NEW CENTURY WASHING MACHINE



The Washer of the Present and the Future

Scientists tell us that some day no person will do hard manual labor—machines will do it all. The first great step has already been accomplished, as far as household work is concerned. The New Century Washer, not only takes all the hard manual labor away from washing, but it washes clothes better than such work has ever been done before. The water tap furnishes the power, the New Century does nearly all the rest.

Washing-machines are not new but the New Century is. The other kinds did *Some* of the work, the New Century does almost *all* the work. The others gave trouble, the New Century saves trouble. The difference is in the patented and exclusive features of the New Century. Ask your dealer about them or send to us for full information.

CUMMER-DOWSWELL, LIMITED
HAMILTON, ONTARIO

GIRLS WANTED

To work in Paper Box Factory and Printing Office. Good board and lodging provided. Write for terms and particulars to

The D. F. Brown Paper Box Co., Ltd.
ST. JOHN, N. B.

25 HANDSOME POST CARDS FOR 25c No two alike. These lovely Art Post Cards in beautiful colors and exquisite gold embossed designs comprise one of the prettiest collections ever offered. Send 25 cents at once and we will give you 100 ADDITIONAL POST CARDS FREE. All postpaid. Satisfaction guaranteed Address, **INTERNATIONAL EMPORIUM, BEEBE, QUE**

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

Dates to be Remembered

Nova Scotia Farmers' Association Annual Meeting, Sydney, N. S., January 21 and 22, 1913.

P. E. Island Poultry Show, Charlottetown, P. E. I., December 30, 1912 to January 3, 1913.

Moncton Poultry Show, Moncton N. B., December 17 to 21, 1912.

North Sydney Poultry Show, North Sydney, N. S., January, 1913, about dates of N. S. F. A. Meeting.

When you have a bilious attack give Chamberlain's Tablets a trial. They are excellent. For sale by all dealers.

Farmer Ads. will Bring Results.

FLORICULTURE.

Please advise me what to do with an Oleander that is becoming infested with flat, brown bugs. They do not seem to crawl but are spreading rapidly. It is also covered with a sticky stuff that seems to come out of the leaves. What shall I do for this as it is hard to wash off?

The sticky substance is the result of the presence of the insects, which can be removed by washing the plant with kerosene emulsion made by thoroughly mixing one pint of kerosene oil with one-half pint of sour milk, stirred thoroughly until a butter is formed. Of this take one part to fifteen parts of water, stir frequently and apply with a cloth or sponge. Two applications will usually free a plant of these pests and it will also remove all foreign matter from the foliage, leaving the plant clean and healthy. You had better put a cloth over the soil while working about the foliage as it is not desirable to get too much oil in the earth.

Mrs. H. P. P., Chicago, Ill., U. S. A. sent foliage of two plants for identification. The broad leaves are from the Arcila and the other foliage is from the Grevilla Robusta or Silk Oak.

If any flower lover wishes to be successful with the Scarlet Salvia, in the vicinity of St. John, it is necessary that the young plants should be started at once. Top cuttings should be taken and rooted as you would Geraniums. They should not be bedded until all danger of cold nights is past and should be well treated in respect to watering, etc. If treated otherwise they will not bud until the middle of September.

Wall flower cuttings should also be taken at once to insure blooming plants for the late summer.

Dutch Hyacinth bulbs are starting strongly now and must be carefully watched not allowing to grow in the dark after the sprouts are over two inches high. Direct sunlight should not be given at first, but after that give all sunshine possible and plenty of water.

The warm house has started everything growing so that bulbs and roots that have been cellared should be carefully looked after so that they do not become too dry. Cellar roses must be watched and if they start to grow should be brought to light else the first crop of foliage and bloom will be lost.

I have been asked a number of times about the new Nicotiana Sanderai, which was so extensively featured in this and last seasons' catalogues. I tried it thoroughly under different conditions but was much disappointed in it as a house plant. It may be, however, a better bedding plant but would prefer the older Affinis as a house plant.

Newfoundlanders Will Attend the N. S. A. C. Short Courses

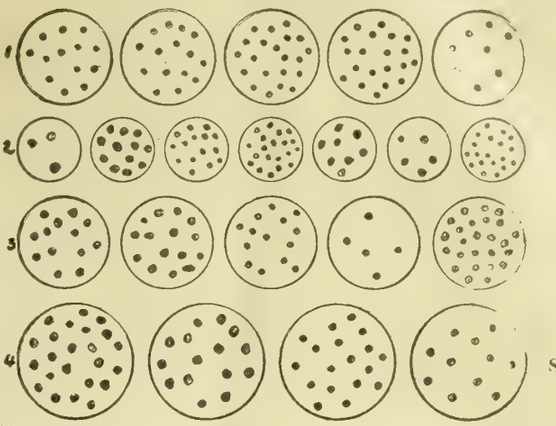
The Executive members of the St. John's Agricultural Society and Mr. Henry J. W. Bishop, Petty Harbor, Newfoundland purpose attending the Short Courses at the N. S. A. C., Truro, N. S.

They will be well rewarded for the time and money thus spent and the benefits that will come directly and indirectly to the Island Colony through the agricultural teachings at the College as gleaned and put in practice by these gentlemen can never be measured in terms of dollars and cents.

FREE $300.00 IN PRIZES

IN THE GREAT DOT PUZZLE CONTEST
A Genuine Contest for WISE HEADS!

SOLVE THIS PUZZLE



1 Something we all have
2 Something we all wear
3 Something we all like to have
4 Something we all do

The above 4 lines of circles containing dots represent the name of 4 different things described after each line. What are they?

HOW TO SOLVE THIS GREAT PUZZLE

Each circle of dots represents 1 letter of the word and the number of dots in each circle determine the letter in its relation to the alphabet. For instance: A is represented by 1 dot because it is the first letter in the alphabet, B is represented by 2 dots because it is the 2nd letter in the alphabet, C is represented by 3 dots because it is the 3rd letter in the alphabet. Now, with these simple instructions and a little patience you can soon have the puzzle solved. To give you a little assistance the 1st letter of the first word is M, because the circle contains 13 dots and M is the 13th letter of the alphabet.

After you have found the solution write your answer neatly on a piece of paper with your name and address and anything else you wish to say about the contest and send it in to us.

Those who send in the Correct or the Nearest Correct Answers; whose answers are the neatest and who live up to the condition of the contest (read rules of contest below), will win the following grand prizes:—

1st Prize, $125 00 in cash.
2nd " 50.00 "
3rd " 25.00 "
4th " 15.00 "
5th " Gent's Watch. Value $10.00.
6th " Ladies' Ring. Value $10.00.
7th " Fine Clock. Value $10.00.
8th " 44-Piece Dinner Set. Value $10.00.
9th Prize. Mission Upholstered Rocker Value $10.00.
10th Prize, Violin. Value $10.00.
11th Prize, Gillette Safety Razor. Value $5.00.
12th Prize, Waterman Fountain Pen: Value $5.00.
13th Prize, Glass Water Set. Value $5.00.
14th Prize, Large French Doll. Value $5 00.
15th Prize, Silverware Set. Value $5.00.

READ THE SIMPLE RULES OF THIS CONTEST

1. Contestants may send in as many answers as they wish, but only one answer can win a prize. (2) Only 1 person in each family will be allowed to compete. (3) No employees of ours or any relation of any employee will be allowed to compete. (4) Children under 12 years of age will not be permitted to compete. (5) Write only on one side of the paper. (6) All letters must be fully prepaid in postage. We will not accept answers upon which we will have to pay postage. (7) The decision of the judges must be accepted as final. The judging will be in the hands of 3 gentlemen of integrity who are absolutely disinterested. (8) This contest is absolutely free. You are not asked to spend one cent of your money or buy anything to enter. As soon as we receive your answer we will immediately tell you if you are right, and how the prizes will be distributed. We guarantee the awarding of the prizes described above according to decision of the judges.

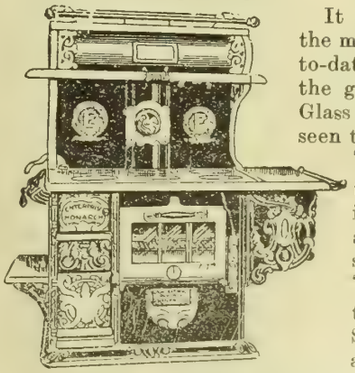
Address all answers to **Contest Department. Q-28**

NEW LIFE REMEDY COMPANY, TORONTO, ONT.

CANADA'S FINEST STEEL RANGE

"THE ENTERPRISE MONARCH"--For Wood or Coal

The acknowledged superior of anything yet made in this line



It has an established reputation as the most thoroughly constructed and up-to-date steel range on the market, with the greatest of all improvements—the Glass Oven Door, through which can be seen the contents of the oven.

We experimented with this feature for a long time and now have it right. No more waste of time and heat—the "Daylight Oven" solves the problem.

Note also the striking design of the Monarch, its convenient End Shelves, Full Length Towel Rod and other unique features.

As to its good baking qualities, ease of operation and economy in fuel, consult the neighbor who has one, or write direct for list of references and particulars.

The ENTERPRISE FOUNDRY CO., Sackville, N. B.

When Writing Advertisers Please Mention the Maritime Farmer.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE.—Hampshire Ram, registered. Three years old. Box 45. Hillsboro N. B.

SHORTHORN BULLS FOR SALE. Walter Eaton, Upper Canard, N. S.

FOR SALE—Pure bred imported Clydesdale mare, seven year old. MORRIS SCOVIL, Gagetown, N. B.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Four Ayrshire bulls, five to eleven months old from good producing stock. JOHN F. FROST, Hampton, N. B.

GUERNSEY BULLS FOR SALE—Ages twelve, four, and two months. All from record of performance cows. D. G. McKAY & SON, Scotsburn.

BROTHER—Accidentally discovered root will cure both tobacco habit and indigestion. Gladly send particulars. S. T. STOKES, Mohawk, Florida.

FOR SALE—Registered Holsteins. 1 bull four years old; 2 bull calves dropped in April, 1 bull calf dropped in October, all good stock. W. GARFIELD CAMPBELL, Salisbury, N. B.

10,000 COON AND SKUNK WANTED—Do not sell until you have my offer. Nine trapping secrets for stamps. E. W. DOUGLAS, Stanley, N. B.

JERSEY BULL FOR SALE. Four years old. sire Ferror (Imp.) No. 391, dam Brampton Regan, No. 439. Apply to J. J. CLARK, Sect. Tatamagouche, N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

GUERNSEYS FOR SALE—1 yearling bull, and 4 between the ages of 4 and 10 months, all very fine animals. WILLIAM COX & SON, Canard, N. S.

WANTED—I would like to buy some early Ohio, Bliss Triumph, and Garnet Chili potatoes, must be good samples. Spring delivery. Write to C. FRED FAWCETT, Upper Sackville, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co., Queen Street. Montreal.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shediac, N. B., during the week ending April 20th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, Sussex, N. B

BANKRUPT BELTING BARGAINS—Positively 85 p.c. to 70 p.c. saved, New and Second hand all kinds and sizes for every purpose. Also enormous stocks of Iron Piping, Pulleys, Shafting, Hangers, new and relaying Rails, Saws, Chains and Cables, Roofing, etc. Write us for prices and tell us what you need. Catalog on request. The IMPERIAL WASTE & METAL CO., 3 Queen Street, Montreal.

WANTED—Young Man or Woman to learn mail order business Send ten cents for postage—we will send goods to sell for $2.50. Ten cents is the total cost to you until you sell the goods. We teach you the business free; supply circulars free; write your advertising free and pay for it; and supply you with goods without deposit. You pay for the goods after they are sold. Over 100 per cent profit. HOMEWORKERS ASSOCIATION, Box 772, Halifax.

Mammoth Bronze Turkeys

From Canada's famous Breeder's Stock (Bells, Ont) (Tom 38 lbs.) young Toms $6.00, hens $5.00. Apply,

D. S. NOBLE,
Central Clarence, N. S.

The Clydesdale at Home.

(Continued from page 212)

last year were Baron of Buchlyvie, Baron's Pride, Everlasting, Hiawatha, Revelanta, Apukwa, Royal Favorite and Oyama. Celebrities spring from comparatively humble stock; that is, the winners do not produce all the winners by any means. Nevertheless, there are broodlines, established by generations of masterful intelligence, which give a high percentage of the foremost sires and show stock. Once a strain of breeding achieves widespread popularity it is given opportunity to perpetuate itself. So-called families are thus founded. In some instances this leads to the worshipping of dead equine ancestors and the overlooking of mediocrity in their living posterity. Among conservative people there is a deep sentiment back of such exclamations as "Long live the King!" Long live anything that once secures a foothold in Scotland.

What the breed means to scottish farmers it could mean to American farmers in many regions. But before it can make rapid progress on this side the public must have a clearer conception than it appears to have of fundamental draft-horse values. It must have a keener appreciation of the sterling stuff of which the Clydesdale in his best estate is made. It must attach more importance to the soundness and quality that characterize Clydesdale underpinning. America has a broad footing for this breed, but it is doubtful whether a country so Scotchless as ours in racial character has the type of horse-sense that is required to give the Clydesdale his due.

Which reminds us of a story: Jamie finding a horse-shoe pretended not to know what it was, and meeting a minister, whom he knew, asked for enlightenment. "Why, Jamie," said the clergyman "anybody that was not a fool would know that it is a horseshoe." "Ah!" said Jamie, "what it is to be wise—to ken it's no meer's shoe." And this story compels another: A Highlander observed standing at a hotel door a big man in full tartans, and noticed that his nostrils in an upturned nose gave that organ the appearance of the end of a 12-gauge double-barreled shotgun. He accosted the man and with magnificent politeness offered his mull for a pinch of snuff. Said the long, lanky stranger: "I never take snuff." "Oh", said the Highlander, "that's a peety, for there's grand accomodation.—D. C. W. in Exchange.

The Meeting of the Maritime Poultry and Pet Stock Association.

The annual meeting of the Maritime Poultry and Pet Stock Association was held in the Board Rooms of the Winter Fair Building at 10.30 A. M. on Wednesday, December 4th. The officers and about twenty-five members were present.

The minutes of the last meeting were read and approved. The President, Mr. L. H. D. Foster, of Marshfield, P. E. I. called on the vice-president for reports of the work in the different provinces.

Mr. Seth Jones, vice-president for N. B. spoke of the improvement in New Brunswick and outlined the work which is to be undertaken in the province to advance the industry. He called the attention of the members to the large importations of poultry and eggs and suggested that the members should get a share of this trade.

Mr. L. A. Haszard, vice-president for P. E. I. congratulated the Association on the great improvement which was shown in the dressed poultry classes. The market was always ready to receive poultry of the quality shown at a good profit to the producer but the poultry of poor quality was never in demand.

Mr. W. H. Henry, vice-president for Nova Scotia spoke briefly of the increase in the number of birds shown and also the superior quality in comparison with the early years of the show.

J. P. Landry reported for the prize list committee and pointed out the increase which had been given to the poultry prizes. The prize list had been improved upon and was now as good if not better than that offered by any other exhibition in the Maritime Provinces. The list would, however, require some changes and he called on all the exhibitors to write the prize list committee in order that they may make the list better than ever.

Mr. Seth Jones reported to the members that he had secured a oew entry ticket which would likely fill the requirements of the members. It was moved by Mr. I. C. Craig and seconded by Mr. L. A. Haszard that the entry ticket exhibited by Mr. Jones be used in future.

The motion was carried.

Mr. J. B. Dagget reported that he was unable any longer, on account of his new position, to act as a committee of the Association but advised the members to stand together and he informed them that his sympathy was with them in their work. An unanimous vote of thanks was tendered Mr. Dagget for his assistance to the poultrymen.

The financial report was read and showed a balance on the right side of the account of $129.51. This does not include the amount of this years subscriptions but when they are in, the amount to the credit of the association will be somewhat more.

The report was adopted.

Mr. J. Fred Watson, judge in the open classes, was called on and spoke of the quality of the exhibits.

W. A. Brown, judge of the dressed poultry classes spoke of the quality of the exhibits and recommended that increase of prizes be given in the dressed poultry classes.

He advised that more time be given up to lectures at the show than was allotted for this work this year. It was also pointed out by the speaker that many more could be interested in the work by holding the meetings oftener.

The Department of Agriculture were always ready to assist the work and advised the members to take advantage of their offer.

Mr. George Robertson complimented the members on the improvement in the classes he judged. The quality was good and would win in any show. He called attention to the fact that some very good poultry was shown which had not received proper care and attention. He would urge members to wash birds and prepare them by having them accustomed to the coops before coming to the show. It often spoiled a good bird to have it in a small coop when it was accustomed to freedom.

Mr. T. A. Benson, the newly appointed superintendent of poultry in Prince Edward Island spoke of cooperation in poultry work to get the best results.

He advised the members to co-operate in their work and they would get better results.

Mr. Percie Johnson, St. John's, Newfoundland spoke of his pleasure at being an attendant at the Winter Fair and in particular the Poultry show. Out of his first visit to the fair much good had resulted to the poultry show had recently been held poultrymen of his Colony. The first in St. John's and was a great success. He stated that the people of Newfoundland had paid annually $11-000 for eggs to Prince Edward Island. They had also paid about $22,000 to the United States for dead poultry and it was his opinion that this money could be kept at home if the people would take an interest in the poultry industry.

Moved by Mr. Jones and seconded by Mr. Haszard that the secretary be a committee to arrange for an hour on the programme for a poultry lecture. The motion was carried.

The following were elected officers for the year;—

President, Mr. Seth Jones, Sussex, N. B.

Vice- president for N. S., C. J. Cook New Annan, N. S.

Vice-president for N. B., D. G. Stewart, Dalhousie, N. B.

Vice-president for P. E. I., Mr. L. H. D. Foster, Marshfield, P. E. I.

Director for N. S., Mr. J. A. Simpson, Amherst, N. S.

Director for N. B., P. P. Gunn, Sussex, N. B.

Director for P. E. I., Mr. L. A. Haszard, Charlottetown, P. E. I.

Prize List Committee; J. P. Landry Seth Jones and L. H. D. Foster.

J. A. Simpson, P. P. Gunn, and L. A. Haszard were appointed a committee to obtain more premiums for the prize list.

NORTHERN GROWN TREES

Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery—no agents. Send list of your wants for prices, etc.

E. L. COLPITTS
Petitcodiac, New Brunswick

JOHN RICHARDS,
Bideford, P. E. Island,
Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

FOR SALE

My Harness Business in the town of Shubenacadie doing a good business. Also my Farm consisting of six acres in good cultivation, only 200 yards from depot and school. Good house and barn, wood house; all in good repair. For further particulars apply to

W. H. HENRY,
Shubenacadie, N. S.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.S.

FOR SALE

Several yearling Guernsey Bulls, sired by "Golden Opinion" and "Prince of Willow." All prize winners at the Maritime Shows and Ottawa.

ROPER BROS., Charlottetown, P. E. I.

FOR SALE

Two Jersey bulls, one twenty-three months old, and one eleven months, both from heavy milking dams.

Robt. Robinson, Meadowview Farm, Phone 157-3 Sussex, N. B. Box 232

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

J.W.Calbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown. N. S.
Wm. A, Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.

Shropshires

C' A. Archibald, Truro, N. S.

POULTRY.

Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

Springbrook Ayrshires!

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

Bred for Eggs and Meat

Bellevue Strain of White and Columbian Wyandottes, S. C. White Leghorns, and Light Brahmas. Stock for sale. Over 30 years in business.

MICHAEL K. BOYER,
Boz 27 Hammonton, Atlantic County, New Jersey

Maple Green Farm Holsteins

Offers for sale at reasonable prices a number of bull calves from record of performance dams and grandams with large records. I expect to be to Amherst Dairy test with the dams of these calves where they and their performance can be seen. For particulars write,

R. L. HICKS, Dalhousie Jct., N.B.

EVERYHING you want in the line of Poultry Feed Remedies or Supplies. Send for catalogue.

Maritime Poultry Supply Co.,
Moncton, N. B.

CORNING TURNIP SEED
FOR SALE

About 1000 of the famous Gr. Top "Corning" Turnip Seed, crop 1912, grown from selected roots. Price 50c., postpaid 55c.

S. P. GOUDEY, Yarmouth, N. S.

Barred Plymouth Rocks

Again we maintained our prominence as breeders of B. P. Rocks at Maritime Fair by winning Silver Cup for the best display of this variety. In heavy competition won 1st and 6th on hens; 1st, 5th and 6th on pullets; 2nd, 5th and 6th on cockerels; 1st and 2nd Mating pens (pullet); 1st breeding pen, and special for best female. High class stock for sale.

CRAIG BROS., Amherst, N. S.

Rose Bank Farm Jerseys & Yorkshires

FOR SALE

One Jersey bull two years old by Pogis 40th of Hood Farm and bull calves by Foxhall's St. John O'Dreamwold, also pigs one to six months old, both sexes.

Josselyn & Young, St. John, N.B.

Columbian Wyandottes

Winners at Amherst

See Maritime Farmer last issue. Prize winners for sale. Also a few Rhode Island Reds (both combs). New "Peerless" Incubator cheap.

Orchard Hill Farm, Brown's Flats, N.B.

LAWNDALE STOCK FARM

We have a special lot of 3 young bulls for sale at a bargain—Two roans dropped December 1911. One, all red, dropped February 1912. Splendidly bred and excellent specimens. Also other pure bred Shorthorns.

Write for particulars.

J. M. LOVITT, M. D., Proprietor,
P. O. Box 353 Yarmouth, N. S.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H EATON,
Canard, N. S.

ELMWOOD STOCK FARM.
Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

Maple Grove Ayrshires

For immediate sale several young Bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N. B.

Pure Bred Barred Plymouth Rock Pullets

I can offer about 20 birds for immediate sale at 75c each.

ALLANDALE FARM, Hampton, N. B.

"HILLSIDE STOCK FARM"

We have for sale at right prices four Ayrshire bulls from twelve to fifteen mos. old. They are sired by the champion bull of 1911; a son of the renowned Scotch champion "Spicy Sam."

Prescott Blanchard, Truro, N. S.

Guernsey Bull For Sale

We have a choice 25 months old bull for sale. We also have a number of choice cockerels of Barred Plymouth Rock, White Wyanndotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Apply to

Walter McMonagle & Sons,
Sussex Corner, N. B.

Sea View Stock Farm

offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs this year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

Sgd. J. D. IRVING,
Buctouche, N. B.

Columbian Wyandottes

THE LATEST AND BEST OF THE WYANDOTTE FAMILY

Combining the great utility qualities of the White Wyandotte with the beautiful markings of the Light Brahma.

Beatiful Birds Great Layers Splendid table fowl

We can supply you with prize winners or choice utility brids at prices you can afford to pay. Write us anyway.

We also have for sale, 1 cockerel, 3 pullets, Rose Comb R. I. Red; 4 pullets, S. C. R. I. Red; and a new Peerless Incubator, that we will exchange for stock or sell very cheap.

Also a 30 acre Fruit Farm, bargain for someone

Orchard Hill Farm *Brown's Flats, N. B.*

Cobequid Farm Holsteins

We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

FOR SALE--Pure Bred Shropshires

20 to 30 Shropshires.
6 Cheviots.
5 Leinsters.
A few Southdowns, Oxfords and Lincolns.

These sheep are from one to two years old, extra choice, being picked from noted flocks by Mr. R. H. Harding of Mapleview farm, Thorndale, Ont. Write or wire,

F. DeL. CLEMENTS, 9 & 11 Rodney St., St. John, N.B.

"HOLSTEINS"

We are now offering seven good grade cows and heifers due to calve in Nov. & Dec. bred to our herd bull, also some excellent purebred heifers now being bred tc one of the best bulls in Canada.

LEA & CLARK, Victoria, P. E. I.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

SUNNY SIDE STOCK FARM

Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

In Chester White Swine I am booking orders for young pigs.

J. F. ROACH, 'Phone 111 SUSSEX, N. B.

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

BELLEVIEW STOCK FARM

Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

C. A. ARCHIBALD, - Truro, N. S.

HOMESTEAD FARM
Spring Offering

We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.

LOGAN BROTHERS,
Amherst, R. R. No, 1, N. S.

KERRY CATTLE

Breeders of Kerry Cattle are invited to forward their names and addresses to THE MARITIME FARMER. A subscriber wishes to get in touch with them.

Money Makers on the Farm

Turkeys next to geese will make you more money than anything else on the farm. Get my book and raise turkey easily, no more trouble than chickens. Book free for a stamp. Indian Runner ducks and splendid Sicillian Buttercups.

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Woodward's Cove, Grand Manan

Successful Lessons in Poultry Raising

Twenty complete Lessons. The successful Poultry Book a simple and comprehensive treatise in the care and culture of domestic fowls. This book is sent free on request.

OCTAVIEN ROLLAND
Sole Agent for the Des Mones Incubator, P. O. Box 2363, Montreal, P. Q.

Suffered With A Lame Back

COULD NOT STRAIGHTEN UP.

Many people fail to understand the significance of a lame, weak, sore or aching back.

When the back aches or becomes weak it is a warning that the kidneys are affected in some way.

Heed the warning, cure the back and dispose of any chances of serious kidney trouble following.

Mr. C. Grace, Hamilton, Ont., writes: —"I was suffering with a lame back, and for two weeks was not able to straighten up to walk, and hardly able to sit down for the pains in my back, hips, and legs. I had used different kinds of pills, plasters, liniments and medicines, without any relief. One day I read about Doan's Kidney Pills and decided to try them. Before I had half a box used I felt a great deal better, and by the time I had used two boxes, I was cured. I have no hesitation in recommending Doan's Kidney Pills."

Price, 50 cents per box or 3 boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

When ordering specify "Doan's."

Before After

ABSORBINE

Removes Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from any Bruise or Strain; Cures Spavin Lameness, Allays Pain. Does not Blister, remove the hair or lay up the horse. $2.00 a bottle, delivered. Book 1 E free.

ABSORBINE, JR., liniment for mankind. For Synovitis, Strains, Gouty or Rheumatic Deposits, Swollen, Painful Varicose Veins. Allays Pain. Will tell you more if you write. $1 and $2 per bottle at dealers or delivered. Manufactured only by W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca

HOW TO CONQUER RHEUMATISM AT YOUR OWN HOME

If you or any of your friends suffer from rheumatism, kidney disorders or excess of uric acid, causing lameness, backache, muscular pains; stiff, painful, swollen joints, pain in the limbs and feet; dimness of sight, itching skin or frequent neuralgic pains, I invite you to send for a generous **Free Trial Treatment** of my well-known, reliable **Chronicure**, with references and full particulars by mail. (This is no C. O. D. scheme.) No matter how many may have failed in your case, let me prove to you, free of cost, that rheumatism can be conquered. **Chronicure** succeeds where all else fails. **Chronicure cleanses the blood** and **removes the cause.** Also for a weakened, run-down condition of the system, you will find **Chronicure** a most satisfactory **general tonic** that makes you feel that life is worth living. Please tell your friends of this liberal offer, and **send today** for large free package, to **MRS. M. SUMMERS, Box E.** 30t —**Windsor, Ont.**

COMFORT IN THE RURAL HOME

The installation of a GOOD HEALTH CHEMICAL CLOSET in your home means health-convenience-comfort for the whole family. Not a luxury but a necessity. A postal will bring you full particulars. Address

THE NATIONAL MFG. CO., Limited. MONCTON, N. B.

To Tell the Age of a Horse.

There are things which we may reason out, and others which to be remembered must be in a sense memorized. One of the latter is the method of telling the age of a horse. Most of our memories work best to rhyme and the Aberdeen Free Press has used the rhyming method of telling the age of a horse. Here it is:

To tell the age of any horse
Inspect the lower jaw, of course.
The six front teeth the truth will tell
And every doubt and fear dispel.

Two middle "nippers" you behold
Before the colt is two weeks old,
Before eight weeks two more will come,
Eight months, the "corners" cut the the gum.

Two outside grooves will disappear
From the middle two in just one year
In two years from the second pair.
In three the "corners," too, are bare.

At two the middle "nippers" drop,
At three the second pair can't stop,
When four years old the third pair goes,
At five a full new set he shows.

The deep black spots will pass from view,
At six years from the middle two,
The second pair at seven years,
At eight the spot each "corner" clears.

From middle "nippers" upper jaw,
At nine the black spots will withdraw;
The second pair at ten are white,
Eleven finds the "corners" light.

As time goes on the horsemen know
The oval teeth three-sided grow;
They larger get, project before,
Till twenty, when we know no more.

Value of a Brood Mare.

The value of a brood mare is probably as indefinite a quantity as that most invariable of all quantities, the length of a piece of string. So much depends upon the mare herself, her type, breeding ability, motherliness, individuality.

More, perhaps, depends upon the owner of the mare, his efficiency as a manager and caretaker, both of mare and of foal, his judgment in the selection of a suitable stallion with which to mate the mare, in the development of foal and the selection of feeds. Due to the many factors which may influence it, therefore, the value of a broad mare becomes a most uncertain, a most variable quantity.

There is, I know, a brood mare that has demonstrated her worth to the owner. She is a seven-eights grade Percheron, of good type and quality, weighing about 1775 pounds. Rearing a colt every year, with one exception, during the past six years has not taken from her that snap, vigor and energy which undoubtedly has contributed largely to her breeding efficiency. It has developed in her that roominess of middle and hindquarters and that motherly appearance which associates itself inseparably with what we call the brood mare type.

"What is he worth to you," I asked the owner. "She and one of her three-year-old sons make me one of the best teams every year," he replied, "and I sell the colts the wintes before they are four years old. I have never taken less than $250 for one of her colts at that age. This fellow has been worked with her this summer, and he can see for yourself what he will be worth next winter when I get a little bloom on him Took them off a gravel wagon to show here. Two-months feed will put him up to 1850 pounds if the buyers will let me feed him that long."

The Reliable Remedy for Childrens' Colds

You cannot be too careful what cough medicine you give the children, for some of the remedies offered are anything but reliable.

NA-DRU-CO

Syrup of Linseed, Licorice and Chlorodyne

is reliable, for it contains absolutely nothing harmful to even the children.

But don't take our word for it—ask your druggist or physician. To these men, in whom you justly place implicit confidence, we will gladly send on request a complete list of the ingredients in this or any other Na-Dru-Co preparation.

Keep a 25c. or 50c. bottle of this reliable remedy always on hand, and it will nip in the bud all your trouble with coughs and colds.

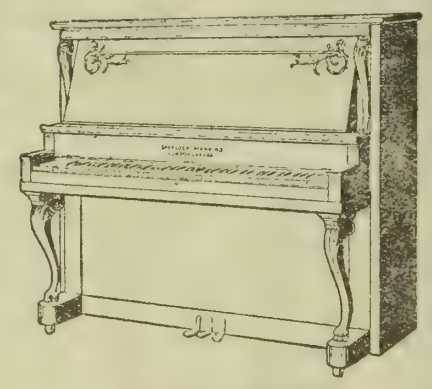
NATIONAL DRUG & CHEMICAL CO. OF CANADA, LIMITED. 312

When you buy a Sherlock-Manning 20th Century Piano

You positively get "Canada's Biggest Piano Value"

This is not merely an advertising claim. It's the plain statement of a fact which we can prove to your **entire** satisfaction.

Examine the Sherlock-Manning 20th Century Piano. Listen to its exquisite singing tone. Ask about its many quality features — Otto Higle Double Repeating Action; Poehlmann Wire (the best imported piano wire); Weickert Felt Hammers; the famous Billings Brass Flange (the flange that endures); and other important features.



Louis XV.—Style 80

Then, when you've found out all there is to know about the **Sherlock-Manning 20th Century** Piano—when you've been convinced that this instrument represents the best piano value in the Dominion—then, ask us its price. You'll find it much less than you expected.

But there are sound reasons to account for the lower price as well as for the greatest excellence of these splendid instruments.

Write us today for full particulars and handsome art catalogue —and we'll tell you how **you can save $100.00** on the purchase of as fine a piano as can be made at any price.

We'll give you plain facts which will prove to your satisfaction or the satisfaction of any unbiased master musician that the Sherlock-Manning is

"Canada's Biggest Piano Value"

Sherlock-Manning Piano & Organ Co.

London - - Canada

(NO STREET ADDRESS NECESSARY) 30

Constipation

is an enemy within the camp. It will undermine the strongest constitution and ruin the most vigorous health. It leads to indigestion, biliousness, impure blood, bad complexion, sick headaches, and is one of the most frequent causes of appendicitis. To neglect it is slow suicide. Dr. Morse's Indian Root Pills positively cure Constipation. They are entirely vegetable in composition and do not sicken, weaken or gripe. Preserve your health by taking

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BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

DRAFTER OR DRIVER

I wish that in some way the value of a brood mare might be brought to the heart of a young man, any one of the number of young men who each year out of their first wages purchase their first piece of horse flesh. How many invest all the savings of the first year or two of work in some little squirt of a driving gelding whose only function is to drag a rubber-tired buggy about during the time that the owner had better be sleeping a bit, getting a little refreshment for the next day's work? How few appreciate the fact that with a little application of business to this first investment they might put their money into a good brood mare which each year thereafter would add materially to their annual income.

The young man working for $25 a month besides all the other things, including "horse kept," which make the wages of the hired man on the farm go so much farther than a double wage in town, should be able to make a wise arrangement with his employer whereby the "horse kept" part of the agreement might hold whether the horse be of the common or buggy variety or whether it be of a good draft type.

He can then buy the sort of mare which can be used with the regular farm teams part of the time, and raise a colt each year. A well-bred draft colt can generally be turned at weaning time at something upwards of $100. This amount added to the income of the average hired man would go a considerable ways toward hastening the time when he should become a farmer and a hirer of men.

There may not be quite as much of the dash and display that counts for something with the young people of a certain type in this proposition, but with the older men, with the fellows who have been through the mill and have learned from that expensive teacher, experiense, there is no question as to the wise choice.

The young man starting out in farm life for himself, either as a hired man or as a young farmer, should consider well the value of a good brood mare. If he must own a horse, let him select one that will earn for him some of the easiest money he will ever make.—Horseman, Pictou, N. S.

Fitting Horses for Sale.

With the season's work over, many farm horses will be placed upon the market and we will have buyers, shippers, feeders and farmers mating or matching up teams, and traders and junkers scouring farm territory in quest of horses. If you have a horse to sell it will be time well spent to put him in condition. You want the best price, of course, and the animal put into condition will bring it. The shipper wants them well fitted.

If it pays the feeder to buy and feed up, it will pay you to feed and slick up the animal. Make his coat glossy. This is not all done with the brush and curry comb, but largely with good feeding and care. Brush out his tail and mane, trim his foretop and fetlocks neatly and look to his feet that he stands erect.

A new web halter adds much to the appearance of the animal when being shown in the outside yard. If you train him to be shown off once or twice each day you'll be surprised what two or three weeks' work will accomplish. Get acquainted with his manner and gait, and when the buyer comes you will be surprised at the results. When you come to make the deal you can make your own price. That is where the farmer gets his profit, and it is worth while.

Roofing

Free Samples
Free Catalogues
Free Plans

If you want a roof that is durable, economical and one that can be put on quickly and easily, you will be interested in Galt Steel Shingles.

A post card with just the word "Roofing," together with your name and address, will bring valuable information by return mail.

The Galt Art Metal Co. Limited
265 Stone Road, Galt, Ontario.

7 Reasons Why

You want to know why we think your choice of a gasoline engine should be the Renfrew Standard. **FIRST**—Because it is the latest type of gasoline engine offered for sale in Canada. **SECOND**—Because the

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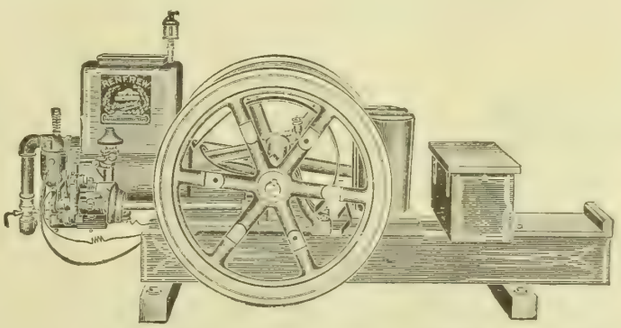
starts without cranking, thus eliminating the only dangerous, laborious and exasperating feature of gasoline engines. **THIRD**—Because the Renfrew-Standard is so perfectly balanced it does not require to be anchored or fastened down. **FOURTH**—Because the Carburetor is of simple construction and proper proportion to make a perfect mixture. **FIFTH**—Because the engine can be closely regulated. **SIXTH**—Because it is conomical on gasoline. **SEVENTH**—Because it is guaranteed for 5 years, by the same company who build and stand behind the famous "Standard" cream separator. Many other points of superiority fully covered in our Gasoline Engine Bulletin. Write for a copy.



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Write us about the Gifford 1 1-2 h.p. engine, the handiest, most compact and most wonderful little engine made

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Are you a trapper? Are you a dealer? Are you seeking a reliable firm to ship to? Many thousands of shippers say we give best returns, good reasons—we pay as we quote, give a square grade and send your money as quick as the return mail can bring it to you. We post you reliably.

No Commissions. No Express Charges.

Write at once for price list, tags, envelopes, invoices, etc.

BENJAMIN DORMAN, Inc.
RAW FURS, GINSENG, GOLDEN SEAL
147 West 24th Street, New York. (Mention this paper.)

MAXWELL'S

JEWEL FOOD-CUTTER

is a daily necessity in every home.

You are always cutting up meats and vegetables for stews, etc.

A knife is awkward and dangerous—a chopping bowl is cumbersome.

"MAXWELL'S JEWEL" cuts everything as you wish—fine, medium or coarse because it has five cutting plates.

Easily cleaned—easily worked—very strong, durable and handsomely finished.

Insist on your dealer supplying the "Jewel" because this is the only food cutter made in Canada—and is superior to anything imported.

DAVID MAXWELL & SONS, ST. MARYS, ONT.

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NOVA SCOTIA FARMERS'

ASSOCIATION

THE SEVENTEENTH ANNUAL CONVENTION will be held at

Sydney, C. B.

JANUARY 21st & 22nd, 1913

An unusually attractive programme is being prepared and vital matters relating to the advancement of Agriculture and Rural Life will be discussed.

Delegates and others going by No. 17 train (I. C. R.) which leaves Truro at 8.30 p.m. Monday, January, 20th, will be in time for the opening session. They should pay one First Class Single Fare to Sydney and ask Agent at Starting point for a Standard Certificate which when signed by me will entitle bearer to return ticket, free.

CHAS. R. B. BRYAN, Secty-Treasurer,
DURHAM, N. S.

HIGH CLASS

JEWELRY

18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....**68 cents**

18k Rolled Pendants, worth $3.00, our price..... ....**99 cents**

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A $3.50 watch for..... ....**$1.36**

Boys Watch..... .....**69 cents** nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
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Sussex, New Brunswick.

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

The Team at the Hitching Bar.

Say, Brother Farmer, what sort of a team do you tie to the hitching bar?

Don't you know that the character of the farmer is reflected in his horses?

"Show me the farmer's team and I can tell you the conditions of his farm," a wise old neighbor told the writer not long ago, when the two of us were looking over the assortments of rigs at the town hitching bar.

"See those spanking fine bays, with the cleanly-polished harness, the padded collars, and the newly-painted wagon over there," this old neighbor went on. "Well, I'll guarantee the owner of that team is a thrifty farmer—fences in good repair, gates swinging free, crops well cultivated, cows sleek and fat. Then look at those others—the grays, good enough horses all right, and they show ample feeding; but they hav?n't been curried and brushed enough to bring out the shine. And see the harness—rusty and unpolished, collars ill-fitting, tugs patched, and hold-backs broken; look at the wagon—hasn't seen any paint since it left the factory. Bolts and nuts missing the seat mended with baling wire. Now I'll warrant that the owner of that team is not a thrifty farmer—he's careless and indifferent. He may have a good farm, but is not getting out of it one-half or one-third what it should produce."

As I drove home the words of that kind old neighbor kept revolving in my mind. Every little while I passed a familiar team—Jed Munyun's blacks, dashing along with a glistening surrey rolling at their heels, and Jed leaning over the dashboard, fairly tugging at the lines. I know that there are but few farm-houses and few barns in all the township bigger and better than Jed's and yet Jed was a poor man only a few years ago, struggling hard to make his way and keep his credit clear. Then I passed Bob Johnson's roans, their heads down, their ears flopping, bobbing along slowly, the lines sagging to the tongue, traces clanking, and Bob half asleep on the dilapidated seat of a creaking buckboard: I also know the condition of things on Bob's farm—an unpainted house, sag-roofed barn, broken-down fences and weed-choked fields.

Other teams I passed on the road home, each telling its story of thrift or laziness, care or neglect. It was as if all the farms of the community, with their houses, their barns, their lots and fields, passed me in review. And I was more firmly convinced than ever that my wise neighbor spoke the truth—the character of the farmer is reflected in his horses So you and I, my brother, might look well to the sort of team we tie to the hitching bar.—Dennis H. Stovall.

Some Nova Scotia Holsteins.

When visiting his home at Truro, N. S., recently, an editor of Farm and Dairy made a brief visit to the farm of Samuel Dickie, Central Onslow, N. S., one of the leading Maritime Holstein breeders. Mr. Dickie's herd is not seen as frequently in the show ring as it used to be. He is going in extensively for Records of Performance test work, believing that purchasers of dairy cattle demand producing ability rather than show yard excellence, although conformation is not lost sight of. At present Mr. Dickie is preparing to enter several animals in the dairy test at Amherst, where he has made many notable successes, having won 75 per cent of the championships during the last three years.

The bull at the head of this herd is Royalton Canary Major, bred by W. H. Standish, of Ohio. The dam of this bull has a record of 34.6 lbs.

WILL GIVE $500 TO SICK READERS OF MARITIME FARMER

Famous Scientist Who Originated the Now Wonderful "Home Treatment" Offers $1.00 Package Free to Sick and Ailing.

In order that every reader of Maritime Farmer who may not have heard of this wonderful "Home Treatment" may have an opportunity to test this celebrated medicine, the now famous scientist, Dr. James W. Kidd, offers to give absolutely free a full size $1.00 package to five hundred readers of this paper, to prove the wonderful claims which have been made for it. In making this offer the scientist said: "I know that there are many people who have been suffering for years with some chronic disease and many of them have spent large sums of money seeking a cure. I know that these people hesitate about investing money in medicine because they have despaired of ever getting well. Thousands have told me that story and many thousands of the same people have told me afterwards that my treatment had cured them after doctors and everything else had failed. I want to prove to a limited number—no matter what the disease, no matter how long they may have suffered no matter how blue and discouraged—that my treatment really and actually does accomplish the wonderful results that have been reported."

People who suffer from Rheumatism, Kidney Trouble, Stomach Trouble, Liver or Bowel Disorders, Catarrh, Bronchitis, Asthma, Chronic Coughs, Weak Lungs, Lumbago, Piles, Urinary Disorders, Female Weaknesses of any kind, the weak, worn out, broken-down and despondent will be delighted at the effect of a few doses. This wonderful treatment creates a fine appetite and helps the digestive organs to carry on their functions as they should. It strengthens the kidneys, too, and drives rheumatism poisons from the blood as if by magic. That is why people who try it become so enthusiastic.

Any reader of Maritime Farmer who will try this extraordinary medicine that has created so much excitement by its cures can obtain absolutely free a full $1.00 treatment by simply filling in the coupon below or writing a letter describing their case in their own words, if they prefer, and mailing it today to James W. Kidd, Toronto, Canada. No money need be sent and no charge of any kind will be made.

As this offer is limited, you should write at once, in order to be sure to receive your free treatment.

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Dr. Jas. W. Kidd, Toronto, Canada.

Please send me a Full $1.00 Course of Treatment for my case **free and postage paid**, just as you promise.

Name _____

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Make a cross (X) before disease you have Two crosses (XX) before the one from which you suffer most.

....Rheumatism	....Kidney Trouble	....Impure Blood	....Female Weakness
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....Constipation	....Chronic Cough	....Eczema	....Painful Periods
....Piles	....Malaria	....Neuralgia	....Hot Flashes
....Diarrhoea	....Asthma	....Headache	....Bearing Down Pains
....Torbid Liver	....Hay Fever	....Dizziness	....Leucorrhoea
....Indigestion	....Heart Trouble	....Nervousness	
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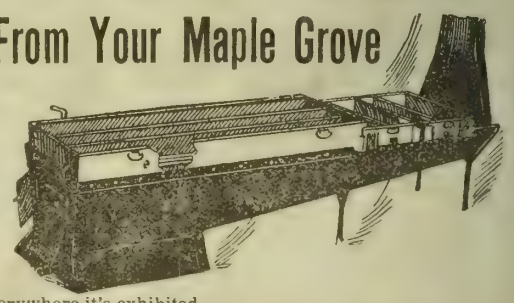
Give any other symptoms on a separate sheet. Correspondence in all languages.

Make a Revenue From Your Maple Grove



It's your duty to your family to get the largest possible profit out of everything you do. If you are trying to work your Maple Grove without the aid of a *"Champion Evaporator"* you are doing them out of their rights.

We can prove to you absolutely that the Champion Evaporator will net you a larger profit on your maple products, than any other evaporator sold on this continent. The "Champion" captures nine-tenths of the prizes everywhere it's exhibited.

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ONE FREE To Use On Your Old Lamp!

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It is one of the most prevalent troubles of civilized life, and the poor dyspeptic cannot even enjoy a meal without distressing after effects, for nearly everything that enters a weak dyspeptic stomach acts as an irritant. Burdock Blood Bitters will regulate the stomach, stimulate secretion of the saliva, and gastric juice to facilitate digestion, remove acidity, and tone up the entire system.

Mrs. Dennis Hebert, St. Boniface, Man., writes:—"I have used Burdock Blood Bitters, with great success, for dyspepsia, indigestion and sour stomach. I was terribly troubled with my stomach for months, and spent a lot of money without getting any relief, until I happened to see about a woman using it, and her trouble seemed the same as mine. I tried one bottle, and was so much relieved, I bought five more, and have taken them, and I now can eat anything I wish."

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

1870 1912

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Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

of butter in seven days and an average test of 4.4. She made 17,500 lbs. of milk in nine months. As an individual the bull is a big, strong fellow, showing lots of constitition and vigor, with as desirable a head as one would wish to see on a Holstein bull.

Another bull that attracted out attention was Helbon De Kol's Prince, the only son of Helbon De Kol. His dam made 31.54 lbs. of butter and 558.30 lbs. of milk, with an average test of 4.5 in seven days and 128.57 lbs. of butter in 30 days. She started her 30-day test 30 days after calving In Record of Performance she made 16,346 lbs. of milk as a three-year-old. This is the largest record yet made by a three-year-old in Canada. A full sister of Prince made an R. O. P. test of 14,889.5 lbs. and 658.96 lbs. of butter at three years and one month old, the second highest record for a three-year-old in Canada. Helbon De Kol's Prince is sired by Lord Roberts De Kol, among whose daughters is numbered National Queen De Kol, winner at Guelph last fall. In the stables we saw many calves sired by Helbon De Kol's Prince, and they were good ones. He is a sure stock getter, tuberculin tested and 75 per cent of his calves are heifers.

Mr. Dickie's females did not show to advantage as most of them were dry or far advanced in lactation. The milk from this herd is shipped to the condensory and as prices are considerably higher in winter than in summer most of the cows are bred to freshen in the fall. A cow that attracted our attention was Nellie Mercedes Beauty, giving at present 65 lbs. of milk a day. Another was Blanche La Honda, giving 50 lbs. of milk a day, freshening last March. All of the cows were of the heavy bodied, low down, deep milking kind. The average test of the herd runs from 3.6 to 3.8.—Farm and Dairy.

OUR VALUES

are summed up briefly under the following captions:

Style and Quality

Our goods are made to suit you no matter what your occupation may be or what they are needed for.

We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited

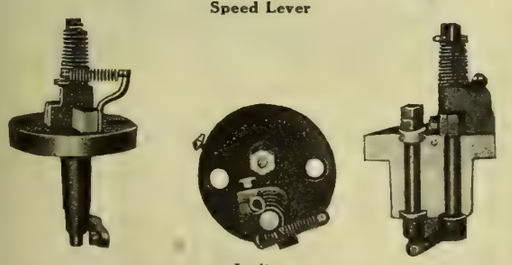
HALIFAX, N. S.

STRONG POINTS OF THE WATERLOO BOY

In the Christmas Number of this paper we mentioned a few of the advantages of handling our engine. We are now going to tell you a few of our engines strong points.

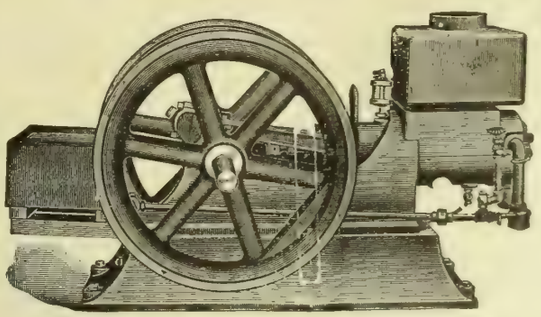
Its speed lever works like the throttle of the locomotive and varies the speed ***while running*** from fifty to seventy-five resolutions per minute. The old reliable fly-ball governor keeps the speed absolutely steady, no matter how much the load varies and the automatic fuel regulator uses fuel ***only*** when needed for power, ***making it the cheapest engine to run.*** We have an improved patent mixer that does away with the expense and bother of a pump and, our new patent igniter is as simple and positive as a pair of scissors.

Speed Lever



Igniter

The Waterloo Boy is the simplest engine made—has the fewest parts, least chance to get out of order, easiest to manage, and is the nearest automatic in action and "fool proof" in construction, frost proof and starts easiest in coldest weather—no bucking or stalling. All working parts interchangeable—made by skilled workmen in a factory with a capacity of 140 engines complete a day—in the biggest and best equipped factory in the world devoted exclusively to gasoline engines. Every part is exact in size and finish, made of the best material and heavier and stronger than will ever be required.



This great engine is advertised in the leading farm papers ***everywhere*** Right now we are telling your customers about its advantages and about its recent great International victory. They are going to want the Waterloo Boy and we are going to bring them RIGHT INTO YOUR PLACE OF BUSINESS, TO GET IT—enthusiastic prosperous ***men with the money to buy.*** We will back you up squarely, fight with you against every rival—we absolutely guarantee the Waterloo Boy, not only to you but ***to your customer, too.***

Here's a big line— a size for every need. Let's get together—***Are you with us?*** Then write for our proposition today—tomorrow your competitor may be in the band wagon and ***the man with the Waterloo Boy is the one that WILL GET THE BUSINESS.***

Remember we have a winning offer ready for you, so fill out the coupon or pin it to your letterhead and mail to-day.

Sussex Motor Co., Ltd., Sussex, N.B.

SUSSEX MOTOR CO., Limited,
Sussex, N. B.

Please send me full details of your gasoline engine proposition together with your prices and terms.

FIRM NAME .. ..

YOUR NAME .. ..

TOWN .. ..

PROVINCE .. ..

Gates' Nerve Ointment
For Frost Bites

C. Gates, Son & Co.,
Middleton, N. S.

Gentlemen:--I had the misfortune to freeze my toe which caused me a great deal of suffering, and although I had it treated, yet without success till I used your Nerve Ointment, which has completely cured it, and I have no hesidency in recommending it to others as the best I ever used,

Yours sincereiy,
Matthew Wood,
Point Phillip, N. S.

CREATE AN INCOME
Provide For The Future

My Partial Payment Plan which enables you to purchase HIGH GRADE BONDS of low denominations, is a safe simple and easy way to secure Paying Investments. Absolutely no risk to you. This plan is appealing to conservative investors everywhere. It is worth investigating.

Write today for booklet. 49

EDWARD L. DOUCETTE
INVESTMENT BONDS
11 St. Sacrament St., Montreal, Can.

Cheap Fares for the Christmas Holidays.

For the Christmas Holidays the customary excursion fares will prevail on the Intercolonial and Prince Edward Island Railway, good between all stations, and to points on connecting lines. The going dates are from December 21st to January 1st and the limit for return January 3rd.

For stations beyond Montreal there will be a special excursion fare on the same dates with a similar return limit. The reduced fares prevailing on these dates will make it convenifor those who wish to visit relatives and friends and for the absent ones to return to the old home for the happy Christmas tide.

I was cured of terrible lumbago by MINARD'S LINIMENT.
REV. WM. BROWN.

I was cured of a bad case of earache by MINARD'S LINIMENT.
MRS. S. KAULBACK.

I was cured of sensitive lungs by MINARD'S LINIMENT.
MRS. S. MASTERS.

If you are troubled with chronic constipation, the mild and gentle effect of Chamberlainjs Tablets makes them especially suited to your case. For sale by all dealers.

This is Not a Fish Story.

Editor The Maritime Farmer:—

I bought two young pigs on the 8th day of May, 1912, from Mr. John Camber, Spring Hill, York Co., N. B. They were just then three weeks old the day I got them. When they were seven months and twelve days old, I killed them on November 29th and they tipped the scales at 295 and 305 lbs. making just even 600 lbs. for tbe two.

Mr. Cecel Henry, a neighbor of mine, killed one six days under 8 months old that tipped the scales at 320 lbs.; it was sired by the same boar as mine, but out of a different sow. These pigs were grade Yorkshires being sired by a pure bred Yorkshire boar.

Now Mr. Editor, do you know of any pigs to beat these, ages considered? If so I would like to hear about them through your valuable paper for we think, around here, if we can get a spring pig to dress 200 lbs. in the fall we have a good one.

Harry Alliston,
Fredericton, N. B.
Herdsman at Brooklands Stock Farm.

Our Best Friends.

Birds which live so largely on noxious insects, protect our crops from great loss and destruction. We are not giving the birds the protection which the best interests of mankind demands. They are being watonly killed and some species are now extinct. The food value of certain species is important, but really nothing in comparison with their live value to catch insects.

Three bills are before U. S. congress to protect migratory birds and it is important that one of them be speedily enacted. The birds that go South for the winter should be allowed to return unmolested to their northern resting places. The only way such protection can be assured is through a stringent federal law. For this reason every one interested in bird life should urge congressmen and senators to pass at this session a federal migratory bird law. Now is the time to lick a stamp for the birds.—Ex.

Getting Eggs in Winter.

Keep the hens busy if you would get winter eggs. The hen that eats her fill and goes back on the roost will not lay many eggs during the winter. The science of feeding has been worked out by many of the experiment stations and colleges, but nowhere better than at Cornell university. Prof. Chas. A. Rogers, in an address to connecticut poultrymen, explained their method of feeding which has given some wonderfully good records.

In the morning the hens are led 2½ to 3 pounds mixed grains for 100 Leghorns. At noon green feed or green cut bone is given and the hoppers of dry mash are opened. At night they are fed seven to eight pounds of mixed grain. Grit and oyster shell are kept before them at all times. By giving a light feed of grain in the morning in deep litter the hens are kept hungry and will scratch all day for it. They should eat from one-third to one-half as much dry mash as hard grain.

Agriculture is a great science, but science does not mean a complicated system of knowledge. Agriculture is simple, and agricultural science is simple. Science is only classified and arranged knowledge.

Make our Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
IF
GIVEN
A
FAIR
TRIAL

EVERY "Great White Llght" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer
SUSSEX, N. B.

We do not sell these burners but each subscriber may get two beside one we furnish free by sending 35 cents for each additional one wanted.

Let's make a Jelly Roll—
With FIVE ROSES flour.

Its *Strength* and *Fineness* hold your batter together in the long well-greased pan.

Bakes *evenly.*

Smooth Texture—soft, golden Crumb, spongy, porous, yielding.

No holes, nor lumps to *vex* you.

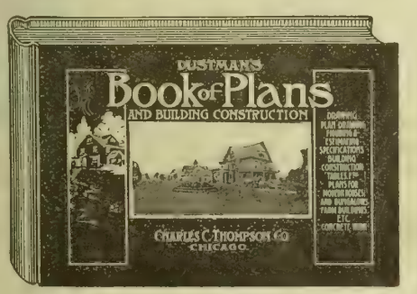
And when you turn it out on the damp napkin hot and *savory*, and you spread the under side with "jell"—

It doesn't get *soggy* nor crumbly.
Roll it gently, carefully.
Not a *crack*—not a *break.*
Perfect Smoothness—a Perfect Roll *Yours.*
Bake anything, make anything.
Use FIVE ROSES—*bread and pastry.*
Melting puff paste—flaky pie crust—crinkly fritters—tooth some rolls.
FIVE ROSES for anything—*everything.*
Be flourwise.

Five Roses Flour

Not Bleached LAKE OF THE WOODS MILLING COMPANY KEEWATIN TRADE MARK REGISTERED Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED MONTREAL



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By U. M. DUSTMAN, (*Licensed Architect*)

10,000 Sold in 30 Days

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Here's a different book from those upon the market. It contains information not generally known outside the building trades; just such information which the building public want. The author has written a book in which he has embodied the cream of over thirty years successful experience. He is widely known as a practical and expert architect and is an authority on the construction of medium priced homes.

Everyone interested directly or indirectly in building should have this book. 250 pages; oblong size, 9x13 inches; bound in blue cloth; white hand stamping—150 plans for modern houses, bungalows, barns. farm buildings, store fronts, store buildings, garages, etc., etc.

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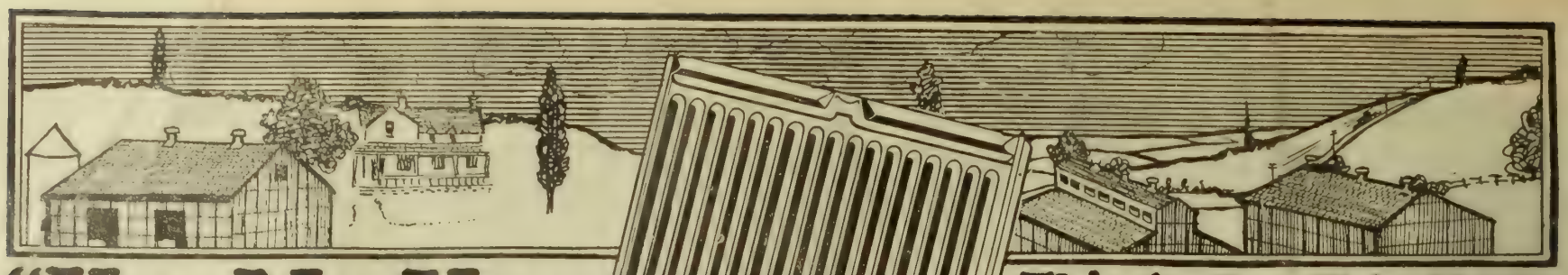


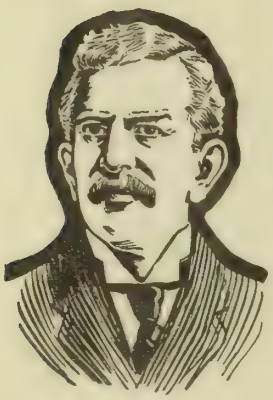
"Use My New 'George' 100 Year Metal Shingle on the Roof and My Zinc Covered Corrugated Iron on the Walls of your Barn"

This is the Shingle I Recommend for Barns

"My son, George H. Pedlar, Jr., invented this big shingle, just before he died. He planned a big shingle for big roofs to lay in one-tenth the labor time needed for cedar. We made up and tested them for three years. Now we place them on the market. The "George" is 24x24 ins. and saves labor on big roofs. The "Oshawa" which is used all over the world, is 16x20 inches. It is used on ordinary size roofs or complicated roofs."

"I recommend the "George" Shingle for good size barns. It costs the same as my "Oshawa" shingle per square. Both are in 100-year metal. Both cutclass cedar, rolls, etc., as my shingles are fire-proof, lightning-proof and sure-proof. These two shingles are the triumphant result of 50 years of labor in making good barn roofs. With the recent rise in cost of labor and wood, my metal shingle is now the most economical roof in Canada."

GEORGE H. PEDLAR.



"I Have been making metal shingles for farm barns for half a century. I found recently a hundred-year metal for my shingle. It surpasses and outclasses anything else in the world that a man can use for a barn roof. You want a 100-year roof on your barn, at about the cost of cedar shingle, don't you? Of course, you do."

"Well, that means my shingle. My metal shingle will cost any farmer less to-day, and be lighter and stronger than cedar shingle. This is because my shingle saves many dollars for labor cost in laying. My shingle needs no paint. Once this cost advantage did not exist. But now-a-days labor cost of laying is very high. Wood shingles are of poorer quality and advanced cost. All told my roof on the barn itself is the utmost value your money can buy—is to-day's most economical roof."

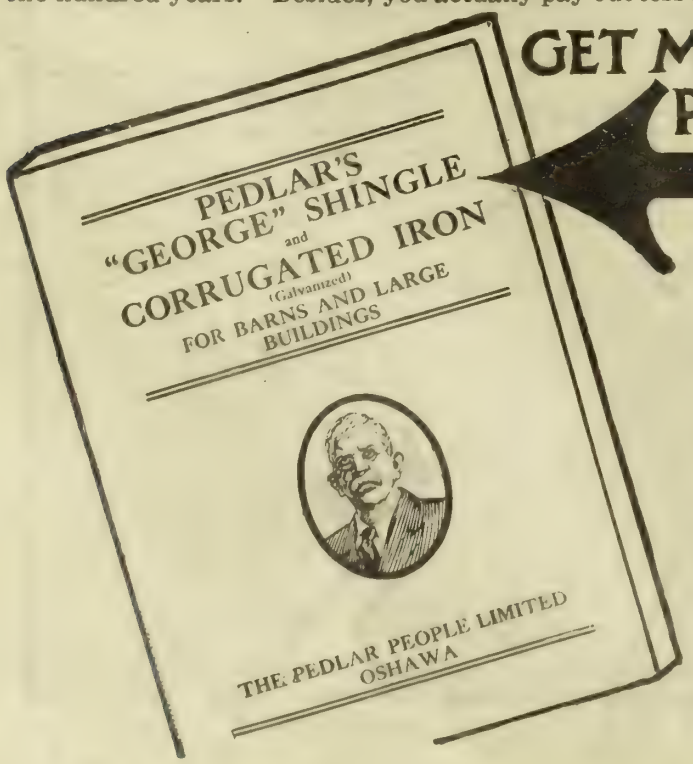
"A barn built without my shingle is going to cost you more in actual dollars to-day, and next year, and every year, that you need to spend. It is going to be a leaky barn sooner or later. You will pay higher fire insurance. You will take bigger fire risk. You will either pay out money for roof repairs, or see your hay and grain rot year after year from poor roofing material. Only my shingle in metal will stop these troubles from the beginning. It will give service for one hundred years. Besides, you actually pay cut less money for my roof when laid, than for a cedar-shingle roof laid and painted properly."

"But that is not all in lowering barn cost. The time has come to stop using lumber sidewalls. Labor and lumber is too expensive. Use my galvanized, corrugated iron for the walls. It is fireproof and strong. It is applied swiftly in 8-ft. sheets, saving days and days of wages. Besides cutting out painting, every sheet of my iron is a brace that strengthens your barn framing against sagging and wind pressure. A barn with my shingle and my sidewalls in metal cost less than the same barn with cedar shingles or roll roofing and lumber walls, when you figure in labor and paint. Use my corrugated iron for your barn walls, and my metal shingle for your roof—save money, get a lightning-proof barn, and get a longer-lasting barn than any other way.

"Write my nearest office about your new barn or remodelling your present barn. Tell us the dimensions. We will tell you what shingle and walls in metal will cost you and what they will save in labor and paint."

"Send them a letter to-day. I now have two sizes of metal shingle for you. My big shingle, the "George" is 24x24 inches. My "Oshawa" is 16x20 inches. According to the size of your barn, we will tell you the right shingle to use. Even the big "George" Shingle does not cost more per roofers "square"; your roof and its shape determines the size you need. My corrugated iron goes with either shingle."

G. H. Pedlar



GET MY NEW PEDLAR BOOK FREE

Why not have my little book? It shows how a barn is built with my shingle and corrugated iron siding. It is a straight talk about making a better barn at less cost than the old way, and making it fireproof as well.

My nearest branch will send you this book free. I have just written it. It is my personal message to you. A post-card will bring it.

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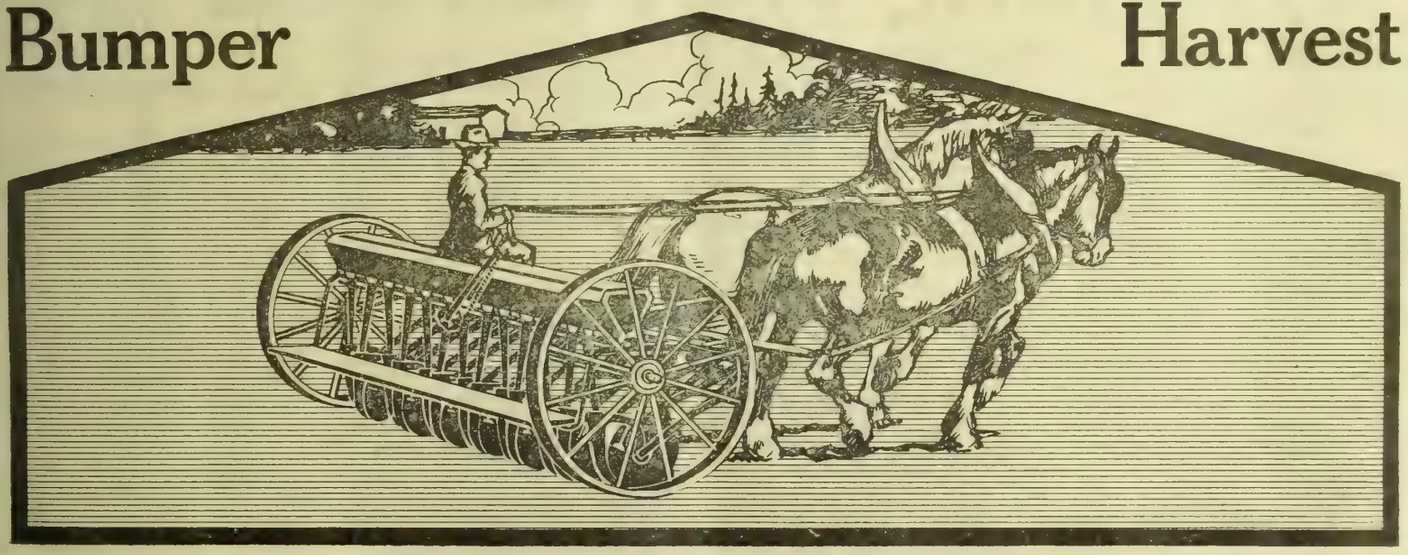
Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 18. SUSSEX, N. B., JANUARY 7, 1913 No. 7

A "Cockshutt" Drill Makes a Bumper Harvest



GET a Cockshutt Drill. You will benefit for many years. You will give your seed and your land a fair show.

You sow in rows six inches apart. This means you get three to five extra bushels, just by using a Cockshutt drill. Remember this is profit. These extra bushels are found money for every acre you seed with a Cockshutt.

Plan right now for a new seeder—write us a letter asking for details. Remember, this means $50 to $100 of extra profit for you for years to come.

SEND US A POSTAL!

Write us a card. Say "I want more information on Cockshutt drills." This does not obligate you to buy. It will get you facts about the Cockshutt—show you how perfectly designed it is. This is one of the lightest draft drills on the market. That alone ought to give it the preference. But when you consider its effectiveness—the harvest it brings you, the crop it protects, the early spring growth it insures, the Cockshutt Seeder is THE DRILL. Write that card to us to-day, please. Now is the time to investigate.

THE Cockshutt Drill is made with a strong I-beam frame that keeps all discs at the same height. It is carried on wide-tired wheels revolving on short axles with renewable bushings. The draft is always light. The discs are self-cleaning. They drop trash automatically. The boots cannot clog with mud. The discs are self-oiling. The feed won't smash, break or bruise the kernels--is always accurate

Your Crop Needs a "Square Deal"

The Cockshutt Feed gives you perfect control of the seeder. The feed is always just right for your land. The "I"-beam keeps your drills up, without sagging. This means that you sow just enough seed at just the right depth for a quick start. You get prompt, early, even growth—half the battle for a big harvest.

KEEP YOUR TEAM GOING

The Cockshutt Disc "draws away" from the trouble-proof grain boot. As trash rises on a disc, it simply falls off, instead of wedging. This keeps your drills running steadily. You have no stops. You sow without an hour's delay from the day you start seeding till you are done. This means big money saved in wages, and full advantage of spring growth.

GUARD AGAINST DROUGHT

The close-set rows seeded only six inches apart are protection against drought. Your crop shades your land so well in June and July that drought trouble is minimized. The Cockshutt Drill brings you the full benefit of summer rains, simply by giving a compact crop that uses every drop of rain for growth.

Get Five Extra Bushels Per Acre

With the Cockshutt your crop gets an even, early start. It grows compactly. It takes full advantage of summer rain. It ripens evenly. It gives the same crop on six acres that you now get from seven acres. You get five extra bushels per acre per year using a Cockshutt Drill You don't pay a cent extra for seeding--in fact, you pay less wages and do the seeding quicker.

COCKSHUTT DRILLS PAY!

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THE FROST & WOOD CO., Ltd.

SAINT JOHN, -- NEW BRUNSWICK

Branches at Montreal, Que., Truro, N. S., Charlottetown, P. E. I.

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This is about the easiest way to keep down the high cost of living

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Not shopworn or surplus stock, but specially bought merchandise that you'll be glad to get so economically priced.

FORTY PAGES OF LOW PRICED MERCHANDISE

A little of almost everything. Just enough to make it interesting to all the family, and just such articles for the home as are useful and sure to be appreciated at such low prices.

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For a copy of this Catalogue if you have not received one.

our SPECIAL FREE DELIVERY we will pay charges on shipments amounting to $10.00 or over to Railway Stations in Ontario, Quebec and Maritime Provinces, on all orders received up to Feb. 28th 1913 reserving the right to ship by either freight, express or mail.

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JUST TWO MONTHS TO BUY AT SPECIAL PRICES

With so much that's new and serviceable to choose from you have also great saving in store—and don't forget our new $10.00 Free Delivery Offer. Truly a grand climax to a notable selling event.

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TORONTO - CANADA

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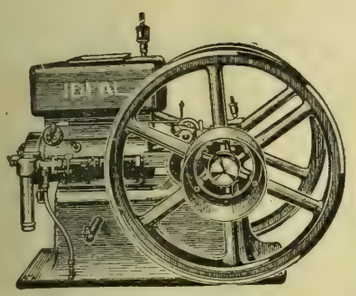

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Steel Saw Frames, Pumps
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Concrete Mixers and Water Boxes

Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.

A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

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Authorized Capital $1,000,000.00

Business established 26 years with trade connection in principal countries of the world. This is one of largest businesses of its kind in the world.

The company do their own financing, and pay **interest twice a year,** on 1st June and December. and allow the investor to withdraw his money at any time after one year on 60 days' notice if desired.

This security is different from any other ever issued with its **Profit Sharing Features,** and is as safe as any farm mortgage. Investors wanting the highest earning capacity with absolute safety, should write at once for full particulars to

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CANADA, ASK FOR EDDY'S.

MADE IN THE BRITISH EMPIRE. MADE IN CANADA. MADE IN HULL

Make Your Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
IF
GIVEN
A
FAIR
TRIAL

EVERY "Great White Llght" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

We do not sell these burners but each subscriber may get two beside one we furnish free by sending 35 cents for each additional one wanted.

DE LAVAL
CREAM SEPARATORS

There's no good reason why you should wait till spring before getting one

On the contrary you may buy a DE LAVAL NOW and save half its cost by spring. Moreover, if you can't conveniently pay cash you can buy a DE LAVAL machine on such liberal terms that it will actually pay for itself.

As to your NEED of a separator, if you have the milk of even a single cow to cream you are wasting quantity and quality of product every day you go without one. This waste is usually greatest in cold weather and with cows old in lactation, and it counts most, of course, when butter prices are high. Then with the separator there is always the sweet warm skimmilk, and saving of time and labor, in addition.

When it comes to a choice of separators DE LAVAL superiority is now universally recognized. Those who "know" buy the De Laval to begin with. Those who don't "know" replace their other separator with a DE LAVAL later—thousands of users do that every year. If you already have some other machine the sooner you exchange it for a DE LAVAL the better.

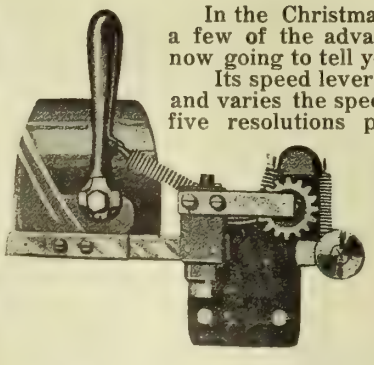
Why not start 1913 right in dairying? SEE and TRY a DE LAVAL NOW when you have plenty of time to investigate thoroughly. The nearest DE LAVAL agent will be glad to set up a machine for you and give you a free trial of it.

173 William Street, MONTREAL, CAN.

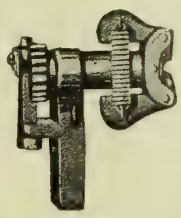
DE LAVAL DAIRY SUPPLY CO., Limited.

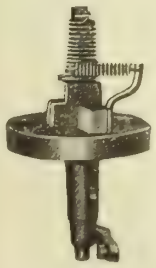
128 James Street, WINNIPEG, CAN.

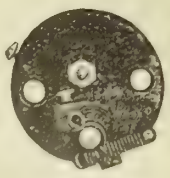
STRONG POINTS OF THE WATERLOO BOY

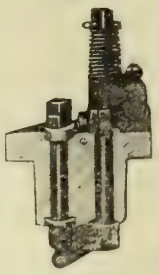


Speed Lever







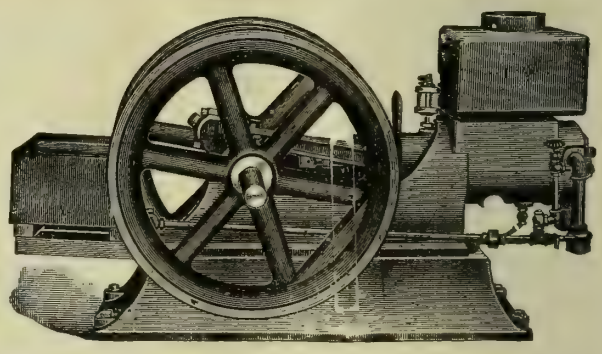


Igniter

In the Christmas Number of this paper we mentioned a few of the advantages of handling our engine. We are now going to tell you a few of our engines strong points.

Its speed lever works like the throttle of the locomotive and varies the speed ***while running*** from fifty to seventy-five resolutions per minute. The old reliable fly-ball governor keeps the speed absolutely steady, no matter how much the load varies and the automatic fuel regulator uses fuel ***only*** when needed for power, ***making it the cheapest engine to run.*** We have an improved patent mixer that does away with the expense and bother of a pump and, our new patent igniter is as simple and positive as a pair of scissors.

The Waterloo Boy is the simplest engine made—has the fewest parts, least chance to get out of order, easiest to manage, and is the nearest automatic in action and "fool proof" in construction, frost proof and starts easiest in coldest weather—no bucking or stalling. All working parts interchangeable—made by skilled workmen in a factory with a capacity of 140 engines complete a day—in the biggest and best equipped factory in the world devoted exclusively to gasoline engines. Every part is exact in size and finish, made of the best material and heavier and stronger than will ever be required.



This great engine is advertised in the leading farm papers ***everywhere*** Right now we are telling your customers about its advantages and about its recent great International victory. They are going to want the Waterloo Boy and we are going to bring them RIGHT INTO YOUR PLACE OF BUSINESS, TO GET IT—enthusiastic prosperous ***men with the money to buy.*** We will back you up squarely, fight with you against every rival—we absolutely guarantee the Waterloo Boy, not only to you but ***to your customer, too.***

Here's a big line— a size for every need. Let's get together—***Are you with us?*** Then write for our proposition today—tomorrow your competitor may be in the band wagon and ***the man with the Waterloo Boy is the one that WILL GET THE BUSINESS.***

Remember we have a winning offer ready for you, so fill out the coupon or pin it to your letterhead and mail to-day.

SUSSEX MOTOR CO., Limited,
Sussex, N. B.

Please send me full details of your gasoline engine proposition together with your prices and terms.

FIRM NAME ..

YOUR NAME ..

TOWN ..

PROVINCE ..

Sussex Motor Co., Ltd., Sussex, N.B.

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 18. SUSSEX, NEW BRUNSWICK, JANUARY 7, 1913. Number 7.

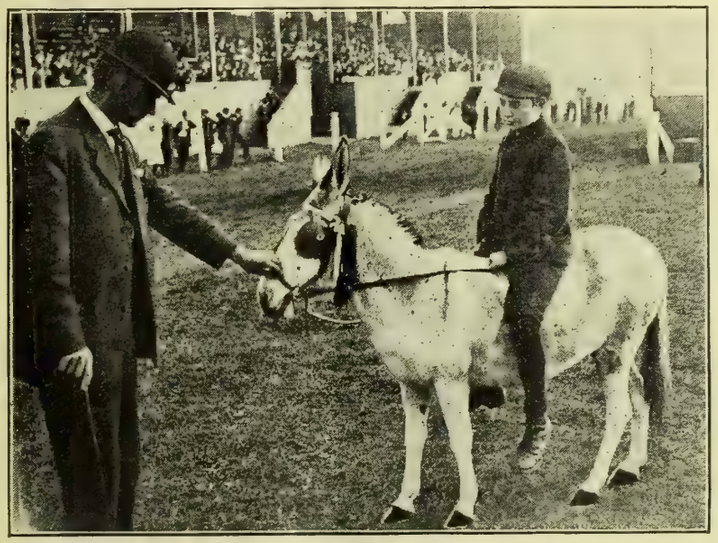
Care and Application of Stable Manure

A Practical Farmer's Methods

By W. M. Lea, P. E. I.

NO branch of farm work is more important and probably none so carelessly handled, as the saving and application of stable manure. Few indeed, seem to consider the almost inestimatable value of fresh stable manure to our Maritime soils. Valuable not only for the amount of plant food contained, but also for its varied beneficial actions on every kind of soil.

A wise provision of nature has so composed the make-up of soils, that no greedy man can completely crop out and impoverish a farm, then pull up stakes and move on in his work of destruction. Only certain elements or proportions of plant food can be removed. When the supply is cut off no more can be made available without the application of some form of fertilizer or stimulant. Fresh stable manure, as a fertilizer, is in a class by itself not only in the content of the elements of fertility in the best balanced proportions for every variety of farm crops, but in the myriads of bacteria that have such a beneficial effect in assisting the liberation of much fertility—and also in adding humus, that great moisture retainer, to the soil.



Posing a Prize Winner

Every farmer knows, or should know that manure contains its greaest value the day it is voided from the animal, and every day it is kept under conditions favorable for decomposition or for leaching out in any form its fertility becomes less. Believing such to be correct what method of saving and application should we adopt to prevent the smallest possible amoumt of loss between the time it is voided from the animal, until absorbed by the soil? We must have tight stable floors, and for this purpose nothing equals a concrete floor. It does not take many years of the liquid leakage through old wooden floors to pay for a good concrete floor, this is one of the very first improved short cuts to wealth that should be attempted. Then decide on some system for handling the droppings daily.

Many farmers advocate the hauling of manure to the fields to be spread at once, and where this can be conveniently attended to it has much to recommend it, up till the time when frost and snow are on the ground. After this I do not approve of spreading manure broadcast as we lose entirely too much fertility by leaching.

In this climate it is no trouble to keep manure in perfect condition until spring. Just do as our commission men do with perishable food products, "put it in cold storage." So long as it is frozen hard no fertility can escape. This is the practice I have followed for several years and I find it most satisfactory. The stables are daily cleaned into a sleigh and drawn directly to the fields, where we keep the pile spread very thin so that all damp manure is frozen hard. We can drive up on the pile. The frost stays in the heap until the manuer spreader can be started in the spring. If all manure is in the field where it is to be applied we can, with a spreader, make a much quicker and better job than by any other method. We used to use a shed for storing but found it hard to keep the manure from heating. If it was piled too deeply much leaching was occasioned by the great pressure. Heating and leaching cau se great loss. We also have tried the several years, spreading directly on the field from the stable, and although our fields are level, we always found that when manure was spread on snow and there was any depth of frost in the ground, we had a noticably lighter crop than when the balance of the field was finished off in the spring.

In Winters, when we happen to have little or no frost in the ground there seemed to be little difference, but when spread on frost and ice the loss was very great. However, this method seemed to be popular with many of our most progressive farmers in other provinces so I persisted in trying it until thoroughly convinced that on our farm at least, we lost greatly by applying manure in winter.

Where manure has been carelessly handled in and around the barn, or partly clear of the stable door and allowing what snow happens to fall to be composted with it to wash out fertility during the thaws of spring, probably the loss is no greater than when it has to waste on the frozen field, but neither should ever be practised.

I think it will pay every farmer to use a manure spreader, either as his own property or if too expensive for his circumstances, as a jointly-owned machine with his neighbors.

Of all the machines usually found on a farm I consider the manure spreader the most profitable. Where good farming is carried on, is where each year's quantity of manure is greater than that of the last. The spreader is a necessity. It is a great labor saver, next to the binder, the greatest labor saver we use. It is also a money-maker as well, in so far as we get much greater value from the manure when handled by this machine.

We often see a deep trench filled level with manure immediately before the root crop is planted on it, and the assurance given us for this heavy interment, I can't call it dressing, "that despite all these theories we always find that we get the biggest crops where we put the most manure." Probably they do, but they don't know the great waste of fertility thr ugh this practice. P. E. Island soil is principally a sandy loam with good natural drainage, a soil that responds readily to good culture, but is a poor retainer of manure. We cannot manure for future generations. Our best practise is to manure as often as possible with as light a dressing as will grow a paying crop, consistent with the fertility already available and the variety of crop we intend to grow. We must not bury manure in a trench. You may plow most of the bulk of it up again but much of the fertility is washed down with the subsoil.

For corn land we top-dress some kind of grass land, allowing as great a growth as possible of grass before ploughing, but for roots we apply as eary as convenient in the spring, plough lightly, just enough to cover the manure, then when we start to cultivate immediately before planting. The land will so absorb the finely and evenly distributed manure that we hardly find any traces of it. The little we do apply is thus made immediately available for the crop. We may not have as heavy a crop but we invariably have a paying uniformly good crop, but double or treble the acreage of the farm will get a badly needed dressing. Where we give even a very light dressing of manure we can always depend on getting a catch of clover, so our policy is to get over as great an acerage every year as possible. We topdress grain land that we are seeding down to clover. Here is another place where the spreader can be used to great advantage, we always apply manure after the grain has appeared, partly for the reason that in the rush of spring work we find it impossible to get at it earlier, and partly for the reason that I think it does really better this way as the manure is washed evenly around the plants with any rains we may happen to have, and mulche the damp land below. The lightest dressing is easily noticed in both grain and clover crops, 8 to 10 loads of a 40 bu. spreader will, on what is considered poor run down Island soil, bring a good crop of grain and I have often observed that where a spreader was available many odd acres of land were given a dressing with the scrapings and leavings of manure found around a yard that but for the use of the machine would be wasted.

Good farming in the Maritime Provinces will include the returning of all crops back to the soil in the form of stable manure, and if this is accomplished as soon as possible withou any loss of fertility our farms will rapidly become more fertile by the extra gain of the action of bacteria on

the physical condition of the soil, on the liberation of inert fertility contained therein, and on the amount of fertility being yearly added by the growth of clover made possible by this dressing of manure. In conclusion I would say: See to your floors, if they are concrete well and good, use all the absorbant you can; but if wooden, and open do something even this winter to remedy it. I have found dry clay that can always be had in cellars at this season to be a good absorbant, and in time to calk a floor. Then put your manure in cold storage as quickly as possible, and in the spring make an effort to get the use of a spreader. If you have never used one before have patience at first, both you and the horses will get used to it, and like it, especially yourself. If your farm is rolling or hilly put your pile in the highest corner and spread down, and and if your horses are light put plenty of them on. When you get to know it, you will find a way to work it anywnere.

Home Grown Seed Superior to Imported Seed

Since the organization of the Canadian Seed Growers' Association the old belief "that in order to grow good crops it was absolutely necessary to change the seed every two or three years" is fast dying out. Farmers are beginning to see that they can grow as good, and even better crops from seed produced on their own farms than from seed brought from a distance although there are still many farmers who believe that it pays them to change their seed every few years. This has not been my experience.

Five years ago I adopted the system recommended by the Canadian Seed Growers' Association for growing seed wheat and oats. I obtained pure seed from members of the association in an adjoining country. The wheat had been selected for 7 years and the oats for 3 years before I got them. I have been using the product of this seed ever since and it is improving every year. At least I can assure you, it has no notion of taking the old disease commonly called "running out."

When we consider the fact that this wheat after being grown in Nova Scotia for 12 years won first prize in the standing crop competition in Colchester with the highest score of any field in the province. It should convince the most doubtful one that the farmers of Nova Scotia can successfully grow their own seed and with a little care in selecting seed will improve instead of "running out."—R. D. MacKay, Balmoral Mills, N. S.

Four Years Experience in The Hand Selection of Seed Potatoes

By the crop reports that our New Brunswick Government send out, we find our average crop of potatoes for the Province of New Brunswick runs about 180 bushels per acre. Granting that there are 10,000 hills in one acre of potatoes this would give 1 1-12 pounds per hill. This, of course, as we all know is easily beaten by probably every farmer in this room. However, these reports are made up from actual conditions throughout our entire province and therefore must be taken as a basis for comparison.

There are several points that have come under my observation in my work with potatoes these last four years that I trust I can make of interest this afternoon.

The C. S. G. A. work attracted my attention and upon studying the situation I decided to take up the work of selecting potatoes. Four years ago, much to the amusement of some of my neighbors, I planted a few hills of potatoes according to the rules laid down by the Association. The result in the Fall was a most remarkable one to me and those interested. Many hills were only fit for feeding while others were of fine type and had many individual, marketable tubers. These, of course, were saved separately with a proper record until the next year. My next year's work showed very few hills not desirable. The third year's work were all of very desirable quality. At digging time I invited the neighbors to come and see. One of my best hills when dug and weighed at this time was found to weigh 11½ pounds. This has been my best record. That particular hill had a good chance as the season was favorable and a good record was made. This season not being so favorable I did not excel last year's work.

One thing in my work has been very noticeable—that my fourth year's records show my best hills to come from my best hills of the first year, plainly proving "like begets like."

Coming back to the first part of my remarks about crop and yield per acre, I may state that my best hills the first year weighed three pounds and by breeding up, the average at present is from six to seven pounds per hill. Comparing this with the average yield per acre for the Province of New Brunswick we see a vast difference and one worthy of a great deal of consideration by our thinking farmers.

In giving my explanation of these results I can say to you strongly—take up this line of work, meaning at the same time to make it a success, and perhaps even greater results will be granted you. The rules of the Association are simple, the product of your labors are yours and your satisfaction and reward will come in digging out of Mother Earth such hills as these.

To prove to the meeting that such results from a few year's work as I have been telling you about can be duplicated or even excelled, I have had these few hills brought here for this afternoon. They are from "Acadie Farm," Memramcook, owned by Emlie Legere. Mr. Legere got his few selected potatoes from me two years ago. This is the result of his second year's work. Mr. Leger is to be congratulated upon the accomplishment of such results. He is calling the attention of many of his neighbors to the results and I have no doubt but that the work will spread rapidly in his section. Another proof of the benefit of selected seed I have here in my hand from Louis A. Green, Fox Harbour, N. S. Two years ago he wrote me for my method of growing and selecting potatoes. In the fall of the same year I received a letter saying that he had beaten every record in that part by producing 315 bushels per acre. This letter dated Nov. 11th states that when he gets his rotation properly going he believes the 500 bushel mark can easily be reached.

Men! these are results worthy of our best consideration and while we acknowledge the soil for potatoes may be better in one part than another, they will adapt themselves to a variety of soils and what has been done can be done again. From England we read of one and two thousand bushels per acre and we wonder how such results are produred. Perhaps we can see now how the result may be accomplished .

My aim would be reached if by these few rambling remarks this afternoon I can help some brother farmer to grow two potatoes where one grew before.—C. Fred Fawcett.

Editor's note: A letter from Mr. Louis A. Green appears on another page of this issue. Mr. Green reached the 400 bushel mark this year,

Royal Seal

First Prize Standard Bred Stallion at the 1912 Cape Breton Island Exhibition. Owned and exhibited dy F. C. Redding, Sydney, N. S.

Comments Re Potatoes

Comments upon the potato crop this year would lead one to believe that there are some remarkably heavy yields. The writer also was told some glorious stories of good yields of potatoes in 1911, while doing judging in the standing crop competition of Victoria Co., N. B. and the yield of 1912 threatened to be quite as good as that of the previous year.

We hear of potatoes of about two lbs. in weight, and of some goodly numbers per hill. One exhibitor gave the information that his crop would average eight potatoes per hill, and he picked a number off the top of the bin when done harvesting that averaged two lbs. each. It would have been nice to induce the judge to believe that good potatoes would average along about twelve lbs. per hill. It apparently never occured to the exhibitors to count up and find how many pounds potatoes do average per hill.

It surprises many people to know that two lbs. per hill as potatoes are generally planted will produce about 120 bbls. per acre.

In selecting in my own field this fall to obtain some good producers for seed for next year, I found some good hills. The heaviest single hill weighed six and one-quarter lbs. and they were not plgnted far apart either. Fifteen inches was the distance between hills. Hills will produce twice as much if twice fifteen inches apart, and from selected seed. Why can't we get such yields from all the hills? —Wm. H. Moore, Scotch Lake, N. B.

The Object of the Canadian Seed Growers' Association and How to Get Farmers Interested.

The Seed Growers' Association came into existence to meet the demand for better seed and therefore for better crops all over the country.

What is good seed and how can we get it? What I would call good seed, and I think everyone that grows good seed will agree with me, is a large plump kernel which has body enough to supply sufficient nourishment to feed the young plant after germination, until such time as the small rootlets reach out into the soil to get plant food there. Such seed should also have come from strong, vigorous parents in order that it may be able to transmit its good qualities. We know by experience that large, well-developed kernels will produce strong and vigorous plants if they have the right conditions. You will often see in a field some plants standing above the others. What is the reason for this? As far as I can find out it is due to the large plump kernels that had good vitality and breeding and was thus able to push ahead of the others and take more plant food from the soil.

The next consideration is How to get this good seed? I do not know of a better system than that adopted by the Seed Growers' Association, with which you are all familiar. Although with the majority of the farmers it is not known nor understood so well as it should be. The production of good seed grain is one of the best means for improving the agricultural conditions of a country; but in this work of seed selection the soil cultivation must be considered. The farmer, by the judicious use of selected seed, thorough cultivation of the soil, rotation of crops and the use of farm manures can materially improve

the yield and quality of his crops, secure a larger income for his labor, and conserve and utilize to better advantage the soil wealth of his farm.

Some one has said "feed is half the breed" in the case of animals. Is this not also true with plant life? Yes, just as true. A great many of our grain growers are prone to put their seed into the ground and trust to luck that there may be plenty of food in the soil to carry the plant on to a complete development. They never realize that a quick, vigorous growth is just as essential for the production of a good plump kernel of high vitality as it is in the development of a prize animal. The first important step before chosing the foundation stock of seed for any crop is to ascertain the variety best suited to the locality where it is to be grown. Not only should the best variety be selected, but the best seed of that variety that can be obtained should be secured.

You will often hear the remark: "My seed has run out, I will have to make a change." So far as my experience goes this is not necessary, and we have abundant proof from ex- [illegible] seed growers to the same effect. Sometimes a change of seed is a dangerous practice. The theory that seed necessarily 'runs out' and requires a change from locality to locality is misleading.

To explain what I have said I will give you one or two illustrations from reliable sources. First, I would refer to the Macdonald Robertson seed competitions, which were conducted three years in which the awards were based upon the number and weight of kernels per hundred heads. In regards to total yield, in Spring Wheat, there was a gain of 19 bushels per acre. Another object lesson showing the advantage of selected seed is given by Prof. Zavitz, of Geuelph, whow showed that from large plump seed the yield was 16 bushels more per acre than from small plump seed. One of the objects of our Association is to direct the actions and minds of the farmers in general in the direction that will profit them most. I would strongly recommend that the system that is adopted by the Canadian Seed Growers' Association, be taken advantage of—a system which will be found practicable and profitable by every farmer. It has been said by some one "give the farmer the idea that he can add very much to the proceeds of his farm and he will at once try to find out how the increase can be made." So the first thing we must do is to impress upon him that he can do such a thing on his farm by following intelligent methods. Talking is of little use in convincing the majority of our farmers; but if we can show him through some object lessons how other farmers have accomplished the desired results—they will catch on as quickly as any other class.

It seems to me that more general attention might be paid to Seed Fairs, the making of displays of improved seed growing by members of the association at the regular exhibitions, the offering of special prizes for exhibits with details as to how samples were grown and increase, if any, from former years, would be beneficial. One other thing I would like to see, and that is the offering of prizes to farmers' sons for competition on judging grain. A great deal may be done also in interesting the farmers through the Field Competition in standing grain. I know from experience that all who enter the competition are always willing and glad to hear all the judge has to say. In my estimation, the judge in the Field Competition has a great privilege for giving information to the farmer about good seed and how to get it.

There is another matter that I would live to hear a discussion on at this meeting. Last February at our annual meeting in Ottawa, a question came up in regard to the selling of registered seed. The question was, if I remember rightly, "Should any farmer that bought registered seed from a member of the C. S. G. A. and sowed it, be allowed to register the product without becoming a member of the association and having a seed plot for one year?" It was not decided at the meeting and it will come up again at the next annual meeting. As there are some members here who will likely be there, they could express the views nf this meeting on the subject. In conclusion I would urge the preaching of the gospel of good seed anywhere and every- Show the advantage to be gained by the use of good seed and you will find a demand for such seed arising all over these Provinces. Men will always be found ready to produce an article which people want and for which the public is prepared to pay a good price.

Paper read by D. Innes, before the Maritime Branch, C. S. G. A., at Amherst.

Potato Growing on Clover Hill Farm, Lunenburg Co., N. S.

In the summer of 1912, the Government of Nova Scotia offered ten prizes for a potato growing contest, open to farmers all over the province.

Wallace Rhodenizer

Proprietor Clover Hill Farm, Bridgewater, N. S

Wallace Rhodenizer's Oxen Hauling 70 Bushels Potatoes

The fourth prize in this contest was awarded to Clover Hill Farm, Bridgewater, N. S. of which Mr. Wallace Rhodenizer is the proprietor.

The area entered in competition was one-half acre of loam soil ploughed in August 1911. Part of the field was sod land and the remainder new land that had been broken two years ago and on which a crop of oats had been grown in 1911. The plot had been harrowed a number of times in the autumn of 1910. Mr. Rhodenizer does not believe in cultivating too much in the fall as he considers that there is a tendency to liberate too much plant food that may go to waste during the winter and early spring before the plants send out enough rootlets to make use of it. He, however, finds it necessary, in some cases, to harrow in the fall in order to destroy as much couch as possible.

The plot was manured in May at the rate of twenty tons of barn yard manure per acre spread as evenly as possible.

Mr. Rhodenizer planted some early potatoes on a portion of his plot early in May; the balance was planted with late varieties in June.

The sets were dropped in every second furrow—furrows five inches deep.

For commercial fertilizers, Mr. Rhodenizer prefers to buy the chemicals and mix them at home. For his potato crop he uses 4 cwt. Nitrate of Soda, 4 cwt. Potash and 12 cwt. Acid Phosphate mixed and distributed on top of the potato sets at the rate of 10 cwt. per acre after which the manure and earth are raked in to cover the rows.

The potatoes used were of the Carman variety, cut two eyes to a set, and sprinkled with slaked lime as soon as cut. The potatoes used in planting this plot were selected from the best producing hills at digging time in 1911—a system of selection to which Mr. Rhodenizer pins a great deal of faith for improving the producing quality of seed.

Six days after the sets were planted he harrowed the plot with a spike tooth harrow and before the tops broke through the ground he harrowed again.

As soon as the tops could be distinguished in the rows the cultivator was started until during the season the plot was cultivated eight times

He sprayed when the tops were six inches high and at other stages four times during the season. The last spraying was made about the time the tops covered the rows and interlocked branches. Potato bugs were quite plentiful on the early varieties but the sprayings kept them in check. From one acre treated as above, Mr. Rhodenizer harvested a crop of 440 bushels of marketable potatoes.

In regard to the season Mr. Rhodenizer says that after the middle of July rains descended in little noods as if preparing to float another ark. Notwithstanding the wet weatner the potato crop in Lunenburg County was excellent although a little rot showed in some sections.

The cut of ox team on this page is Mr. Rhodenizer's five-year-old team girting 7 feet 6 inches on which he captured second prize at the local exhibition. In the cut they are hauling a seventy bushel load of potatoes.

In Lunenburg County the farmers think a great deal of their ox teams. Mr. Rhodenizer can plow an acre with his pair in six hours.

Feeding Scabby Potatoes to Stock.

In the study of potato scab at the Maine Experiment station no published data could be found regarding whether the germs of the disease were killed in the passage of the digestive tract of domestic animals. That is, can scabby potatoes be fed to the horse, cow, sheep, etc., without having the manure of these animals carry the germs of the disease?

It is a well-known fact that potato scab will persist in infected soils for an undetermined period, at least 25 years or more. It has also been demonstrated repeatedly that the application of fresh stable manure to the soil, immediately before planting, tends to increase the amount of scab on the resulting potato crop.

Following two experiments the station now reports: It would seem that germs of potato scab are able to pass the digestive tract of both the horse and the cow and go into the manure pile without being destroyed, but much more readily in the case of the former than with the latter animal. The manure of horses fed on scabby potatoes is very likely to carry the germs of the disease. On the other hand manure from cows fed a moderate quantity of potatoes which are not excessively scabby, is probably not a serious source of contamination.

Much of Maine's best potato land is either free from or only slightly affected with scab. Owners of such land should realize that this is a valuable asset and should strive to keep it in this uncontaminated condition. The common practice of depending largely upon commercial fertilizers and of plowing under clover to supply humus in growing potatoes not only helps to prevent the introduction of the scab germs into the soil, but also tends to make the soil conditions unfavorable to their development. Even here, there is a great danger from using scabby tubers for seed purposes Experiments conducted at this station and elsewhere have repeatedly demonstrated that the only safe course to follow is to use nothing but clean, healthy tubers for seed and these should be disinfected with formaldehyde before planting.—N. E. Homestead.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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THE MARITIME FARMER, or
R. D. Robinson Publishing Co., Limited
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

JANUARY 7, 1913.

DATES OF ISSUE.

January ..... -21
February 11-25

YOUR FORTUNE FOR 1913

The desire is universal, as we stand on the threshold of a new year, to know something of the fate and fortune that await us in the twelve months ahead. That man who could foretell the events of the coming year and could see in advance the pathway we shall later tread, would be able to bestow a prize benefaction on the human race.

But as yet, in spite of all the advance made in occult science, it is not given to any one of us to penetrate the veil of the future. For some reason, doubtless most wise, we are compelled to walk on without knowing on the evening of one day what shall transpire on the morning of the next.

Still, it is possible by the recognition of certain underlying laws in the moral universe, to be able to predict more or less definitely the character of the coming year. Without being any kind of occult seer or professed fortune-teller or reader of closed secrets, one may predict with fine certainty concerning the future, reading the sequel of the chapter of life that opens on New Year's day.

It is time we realized that fortune is no mere matter of chance. Indeed, there is no chance. All things are but the inevitable working out of primary causes which are in every case at our control. Chance, luck, fortune, fate, exist only as names. Everything is to be commanded. Luck is only the sequence of stalwart and brave effort Chance is but the result, whose connection with the cause is not perceivable. And fate is something ordained, by ourselves.

Wise is that man who in the opening of the new year realizes that he is its master. Not unless he so chooses will he be made a pawn upon the chessboard of life, to be moved hither and thither by the influence that chance to play upon it and him. If he is swept off the board by any influence seemingly stronger than himself, it will be because he has permitted his own power to lie dormant and has not excercised the full forces that are inherent in himf

Its weal or woe will be but the result of the willing, wise or unwise, of this present time. Next December will but fill the order placed in January by each one of us. The year will give back to each man only what he, in purpose and determination, puts into it. It is now simply an unmarked sheet upon which each man may trace the lines of beauty or mar by his careless touch.

To understand the laws of life is to become master of one's fate. To know what causes will result ultimately in failure and sorrow. A man desired is to hold the key to the fortune of the future. Without holding this key one may knock the futile hand upon the locked gate of fortune. With this key it swings open before each of us, admitting to the greatest good and fairest fortune that life can have in store for us.

The one law, perhaps, that needs to be written large and clear is that he who gives, gains. Social isolation is social suicide. To keep one's self apart, not sharing one's joy and optimism with his fellows, is to adopt a course which must result ultimately in fai,ure and sorrow. A man can no more possess happiness for himself than he can catch and hold the sunshine in his closed fist or keep a plant alive under a glass dome.

The pe(sonal benefits of 1913 will depend almost entirely upon the benefactions we bestow. Who locks up, loses. Who divides his treasure, multiplies his pleasures. Who gives away, gets in return and with good interest. In the realm of ethics the usual arithmetical tables are turned topsy turvy but to our eternal advantage.

Another law to remember is that inspiration comes of an ideal. The new year will be as good to us as is the ideal for which we still struggle. Everything will be worth while, or worth enduring, if by it we are enabled to approach a little nearer to the high goal. Everything depends upon the largeness of purpose. All else will be magnified pr diminished in accordance with it. A man is willing to endure hardship or struggle against obstacles, or to risk life and fortune, if that for which he struggles is transcendantly great.

Indeed, it may be truly stated that we in Canada, at the beginning of a new year in a new era of national life and action, need a clearer perception of a new ideal which shall be more fully consistent with the splendor of our opportunity and the greatness of our national task. In this year ahead we shall lay the foundations af Canada's greatness or else, by careless building, expose our country to future fal,. Everything depends upon a high ideal of personal life and public attainment and having it so clearly limned before us that we shall not for one instant forget, even amid the heat and haze of political conflict, the glory of its form and the greatness of its claim upon us.

Delighted With Xmas Number

P. E. I., Dec. 28, 1912

Editor Maritime Farmer:

I was delighted with your Christmas Number which contained so many good photos of prominent stockmen's properties and their herds with very interesting articles on their methods of obtaining success in their respective callings. Your report of the Winter Fair Dairy Test was also a most complete and instructive article that should be preserved by all interested parties for future reference and guidance.

Wishing you the compliments of the season and still more prosperous years for the "Farmer," I remain,

Yours sincerely,

W. M. LEA.

GET KNOWLEDGE

The farmer who thinks he knows it all, who believes that farming is a combination of luck, brute strength and awkwardness, can never make any progress, or at least can only make that slow progress which comes from his own hard-earned experience. The farmer who realizes that this is a big world and that agriculture is a great big science and a most comprehensive and far reaching art, cannot be kept down.

The first farmer does all he can to keep himself doRn. Ignorance is weakness; knowledge is power. It is a fearful thing when a farmer does what he can to make himself weak among his fellow men. Yet we know hundreds of farmers who do that very thing. They spend no money, make no effort, to grow in knowledge. They have fat hogs and starved minds.

This is all useless. There is not a farmer in the land who can read but who can educate himself in a short time to understand the best agricultural literature. There are thousands of such farmers today who had only three months' winter schooling a year in a country school for a few years, but they kept their minds bright by constant reading of the best farm papers and books. Today they are strong, successful farmers and leaders of men.

No man gets to this point, however, who thinks he knows more than other men around him. The Good Book says' "In a multitude of counselors there is safety." Nowhere does it say that one man can know it all by himself.

We have too many farmers who have no hunger or thirst for knowledge. They want money bad enough to work like slaves for it in a blind way, but not enough to think, read and study for it. It is just that lack of a desire for better farming knowledge that holds them down, and it always will hold them down. The farmer is no exception to other men. No man ever increased in fortune and estimation of his fellowmen by reason of his lack of knowledge.

By the time this issue of the Maritime Farmer reaches our readers there will be hundreds of our young men in attendance at the N. S. A. C. Short Courses. These young men go there to get knowledge: They belong to the class of farmers who realize that agriculture is a great, big science and far-reaching art.

LET YOUR LIGHT SHINE

On another page of this issue will be found an article on the "Winter Care of Stable Manure" by W. M. Lea, of Prince Edward Island. Mr. Lea gives the gist of his own experiences. He tried and proved several methods until he ascertained which was most suitable for the conditions existing on his farm.

We would like to hear from a great many more of our readers on questions of this kind. We feel assured that the reading of Mr. Lea's article will benefit some of our readers. It may be that an account of your experience might help. Mr. Lea. Let us hear from you occasionally. Give your fellow farmers the benefit of what you have learned by experimenting. Do not hide your light. Let it shine.

The Nova Scotia Farmers' Association will meet this year in Sydney on January 21st and 22nd. We have not received a copy of the programme but feel assured that it will be up to the high standard of other years. Many of the charter members of the association are dead and gone and younger men are taking their places, but the good work carried on by these fathers of agriculture lives after them and no more fitting monument remains to mark their memory than the N. S. A. C. on the hill in Truro.

Tuberculosis is not an imaginary disease or one that you can have in your herd for years without knowing it as some men will argue. Many farmers have found that it is real indeed. Afeter it has become thoroughly established in a herd the financial loss each year would be so great that any profit would be out of the question. It is a disease that no self-respecting man will allow on his place, for it will disgust and dishearten the most enthusiastic breeder, and it is a disease which no man with even the semblance of a conscience would care to pass to his neighbor.

If you have faith, preach it; if you have doubts, bury them; if you have joy, share it; if you have sorrow, bear it. Find the bright side of things and help others to get sight of it also. This is the only and surest way to be cheerful and happy.

The Value of Co-Operation From the Farmers' Standpoint.

There are so many things in which the farmers can co-operate it is hard to tell which is the most important. For instance, we have the co-operative cheese factory and creamery system, and farm implements that are used only for a few days per year such as turnip seeder, manure spreader and even binders and cultivators can be used to advantage by two or more neighbors on small farms. An implement that is wanted in this community and one that being rather expensive for the individual to buy alone, should be got on the co-operative plan is the Clover Huller.

The buying of seed is a great drain on our farmers and could certainly be helped if they would take the trouble to sow clean seed and gather it right and in large enough quantities to sdpply home demands.

Farmers should stand together to look after their rights as do the manufacturers and middlemen. For instance the Governor of New Brunswick sent out a commissioner to inquire into the needs of the farmers and if the farmers had co-operated and asked for cheaper money they certainly would have got it, but no, they seemed perfectly contented to pay six, seven and even eight per cent on money and left it to the opposition leader (a lawyer) to demand it for them.

In Germany they have the Reiffessen banking system of Agricultural Co-operative Credit Societiesf It requires a law passed by the legislature enabling co-operative societies to borrow money for farm improvements for a short time on their collective quantities, at a low rate of interest as the larger manufacturers pay.

If the farmers of New Brunswick were awake to their own needs they certainly would see the advantage of a system such as that and they will as certainly never get what they don't ask for.

Again, the Gov. Report of 1910 laid before the farmers the advantages of under-drainage and where a certain number petitioned for it they would buy the traction ditcher and pay for the underdraining and the farmers would pay it back in small instalments. How many took advantage of that affer? Not one that I ever read or heard of and last year the offer was not repeated.

There are many farmers who do not need to borrow the money and these should co-operate and buy ditcher and tiles and do work together to a great advantage.

Along the shores of New Brunswick, Westmorland County in particular, there is a strip of country from one to two miles from the shore that seems by nature to be made for growing potatoes. In fact, I think we can banter the world for both quality and quantity of tubers. Why are there not more potatoes grown? Certainly not for want of fertilizer as there is no place in Canada where manure is so easily obtained but because the shores are generally as far from the railroad that it necessitates long hauls on the bad fall roads, and we in Botsford and Westmorland parishes must pay freight over two lines of railroad and by the time middlemen's profits are deducted the farmer has very little left.

Now our Government Reports say that Cuba is our best potato market. Why cannot the farmers along our shores co-operate and get a steamer and take the potatoes direct from the farms in scows to steamers and then to market without so much handling? A few farmers could go to look after sales etc. at the others expense and thus cut down commission, I have not taken the trouble to study how loads of produce are registered but cannot see why it could not be done by farmers as well as the larger potato dealers. Then if the farmers wanted fertilizer it could be handled by boat and save long hauls and salesmen's profits.

The same plan could be applied to the buying of feed and seed grain and seed potatoes, which would be bought in larger quantities on the co-operative plan instead of paying out large sums in merchants' and middlemen's profits.

In this part of our country the sheep and cattle are what may be classed as scrubs. Why? Because the farmers will not hold together to produce the same breeds. One year an Ayrshire bull is used. The next a pure-bred Durham and perhaps the next a Jersey will be the only one in a neighborhaod. Although they are each good in their place a mixing such as we have can only be productive of scrubs.

To attract the best buyers a community should turn out a uniform article whether it is beef cattle or those of milking breeds.

One of the crying needs of the farmer to-day is more laborers and why can that not be helped by co-operation. A farmer will get one man from the old country and keep him about a month when he will leave for want of companionship. Now if the farmers would club together and get enough help at once from the old country to be of company one to the other it would help to keep men in the place who could be got for a days work, and by the farmers planning their work right there would be work for several men in each community the year round.

Some may say the helping of one another to do plowing, threshing, harvesting etc. is a great advantage but although it is alright if each will do the right thing by the other, but in most cases the greedy ones get the best of the bargain.

For instance, in threshing one man will work for another and stay at the tail of mill while his work will be returned by a boy or poor man who can only cut bundles or do the other

Above all the farmers should have easier jobs.

more to say in the Government of our country and they never will until they co-operate as one man is very little good alone no matter how large his ideas are.—Prize Essay by Thos. A. Oulton at the Port Elgin Fair.

A Sheep Account.

Editor Maritime Farmer:—

The following is a summary of accounts of receipts and expenditures of a small flock of sheep owned by the writer:

The amounts charged against the sheep for feed may not be correct, but it is above the average charged in accounts of other flocks that are published as correct. However, I do not think the charge is excessive.

I have put nothing to their credit for destroying noxious plants, but will let this go to balance housing in winter which heretofore has not really cost anything as they have only used space that eariier in the season was used for storing other farm products.

As for the amount of percentage profit I will leave that to be figured out by some person more proficient in figures than myself.

In the accounts is given the yearly membership fee to the Agricultural Society through which a start was made in registered stock. There were other advantages derived from this same membership fee but it is all being charged to the sheep.

The registered stock is of the Shropshire breed. The scrubs are also pure.

The terms of the Agricultural Society was that the member bidding in stock should have his money refunded at the end of the year, when the stock was returned to the society to be again sold. So if the stock was returned alive and hearty all the bidder was out was the use of the money for the year.

This has been charged at 6 per cent,

EXPENSES 1910 A. D.

Subscription to the Agricultural Society	$2.00
Interest at 6 per cent. on $13.00 paid the Agricultural Society for sheep	.78
Feed for two ewes one year	4.00
1911. A. D.	
Subscription to Agricultural Society	2.00
Interest at 6 per cent. on $5.00 paid to the Agricultural Society for sheep	.30
Feed for four sheep one year	8.00
1912 A. D.	
Subscription to Agricultural Society	2.00
One Shropshire ewe purchased	5.00
Six long wool lambs bought in 1911 at $3.25 each	19.50
Registering three sheep	2.50
Feed for six ewes for one year	12.00
Total	$58.08

RECEIPTS 1911, A. D.

9½ lbs. wool @ 23 cents per lb.	$2.19
1912, A. D.	
63 lbs. wool @ 06 cents per lb.	10.08
1 lamb @ $5.00	5.00
1 lamb @ $6.00	6.00
1 shearling ram @ $12.00	12.00
1 scrub ewe @ $4.00	4.00
On hand at present 12 ewes	
3 grade lambs @ $4.50 each	13.50
5 scrub ewes @ $4.50 each	22.50
2 pure bred ewes @ $7.00 each	14.00
1 pure bred ewe @ $8.00	8.00
1 pure bred lamb @ $8.00	8.00
Total	$105.27
	58.08
Balance	$47.19

Wm. H. Moore,
Scotch Lake,
York Co. N. B.

How to Make Agriculture More Practical.

It is an astonishing fact that the very important study of agriculture has been omitted from our common school curriculum. Truly, it is time we are awakening to make it a more practical study. But how can this be accomplished?

First by teaching our teachers to attend schools where they can obtain a fuller knowledge of the subject, by paying better salaries.

Among the schools which are within reach of New Brunswick are: Truro Agricultural College, where short courses are held during vacations, and the Summer School of Science for the Maritime Provinces. Both of these schools do very creditable work.

Every boy and girl should be taught the names, uses and habits of our common trees and shrubs. Also the names, habits and methods of eradication of our noxious weeds. What could be more profitable than an hour or two each week during fall and spring spent in tramping through the fields and woods, gathering leaves, flowers, etc. and enjoying Nature in all her beauty.

The pupils with the assistance of the teacher should press and mount specimens of weeds, leaves, mosses, lichins, etc. They should be encouraged to bring any plant which they cannot name to the school.

Another interesting branch of Nature study work is the study of butterflies, moths, beetles, etc. Would it not be a good plan to make a collection of the insects and mount them for future reference? The pupil should become familiar with the common names, in what way they affect the plants, and method of treating of most common insects. Cocoons FARM

should be gathered, put in cool places, and watched develop in the Spring.

Lastly to make Agriculture more prartical, supply the schools with gardens. Let every child have his or her own plot of land in which seeds are planted. The children will be very glad of the privilege of cultivating it.

They should experiment with different kinds of seeds, fertilizers, and methods of cultivation, taking notes of expenditures and returns, thus gaining valuable information concerning profitable seeds, fertilizers, etc.

The plan of the garden should be worked out during the Winter by the teacher and pupils.

Summing it all up, we must have more efficient teachers, willing pupils and a school garden.

"There is a pleasure in the
pathless woods,
There is rapture on the
lonely shore,
There is society where
none intrudes,
By the deep sea, and
music in its roar."

—Prize Essay by Miss Amy Lamb at the Port Elgin Fair.

Potatoes at the Rate of Four Hundred Bushels Per Acre.

Editor Maritime Farmer:

Enclosed you will find $1.00 for my renewal subscription to The Maritime Farmer. I would not be withaut The Maritime Farmer as I get a great deal of information from it. About two years ago I read in it an article that Mr. C. Fred Fawcett wrote on potato growing. Being interested in that crop I wrote The Maritime Farmer for information and my letter was forwarded to Mr. Fawcett. I cannot say too much in favor of that gentleman for his kindness to me in answering my questions. The first year I tried his methods I raised three hundred and fifteen bushels of potatoes from one acrel By using the best potato fertilizer on the market this year I have beaten that by eighty-five bushels, reaching the 400 mark. I will be only too glad to give any brother farmer any information I can in regard to my experience.

In thses parts the land is somewhat of a heavy clay soil and does not dry out very early in spring. Some of my neighbors seem very anxious to get their potatoes planted first thing in the spring.

In my experience I find the best way to do is to plough my ground in the fall and plough pretty deep, say five to six inches, and in the spring as soon as it is fit to work I give it a through harrowing with disc harrow and let it lay for six or seven days after which I give it another good harrowing and let it lay again another six or seven days when I go at it again. Some may say that by this time it would be too late to plant. This year I did not plant my patatoes until the twentieth of June. I find that by planting too early I get more potato bugs than potatoes. In dealing my way with the land and using ten to twelve hundred pounds commercial fertilizer to the acre I have grown 400 bushels of good potatoes per acre.

Lewis A. Green,
Cum. Co., N. S,

HORTICULTURE.

Early Fruit Culture in the Maritime Provinces.

Editor Maritime Farmer:—

A subject which will interest a great many of your readers is that of the early culture of fruit in the Maritime Provinces.

In 1000 A. D. Lief Erikson visited the Acadian Valley and gave to it the name of Vinland because of the various kinds of wild fruit growing there. Many of the old Indian names along the Atlantic coast attest the abundance of various kinds of wild fruits.

To the French we owe the discovery of the adaptability of the soil to fruit growing but to the English we are indebted for the promotion of that culture.

In 1605 De Monts in his removal from St. Croix was delighted with the clusters of wild grapes growing at the base of the limestone cliffs of the St. John river. Sailing un the "French Bay" as he called the Bay of Fundy he says in his narrative of the expedition, "We entered one of the finest harbours I had seen along these coasts in which two hundred vessels might lie in security, the entrance is eight hundred paces broad; then we entered a harbour two leagues long and one braad which I have named Port Royal."

Port Royal must be regarded as the northern settlement of Acadia and to this sheltered valley snugly ensconced between two sheltering mountain ranges must be awarded the distinction of the first experiments in horticulture in tne Maritime Provinces if not the first garden in Canada. For when Champlain came to Canada in 1605 he brought with him some apple shoots from France. These he planted at Port Royal and the little plot of land to this day is known as the "French Garden."

It is difficult to trace the history of this particular branch of agriculture from year to year as it is rarely spoken of in history, probably on account of the continual changes of rulers of Acadia and the almost continual petty wars.

The Jesuit Fathers did much to promote fruit culture in the various parts of New Brunswick, Nova Scotia and Prince Edward Island where they were stationed. They varied the monotony of their work and added luxuries to their scanty tables with the vegetables and fruit grown in their gardens among the pine stumps. They bestowed special care upon the fruit trees they had raised from seedlings brought from France.

They introduced grapes from France which were larger and of a much firmer flavor than the native grapes. To this species belong the various kinds of currents which were probably introduced at the same time.

In 1633 we hear of apples growing along side the Gasuereaux river where they had been planted by the French. In 1664—twenty-nine years after Champlain's death the Abeniki of the East as the Indians called Acadia "the land of the dawn," the raising of fruit had passed beyond the experimental stage and the valleys of the Cornwallis and Annapolis (Port Royal) rivers were fringed with apple trees. Much large and varied fruit being raised proving the adaptability of the soil to fruit culture by the combined efforts of nature and man.

However, it was soon discovered that the fruit culture was limited as the climate was not suited to the growth of the citrous fruits. Apples were more extensively raised than any other fruit because of the hardiness of their nature, the sure crops and the many different ways in which they could be used as a food and were a great boon to health. They also required little attention. But even this fruit though much ahead of that already grown was inferior in quality to the later fruit.

In 1761 Cornwallis was settled by people from New England, they found many apples growing and set out large orchards from the sprouts coming from the roots of the trees. One of these New England settlers, Col. Burbsidge, introduced several new varieties and was one of the first to practise grafting for which purpose the vigorous trees of the French settlement was well adapted. He introduced two new kinds which exist to the present day, these are the Nonpareil and the Golden Russet.

Rev. Dr. Inglis, first Anglican bishop, about the close of the eighteenth century, imported the Yellow Bellefleur from the state of New York. It spread rapidly through the two valleys and is now generally known as the Bishop's Pippin.

About 1812 the Hon. C. R. Prescott went to Cornwallis and devoted his wealth, energy and common sense to the development of apples and pears. He introduced the Golden Pippin the Ribston Pippin and the Blenheim and had in his orchard over one hundred varieties of apples and fifty varieties of pears. In 1828 the Baldwin apple made its appearance

Although the principal orchards were at Annapolis and Tornwallis nearly every inhabitant of every settlement owning land in the Maritime

The Nova Scotia Fruit Growers' Convention

The Nova Scotia Fruit Growers Association will meet this year in the town of Middleton, on January 28th, 29th and 30th.

Identified with the Association are the most successful and practical fruit growers in Nova Scotia—men who are accomplishing results not only for themselves but for generations yet unborn. The fruit growers have built a sure and solid foundation for a superstructure which has already attained magnificent proportions in the eyes of the fruit consuming world. This superstructure is being pushed skyward to completion until capped with the dome of union and co-operation it stands a monument to good fruit, honest packing and a business integrity that will remain firm throughout the ages in the minds of a discriminating class of consumers.

Prof. J. P. Stewart, of the Pennsylvania State College will be with the fruit growers at Middleton and will deliver addresses on "Spraying and Orchard Fertilizers.

The Provincial Entomologist, Dr. Matheson, will read two papers, one on the San Jose Scale and the other on the Brown Tail and Gipsy Moths.

The question of Thinning, Marketing, Co-operation and other subjects of general interest to fruit growers will be discussed by men who have tried and proved the methods which will be recommended.

"A systematic fight against fruit tree pests" is the slogan of the fruit growers and we expect the 1913 meeting at Middleton will be a record breaking muster that will rally around any banner that leads to progress in the advancement of better marketing methods and to the extermination of the fruit growers' foes.

Will you be at Middleton? In numbers there is strength.

Maple Syrup Makers

Enter this Contest

Cut Out This Coupon

THE demand for genuine and high grade goods so enhances the market price of Maple Sugar and Syrup that we have decided to open a competition to educate the consumer who is more familiar wiih the second or third grade article. To attain this result we offer $500 in gold for the best made syrup and sugar.

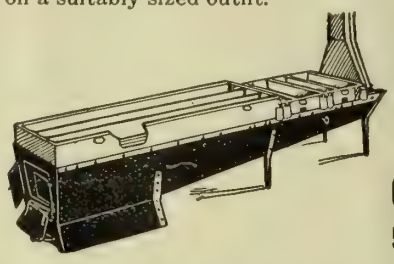
SYRUP AND SUGAR ON EXHIBITION IN MONTREAL

The object of making a display of this kind is to show the public the products of the very best Maple Syrup and Sugar Makers in Canada and must undoubtedly result in unlimited benefit to you should you be one of the exhibitors. All syrup must be made on a Grimm "Champion"—will be judged impartially—must be of a light color to stand a chance of winning a prize—will be paid for if you enter the contest, or returned after contest is over if you so desire.

The entries will be exhibited in the magnificent Show Window of the "Montreal Star."

Why not properly equip yourself to be a WINNER in this contest?

State number of trees you tap, and we will give you price on a suitably sized outfit.



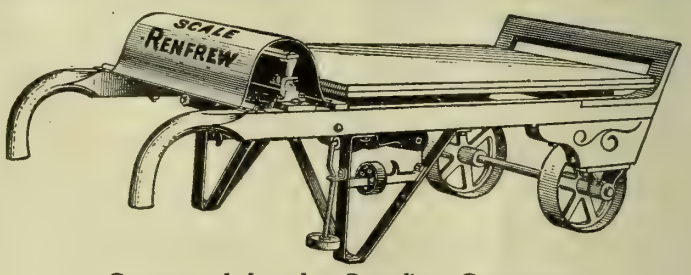
For all conditions and particulars, Address Prize Contest. Don't forget Coupon.

GRIMM MFG. CO. Limited

58 Wellington St., Montreal

THE FARM SCALE THAT SAVES MONEY FOR FARMERS

THE "RENFREW" HANDY TWO WHEEL TRUCK SCALE



Guaranteed by the Canadian Government

The Renfrew saves every cent of profit for the farmer on everything he sells by weight—because of its absolute accuracy.

It saves for him time and labor,—simply wheel the Renfrew to what you want to weigh.

It saves for him because it is built to last,—and weighs everything from one pound to 2000 pounds.

Does your scale do these things? If not it is time to buy a Renfrew,—the farm scale built to suit your requirements.

MAIL THIS COUPON NOW FOR FREE BOOKLET

Mail Coupon For This Free Booklet—"The Profit in The Last Ounce." It tells interestingly about the business side of farming,—and how money is saved with the Renfrew Handy Two-Wheel Truck Scale.

MAIL NOW

COUPON

Please send me Free of charge, booklet "The Profit in The Last Ounce."

Name.....

Address.....

The Renfrew Scale Co.

RENFREW, Ontario.

AGENTS:-Saskatoon, Western Distributing Co.; Calgary, Reynolds & Jackson; Edmonton, Race, Hunt & Giddy; Manitoba Clare Brockest, Winnipeg.

The RENFREW SCALE CO., Renfrew, Ont.

Provinces had a small orchard set out for home consumption.

From these beginnings have sprung the modern fruit orchards of the Maritime Provinces.—Hazel L. Baxter.

The Culture of Roses.

The rose may well be considered the queen of flowers\ but unfortunately there are many parts of Canada where only a limited number of the hardiest varieties ean be successfully cultivated. For this reason many who would grow roses are debarred from doing so because of a lack of knowledge of which are the most hardy sorts and the treatment that should be given them. To supply this information in ready available form, the Dominion Horticulturist, Mr. W. T. Macoun, has prepared a pamphlet of a dozen pages entitled "Hardy Rose Culture in Canada." It is designated Pamphlet No. 9 of the Experimental Farm and may be had free by applying to the Publications Branch, Department of Agriculture, Ottawa.

This pamphlet divides the roses usually cultivated in Canada into four groups according to the degree of hardiness possessed by each. The hardiest group includes Rosa rugosa and hybrids; Austrian briars, Province or Cabbage roses, Damask roses and Moss roses; next come Hybrid Perpetuals, climbing roses and dwarf Polyantha roses; then Hybrid Tea roses, and last of all Tea roses. It is stated that roses of the first group may be grown in some parts of Canada with little or no protection.

The pamphlet treats in a very practical manner of the culture of roses under the following heads: site and soil, plants and planting, cultivation and watering, manuring, pruning, enemies and how to treat them. Then follow lists of the best varieties of the various classes with a brief winter protection, insects and fungus description of each as regards form, color and fragrance. In the preparation of this treatise the conditions in all parts of Canada were kept in view so that prospective rose growers in every province may receive valuable information from its pages.

Letter From Prof. Caesar.

Guelph, Canada, Nov. 28, 1912.
Mr. Manning K. Ells, Sec. N. S. F. A.
Port Williams, Nova Scotia.

Dear Sir:—I have telegraphed you today in regard to your kind invitation for January 21st, 22nd and 23rd. I am very sorry indeed that a number of things prevent my being able to get away this year. I have always had a desire to meet the Nova Scotia fruit-growers and see the Annapolis Valley as it is very famous as an apple growing district. I should be very glad on some future occasion, if you desire it, to attend some of your meetings and help in any way that I can.

There has been nothing new that I know of in the line of lime-sulphur during this last season except that if it is applied say three or four weeks after the time for the Codling Moth spray on a very hot day it is inclined to produce sun-scald of apples. Again we have found that it cannot be combined with kerosene emulsion or with any substance that contains soap because this tends to break down the sulphur. We have been getting just as good results with the lime-sulphur in the control of Apple Scab even in such years as this as we could with the Bordeaux mixture. However, it is only the people here who give the sprayings at the proper times and make them exceptionally thorough that are getting real clean apples. In most parts of Ontario three thorough sprayings will control Apple Scab. Of these the most important by far is the one just before the blossoms burst and the one right after the blossoms have fallen. I am in favor of wetting epery part of the tree at that time. Most people would consider that it was a waste of spray material but the results that we got from this very thorough and very heavy spraying certainly justify us in urging it upon our fruit-growers. In districts like the St. Lawrence Valley three sprayings will not control Apple Scab in a season like this. Those who failed to put an application on early in August found that no matter how clean their apples were up to that time they became badly scabbed before the end of the season. I do not know your conditions sufficiently well in Nova Scotia Scotia but I should think that a careful inquiry of results in various parts would enable you to discover just what measures would have secured for your clean fruit. I do not believe that there is any reason for losing faith in lime-sulphur as a means of controlling Apple Scab. No mixture could have give more satisfactory results than we obtained in most orchards in Ontario where the work was done properly. Again regretting that I am able to be present at your meeting which I should enjoy very much, I am

Yours sincerely,
L. Caesar.

Canadian Apples Arriving in New Zealand.

This month the character of imports from Canada changes somewhat. Fruit is now coming in. Your Commistioner is pleased to report that apples from British Columbia are arriving in first-class condition. A consignment by the Marama caused great satisfaction. They were examined on the floor of the auction room, and they were certainly a choice lot.

A feature of this shipment of importance is, that a few hundred cases which missed the Zealandia on her last voyage, were placed in cold storage at Vancouver, and remained there until the sailing of the Marama, twenty-eight days afterwards. These apples were in as good a condition as those which came through without delay.

It will be remembered that a number of apple importers of New Zealand were placed in touch with apple exporters of British Columbia some time ago. The result is that the demand exceeds the available supply. There is ample opportunity for other shippers to enter this trade. During a certain period of the year, say three months—October, November and December, if Vancouver can supply the fruit, the buyers here will do most of their business with Canada. There are several large fruit importers whose orders would be regular and substantial. The British Columbia apple has certainly become very popular here.

PEACH EXPERIMENT POSTPONED.

In consequence of the failure to connect with the Zealandia, the trial shipment of peaches did not arrive. It is to be regretted that this experi' ment of shipping peaches to New Zealand must be postponed for another season. The experience of the past two seasons has demonstrated that New Zealand will be a constant and increasing market for British Columbia fruit. When the suggestion was first made to the exporter to send a trial shipment on consignment, there was some hesitation to do so. Now the prices realired are so satisfactory that the shipper is just as eager to send on consignment as he was formerly to sell outright. This is the best evidence which can be advanced as to the quality of the goods.

Mature your crop early

HOW?

The market gardener gets the top of the market for early produce, and the general farmer saves many dollars from early frosts by using a **soluble,** high-grade complete fertilizer, like one of our Stockbridge manures. There is no mystery about it. A crop, like a calf, will grow quicker and healthier on a full ration, **but the ration must be right.** The

Stockbridge Manures

offer this sort of ration for crops.

The Stockbridge Manures were formulated by the late Professor Stockbridge of the Massachusetts Agricultural College and were introduced forty years ago. They have been improved and kept up-to-date. The Stockbridge and all the other Bowker brands are soluble, active, sure. They are made from the best materials by special factory methods. Prompt service and moderate prices go with them.

We want Agents in unoccupied territory. Write today for prices and terms; this may mean a good business for you if your act at once.

Write anyway for our illustrated catalogue and calendar. We want you to know what we can do before you buy your spring fertilizer.

BOWKER FERTILIZER COMPANY

76 Lyman Street, Buffalo, N. Y. 42 Chatham Street, Boston, Mass.

Original and largest manufacturers of special fertilizers.

British Apple Trade.

The Canadian High Commissioner reports that the frequency with which letters and special articles appear in the daily and weekly press on the subject of the English apple, may be taken as evidence of the growing interest which is being taken in the effort to improve the quality of the fruit and to market it in a more attractive manner.

Associations have been found and others are in contemplation, for the purpose of promoting the more general growth of the apple on scientific lines, and with a view to advising growers as to varieties best suited to different districts, and instructing and helping the members in regard to packing and marketing. Each year is showing some improvement, and the most progressive growers are now packing the choicest of their fruit in boxes.

ments were made a few weeks ago to

It was in this way their consign- South America and Cape Colony. Some of the shipments are reported to have arrived in good order but others were not so satisfactory, probably owing to defective cold storage on the ship.

The fruit brokers state that the Nova Scotia apples which are now arriving in London are, speaking generally, good both as to quality and condition, but that prices are not so satisfactory (14s. to 18s. per barrel), the reason suggested being the large quantity of English apples still on store, however, the actual quotations the market. At a large west end are as follows:—

Barrels—

Kings	19s. 6d. to 21s.
Wellingtons	24s. 6d.
Newtons	37sf 6d.
King Tompkins	21s.
Ribstons	28s.

Boxes (British Columbia)—

Newton Pippins	13s. 6d.
Baldwins	12s. 6d.
Winter Banana	16s. 6d.
Cox's Orange	20s. 6d.
Ribston	12s. 6d.
Jonathan	13s. 6d.

It may be noted that there is now no interregnum between the various apple seasons, the Australian, with the aid of the cold stores, having this year extended their season well beyond the time when the English apples came in, Australian Jonathans in excellent condition and of the fine appearance and flavor being on sale as late as October.—Trade and Commerse Report, Dec. 30, 1911.

DAIRYING.

Buying Feed for the Dairy Cow.

On the farm where the winter milk production is given special study and attention, the buyiag of supplemental grain foods is one of the most important factors in determining the profits from the business. It is the largest item of expense. The general adoption of various kinds of commercial by-product feedstuffs as a source of protein has greatly complicated the feeding problem, and increased the danger of injuring the animals by improper methods of feeding. There are many brands of dairy feeds on the market, varying in price from $25 to $40 a ton. Some are good and some are bad. Many dairymen have no real knowledge of feed stuffs, and are likely to buy an inferior brand that is cheap in preference to a high-class product. It is not always ton price, which would be bad enough, but bulk rather than kind or quality of nutrient that guides in the purchase. A much larger quantity of the ready mixed feeds, guaranteed to meet all conditions of feeding, are bought rather than those standard by-products which result from the manufacture of oils, sugar and starch and which are much richer in digestible protein than the original grains, and serve to directly supplement the home-grown feeds. Not only is this much so, but the situation in many dairying communities shows that buyers are paying nearly as much for a ton of feedstuff that carries from 10 to 15 per cent of protein and much more of crude fibre, as they do for feeding materials contaiaing 20 to 40 per cent of protein and a low percentage of crude fiber.

Feedstuffs of low protein and high fiber content are not always unwholesome, nor are they always unprofitable where winter roughage is scarce and high in price; however, they are sure to be made up, in large measure, from bulky by-products which could not be sold under their true names, but when skillfully mixed with more or less of the highly concentrated protein feeds, make mixtures that are palatable and digestible. The point is, however, that in buying such feeds, even when free from dangerous substances, the buyer obtains large quantities of substances which he does not need to enable him to derive the maximum benefits from his home-grown feeds. We make a mistake when we invest in these high-priced feedstuffs when we have already on our farms an excess of a large proportion of the food nutrients which they contain.

The dairyman who wishes to buy a feeding material to supplement his home-grown supply should first of all understand the character of any material to which his attention is called and not depend upon the manufacturer or dealer for this information. A good dairy feed depends as much upon the quality of the grains and by-products as it does upon the amount of food nutrients it contains. All materials in a mixed feed should be of the best quality.

Owing to the high prices of oats and corn, together with the advice from the chemists of experiment stations, farmers have wasted a vast amount of money by selling their good grains and paying a much higher price per ton for manufactured feeds that were less valuable. The only safe plan is to buy no feeds whose chemical composition and origin cannot be correctly ascertained. Honest manufacturers are glad to impart this information and your experiment station will be glad to assist you in determining its accuracy.

While it is very important that buyers of feed stuffs should have an knowledge of the percentages of protein and fat in such materials yet this knowledge does not always show their real character and value. It is possible to make up a feedstuff by the use of hominy, oat-hulls, corn and cottonseed meal that appears to be of high value as measured by the percentages of protein and fat, that is really of inferior value because it contains an excess of highly indigestible fiber. It is for this reason that buyers of dairy foods should not rely entirely upon the guarantees of protein and fat. One of the most significant facts in this connection is that a large number of feedstuffs now on the market are compounded for the purpose of mixing some cheap and bulky ingredient in order that it may be sold at grain prices when otherwise it would be unmarketab,e.

The surest way of detecting inferior ingredients in feedstuffs is by a microscopic study of the various mixtures. In this way an excess of oat-hulls, the presence of corn cobs, weed seeds and other ingredients may be ascertained. Special examinations made of various feedstuffs in New York showed ten brands of wheat by-products adulterated with ground corn cob. Ground cob is not easily detected by an untrained eye and in this way many buyers are paying grain prices for a mixture that contains as high as 500 pounds of ground cob in each ton.

Ground alfalfa is a prominent constituent in many mixed feeds. In some cases it is accompanied by cracked corn, ground oats and other feeding materials. In some brands nothing else but molasses and common salt is present. Ground alfalfa is a valuable feedstuff; however, it cannot be properly classed as a grain food and sold at grain prices. Dealers who buy alfalfa at hay prices and sell it at grain profits are making large profits.

From a study of the chemical composition of some of the popular brands of mixed feeds one is greatly impressed with the grand work a few of the feed manipulators are doing to assist in working out the problem of conserving our natural resources; however, their efforts are not always in harmony with the teaching of the good book. Because farmers waste large quantities of straw, cornstalks and weed seeds it does not necessarily follow that these philosophic gentlemen should be licensed to add such harmful substances as ripe hulls, peanut and coffee shucks, corn cobs and weed seeds to their grain mixtures and sell them for sound grain prices. If the presence of such materials were clearly stated no charge of dishonesty could be made to hold against the manufacturer. In such cases the buyer would be to blame, because if he were willing to pay grain prices for such materials he himself would be responsible. However, the bulk of these feeds are purchased by unsuspecting dairymen who are really least able to stand the financial losses entailed by their use.

Some of the molasses feeds now prominent in our markets would be excellent feedstuffs if the materials were always of the best grade, but the writer has lived within a few miles of several firms who buy elevator sweepings and by-products from breakfast food plants for from $10 to $14 per ton; after manipulating these waste feeds and giving them some high sounding name they are sold to the consumer at prices approaching $25 to $30 per ton. Buckwheat hulls, a worthless feeding material, are now appearing in molasses feeds. The presence of a little sweetening to add palatability does not add any unusual or superlative properties, nor does it make up for the presence of inferior materials.

There are so many feeds of varying value on the market that the prudent buyer must now purchase them only ue,
on the basis of their real feeding value, always keeping in mind that a high-priced feed that is rich in digestible substances is a better investment than a cheaper feed that is made up of woody, indigestible, fibrous hulls and trash.

Cows vary more in the amount of grain they will consume than in the amount of roughage. The idea is to get a cow to eat only what grain she is capable of handling at a profit.—Successfhl Farming.

Mr. Dairyman in Account With Mr. Farmer.

The dairy farmer should be a farmer as well as a dairyman. The growing of feed crops belongs to the farm, and these crops should be grown at a profit, and sold to Mr. Dairyman as a special market.

Mr. Farmer who produces feed-crops is entitled to a reasonable profit as a farmer. The farm must have its profits for producing the raw materials.

Mr. Dairyman is a manufacturer. His business is to take the raw products from Mr. Farmer and convert them into milk, butter and cheese and unless he can show a reasonable profit, after paying a reasonable price for the raw material, and the expense of operating his plant, he is not making a success as a manufacturer.

NOVA SCOTIA FARMERS'
ASSOCIATION
THE SEVENTEENTH ANNUAL CONVENTION will be held at
Sydney, C. B.
JANUARY 21st & 22nd, 1913

An unusually attractive programme is being prepared and vital matters relating to the advancement of Agriculture and Rural Life will be discussed.

Delegates and others going by No. 17 train (I. C. R.) which leaves Truro at 8.30 p.m. Monday, January, 20th, will be in time for the opening session. They should pay one First Class Single Fare to Sydney and ask Agent at Starting point for a Standard Certificate which when signed by me will entitle bearer to return ticket, free.

CHAS. R. B. BRYAN, Secty-Treasurer,
DURHAM, N. S.

HIGH CLASS
JEWELRY

18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....68 cents
18k Rolled Pendants, worth $3.00, our price..... ....99 cents
Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....$1.36
Boys Watch..... .....69 cents nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
Box D.
Sussex, New Brunswick.

OUR VALUES

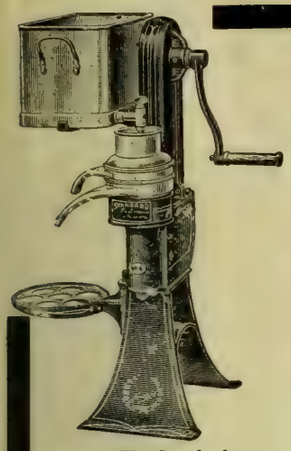
are summed up briefly under the following captions:

Style and Quality

Our goods are made to suit you no matter what your occupation may be or what they are needed for.

We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited
HALIFAX, N. S.



The Standard

Remarkable Skimming Records Reported by Eastern Dairy School

CANADIAN Dairymen look upon The Eastern Dairy School at Kingston with great respect, and know that the School's reports are always accurate and reliable. One of the late reports of the School is of great interest to dairymen as it shows some remarkable skimming records made by The STANDARD Cream Separator.

Test No. 1 (printed on right side of ad) shows that the No. 4 STANDARD skimmed at the rate of over 520 lbs. although listed at only 450 lbs. capacity of milk per hour. Not only skimmed at nearly 100 lbs. over its rated capacity, mind you, but skimmed down to .025 per cent., which represents the loss of but 1-4 lb. of butter fat in 1,000 lbs. of milk.

Other makes of separators, skimming at their listed capacity, average about .10 per cent., which represents the loss of 1 lb. of butter fat in 1,000 lbs. of milk. The STANDARD, skimming at away over its listed capacity, saves 3-4 of a lb. more butter fat in every 1,000 lbs. of milk.

Test No. 1 therefore goes to show that the owner of a STANDARD 450-lb. machine could open it up to skim 550 lbs. per hour and still do equally as good or better work than any other separator running at only its listed capacity or less. In other words, if you would be satisfied with the skimming that ordinary machines do, a 450-STANDARD will skim equally as much as any other 550-lb. machine, and will give as good or better results.

Standard

But if you desire to skim more closely than an ordinary separator will do, just run the STANDARD at its listed capacity as it comes from the factory. You will then secure results such as shown in Tests Nos. 2 and 3 at right, which results cannot be secured by any other separator. Running on the basis of Tests Nos. 2 and 3 you will be making with an ordinary herd of cows an extra profit (as compared with other separators) of almost enough to pay for the STANDARD in two years' time, or an extra profit (as compared with deep-setting or pan-skimming) of sufficient to pay for the STANDARD in one year.

The STANDARD is indeed "The World's Greatest Separator." And the machine you will select if you go into the separator question thoroughly and buy a machine solely on its merits.

Let us send you booklets containing further records of STANDARD tests and proofs of its superiority. Send us your name and address today.

TESTS OF STANDARD
Size No. 4 Listed Capacity, 450 lbs.

Test No. 1 April 23rd

Minutes running	23
Temp. of milk	90 deg. Fahr.
Lbs. of milk seperated	200
Per cent. of butter fat in skimmed milk	.025
Per cent. of butter fat in cream	27.5

Test No. 2 April 24th

Minutes running	25
Temp. of milk	90 deg. Fahr.
Lbs. of milk separated	200
Per cent. of butter fat in skimmed milk	.01
Per cent. of butter fat in cream	39

Test No. 3 April 26th

Minutes running	19
Temp. of milk	90 deg. Fahr.
Lbs. of milk separated	150
Per cent. of butter fat in skimmed milk	.01
Per cent. of butter fat in cream	41

The Renfrew Machinery Co., Limited

Head Office and Factory, RENFREW, Ont. Sales Branches, Winnipeg, Man., SUSSEX, N. B.

The primary function of the farm is to raise the feed to supply the manufacturer with the raw materials to manufacture into finished products.

There are many times when Mr. Farmer, who furnishes the raw material, and Mr. Dairyman, who manufactures the finished products, should get together, compare accounts and do a little reasoning about the next year's business.

Mr. Farmer may have a field that will yield 400 bushels of oats that will be worth $160 to Mr. Dairyman to run through his manufacturing plant and convert into milk, butter and cheese. On the other hand, this same field, is planted to potatoes will yield 1,200 bushels that will sell for $800. Mr. Farmer would be $640 ahead, to say to Mr. Dairyman.

"You take $160 and buy your feed, and I will plant my field of potatoes. I cannot afford to grow oats for you this year."

The whole science of successful hairy farming consists of growing crops at less cost than they will sell for in the market, and then feeding them to cattle that are capable of turning them into finished products that will yield a manufacturer's profit, and thus making two profits; one for Mr. Farmer and one for Mr. Dairyman.

As a class, dairy farmers are raising feed-crops at less cost than their average selling price, and could they all be sold directly after harvest, they would, in most instances, pay a handsome margin over the cost of production. But when they come to manufacture these crops into dairy products on the farm, so that they will have the valuable by-products from their manufacturing business to maintain the fertility of their land, instead of realizing an additional profit from their manufacturing business they find the balance on the wrong side of the ledger, if they keep one.

Too many support their cows from the farm, instead of making the cows support them. Every dairy farmer should keep a record of his farming, as well as of his dairying, to determine whether he is making money from his crop growing or dairying. It would be of great assistance in search ing out leaks and putting the business on a sound money basis.—W. Milton Kelly.

Buttermakers Difficulties.

Sleepy cream is a trouble which the buttermaker has to deal with more in winter than at other times of the year. Cream is termed "sleepy" when it fails to yield up its fat as butter, or only does so with some difficulty. If the various causes of cream going sleepy are known, the trouble can be eliminated to a great extent. In the first place, it is desirable to properly ripen the cream, and regulate it to the correct consistence and temperature before churning. Sweet or sweet and ripened cream mixed is more liable to go sleepy than is cream which has soured uniformly, to the extent that it contains from 5 to 6 per cent. of acid.

If the churning temperature is too low, which is sometimes the case in winter, the cream becomes viscid. This causes it to adhere to the churn, and then, of course, it does not receive the necessary concussion to turn cream to butter. When the cream is too warm at the time of churning, it may swell and froth to such an extent that proper churning is out of the question. Another cause of cream going sleepy is having too much cream in the churn at a time. If the churn is much more than a third fall, it will probably make the cream go sleepy, and it is better to churn the cream in two lots than to over-fill the churn.

When the cream is too thick, it sticks to the sides of the churn, and, after churning for about ten minutes, the cream will be found to be sleepy, on account of not receiving the necessary concussion to convert it into butter.

Cream contains several gases, which are liberated when the process of churning is commenced. If these gases are retained in the churn, the cream froths and becomes sleepy. The cause of sleepy cream can be avoided by keeping the churn well ventilated, especially during the commencement of churning.

When sleepy cream is not due to some fault in the treatment, or churning of the cream, the trouble will appear from time to time throughout the year. Sometimes sleepy cream is caused by an abnormal condition of the milk, which often takes place in early spring and autumn, when the cow's food is subjected to a sudden change. When the cows are first turned out on fresh grass in the spring, and in winter, when the stall foods are changed too suddealy, it causes the cream to go sleepy.

When cows are stale in milk the fat globules are very small in size, and this makes the cream very difficult to churn. In this case one or two newly-calved cows in the herd will remedy matters to a great extent.

If the trouble of sleepy cream exists through no fault of the butter-maker it may be overcome by scalding the cream to 160 degs. F., and then ripening the cream with some pure culture starter keeping the cream at a temperature of 62 to 65 degs. F.—C. W. Walker-Tisdale.

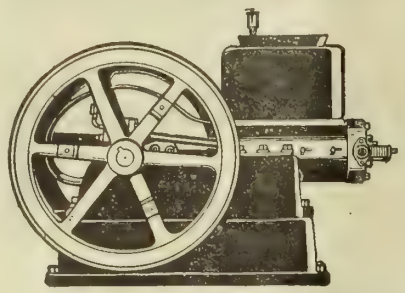
Turnip Flavor in Butter.

A good way to prevent the taint of swedes or turnips appearing in butter is to scald the cream a couple of days before churning. This is doae by putting the cream vessel into a furnace of boiling water, and allowing it to remain there until the cream reaches a temperature of 170 deg. F. The cream must be frequently stirred during tae process, or the sides and top will be many degrees warmer than the interior. When the cream is removed from the furnace, it should be passed through a strainer, and then be put in a place where dust and dirt cannot get in, for scalded cream does not strain easily after it gets cool. But it is a mistake to give everything to the cows which comes out af a root field, as many do. Roots which have been forced too fast by abundant dressings of artificial manure are often decaying when they are brought into the cow shed, and food of this kind is not suitable for milch cows. Decayed leaves, too, are sure to taint the butter worse than wholesome roots alone. But if sound swedes alone are given in moderate quantities, the milk supply will be maintained, and if the cream be scalded as above directed, there need be no fear of taint. —Staffs, in Farm and Home, England.

If you pay as much attention to your advertising as to your bank balance, you will soon be doing better advertising and the bank balance will take care of itself.—Standard Advertising.

A good soft bed is as much appreciated by the cow as by the cow's owner.

GILSON ENGINE "GOES LIKE SIXTY"



Anybody can operate the simple "GOES LIKE SIXTY" Engine. Ready for work the moment you get it. Built strong and solid to last a lifetime. Will give long, unfailing satisfaction. Gas, gasoline or kerosene can be used for fuel.

Gilson quality gives full value for your money—dependable service, great durability, highest economy and perfect satisfaction; freedom from trouble, delays and expense.

Every engine ABSOLUTELY GUARANTEED. You can try this engine on your own farm before settling for it. You take no chances.

The "GOES LIKE SIXTY" Line has an engine for every purpose. All styles and sizes from 1 to 40 h.p.

Write for catalogue

GILSON MANUFACTURING CO., LIMITED
57 York Street, GUELPH, ONT.

LIVE STOCK.

Summary of Winter Fair Dairy Test.

The number of cows entered in the Ontario Provincial Winter Fair Dairy Test at Guelph in December was 59 as comapred with 90 at the Maritime Winter Fair, at Amherst.

The sweepstakes cow at Amherst was the purebred Ayrshire cow, Milkmaid 7th, owned by A. McRae & Sons, of Price Edward Island, having produced 188 lbs. milk containing 7.73 lbs. butter fat in three days.

The sweepstakes cow at Guelph was the grade Holstein cow, Cherry, owned by Mr. Geo. E. Ryan, Courtland, Ont., who sold her and his first prize three-year-old grade cow for $320.00. Cherry produced 206.6 lbs. of milk containing 7.85 lbs. of butter fat in three days. Cherry's mother was a good average milker of nondescript breeding, but her sire was a purebred Holstein.

At Amherst: The highest scoring purebred Holstein was Samuel Dickie's Artis Rosia, shown in the aged cow class, with a record of 223.1 lbs. milk and 6.71 lbs. butter fat in three days.

The highest scoring Guernsey was Hugh A. Dickson's Beauty's Bell in the aged cow class with a record of 144.9 lns. milk and 7.69 lbs. butter fat in three days.

The highest scoring Jersey was H. S. Pipes & Sons' three-year-old Bonnie Blue with a record of 138.4 lbs. milk and 6.40 lbs. butter fat.

The highest scoring Shorthorn was Geo. M. Holmes' Miss Amherst, in the aged cow class, with a record of 127.8 lbs. milk and 4.09 lbs. butter fat.

The highest scoring grade cow was Fowler Bros.' Mary, a Holstein Grade shown in the aged cow class. Her record was 206.2 lbs. milk and 7.52 lbs. butter fat, just .4 lbs. milk and .31 lbs. butter fat less than the record of the Ontario champion.

The highest scoring three-year-old cow was F. S. Black's Ayrshire Neta. Record 160.1 lbs. milk and 6.65 lbs. butter fat.

The highest scoring two-year-old was H. S. Pipes & Sons' Jersey Blood's Choice. Record 121.0 lbs. of milk, 6.31 lbs. of butter fat.

The highest scoring one-year-old was Logan Bros.' Holstein, Island Lassie. Record 112.6 lbs. milk and 4.28 lbs. butter fat.

Dickie's aged Holstein cow produced the most milk 263.1 lbs. and the most solids not fat, 18.41 lbs.

McRae's aged Ayrshire produced the most butter fat 7.73 lbs.

The highest butter fat test for one individual milking was 7.6 per cent. made by Roper Bros.' Guernsey, Beauty of Eastview.

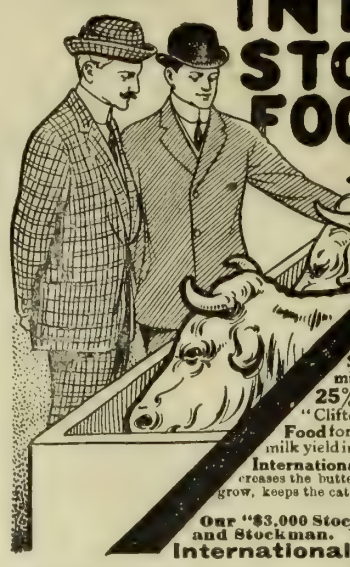
Pig Reply.

Castrating Pigs.—Could you give me a few hints on the right way of castrating young pigs? Are there books on the subject?— Constant Reader.

The best plan is to have a practical demonstration, either by carefully watching the methods employed by an expert in operating or arranging for a special lesson. This will be of more use to you than a page of written description, for, although the castration of the pig is exceedingly simple, and presents no difficulty to a person of ordinary aptitude, it is not possible to describe it minutely without the use of technical terms. From four to six weeks, while the pigs are still with the sow, is the best age for castration, and the operation should preferably be performed in the morning, before the pigs have been fed. The sow should be turned out of the pen, shut up some distance away if vicious or inclined to be nasty, since sows are very much upset when their pigs begin to squeal, which they do even more vigorously while being caught and held than during the operation, which an expert will get through in less than a minute. An assistant is needed to catch and help hold the pigs. There are several methods of holding pigs for castration, the most common being for the operator to thrust the pig handed to him by the assistant between his legs head downwards and abdomen forward, grasping it securely with his knees at the shoulders. The assistant holds the hind legs, with the hocks bent, and keeping them apart and backwards, which exposes the region to be operated on, the operator then pushes the testes up towards the anus, so that the skin is tightly stretched over them, and makes two bold incisions, when they pop out, and then, having freed them from their membranes by a process of twisting and drawing, each cord and artery is broken. The pig is then released by putting it outside the pen with any gilts that may have been captured, so as not to be hunted about in the business of securing other young boars. When all have been finished, the sow should be allowed to rejoin her offspring, and given her breakfast. The knife used should be surgically clean and sharp. There are no books devoted specially to the castration of pigs; the subject is not big enough for a book.

Winter Feeding for Stock.

It is said that there is four times as much animal sickness in winter and early spring as there is in summer and autumn. There must be a cause for this. What is it? Cold weather has little to do with it, but not much. The change from summer to winter feeding does not necessarily cause illness. The real cause is the change to unnatural rations. To maintain health the system requires albuminoids or flesh-formers, and carbohydreates or heat-formers in cerbohydrates, and the food will not all be digested unless taken into the stomach in the required proportions. An excess of either passes off as waste mattee. If too large a quantity of albuminoids is given, it is apt to create diarrhoea, and, if too much carbohydrates, constipation ensues, for the reason that the carbohydrates produce too much heat, make the animal feverish, and this has a tendency to dry up the juices of the system, and the waste matter becomes dry and difficult of evacuation. Let the stockowner ask what effect a constant diarrhoea or continuous constipation of the bowels would be likely to have upon himself. Human beings are always frightened at either, and set about remedying the difficulty at once lest a worse and perhaps fatal trouble ensue. Either one of these conditions weakens the system, and prepares the way for worse difficulties. Stock are subject to the same physical laws. When spring returns and stock are turned out to pasture, four-fifths of their diseases disappear like magic, and this is because grass of itself is a suitable ration. Animals crave it because they know by in-



INTERNATIONAL STOCK FOOD

THE GREATEST MILK PRODUCER IN THE WORLD

We are going to prove this to you by quoting from letters received from men who have tested this wonderful cattle tonic and know what it will do.

Gave 33⅓% More Milk. T. O. Stewart, the famous breeder of Jerseys, says: "I fed **International Stock Food** to my cows all winter, and the milk yield was at least **two-thirds greater**, and the cows are looking better than ever before."

Extra Gallon Every Day for 10c. a Month. L. J. Koch writes: "A three-year old cow was giving a gallon of milk morning and evening when put on dry feed and one tablespoonful of **International Stock Food** per day. She is now giving two gallons of milk each milking and the milk is 50% richer."

25% Increase in 10 Days. Woods & Murphy, owners of the "Clifton Herd" of Holsteins, state: "We used **International Stock Food** for a cow that was run down and a poor feeder. After 10 days the milk yield increased 25%. It also gave grand results with a 2 year old heifer."

International Stock Food increases milk from 15 per cent. to 25 per cent., increases the butter fat, removes taint from milk, butter and cheese, makes calves grow, keeps the cattle well and vigorous, and saves one-fourth the feed. 77

For Sale by Dealers Everywhere.

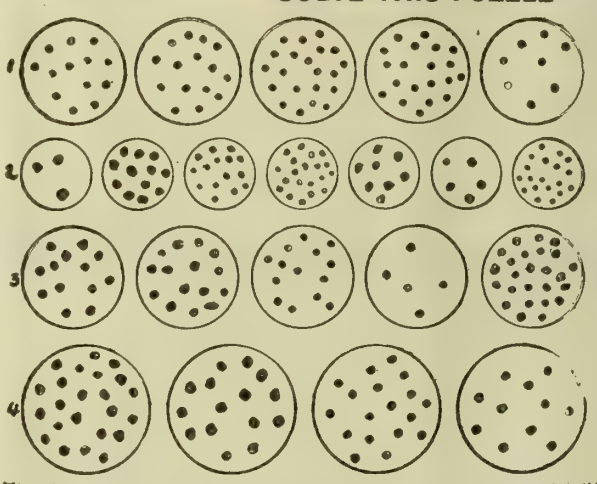
Our "$3,000 Stock Book" ought to be in the hands of every farmer and Stockman. We have a copy for you. Sent free on request.

International Stock Food Co., Limited, Toronto

FREE $300.00 IN PRIZES

IN THE GREAT DOT PUZZLE CONTEST
A Genuine Contest for WISE HEADS!

SOLVE THIS PUZZLE



1 Something we all have

2 Something we all wear

3 Something we all like to have

4 Something we all do

The above 4 lines of circles containing dots represent the name of 4 different things described after each line. What are they?

HOW TO SOLVE THIS GREAT PUZZLE

Each circle of dots represents 1 letter of the word and the number of dots in each circle determine the letter in its relation to the alphabet. For instance: A is represented by 1 dot because it is the first letter in the alphabet, B is represented by 2 dots because it is the 2nd letter in the alphabet, C is represented by 3 dots because it is the 3rd letter in the alphabet. Now, with these simple instructions and a little patience you can soon have the puzzle solved. To give you a little assistance the 1st letter of the first word is M, because the circle contains 13 dots and M is the 13th letter of the alphabet.

After you have found the solution write your answer neatly on a piece of paper with your name and address and anything else you wish to say about the contest and send it in to us.

Those who send in the Correct or the Nearest Correct Answers; whose answers are the neatest and who live up to the condition of the contest (read rules of contest below), will win the following grand prizes:—

1st	Prize,	$125 00	in cash.	
2nd	"	50.00	"	
3rd	"	25.00	"	
4th	"	15.00	"	
5th	"	Gent's Watch.	Value	$10.00.
6th	"	Ladies' Ring.	Value	$10.00.
7th	"	Fine Clock.	Value	$10.00.
8th	"	44-Piece Dinner Set.	Value	$10.00.

9th Prize, Mission Upholstered Rocker Value $10.00.
10th Prize, Violin. Value $10.00.
11th Prize, Gillette Safety Razor. Value $5.00.
12th Prize, Waterman Fountain Pen Value $5.00.
13th Prize, Glass Water Set. Value $5.00.
14th Prize, Large French Doll. Value $5 00.
15th Prize, Silverware Set. Value $5.00.

READ THE SIMPLE RULES OF THIS CONTEST

1. Contestants may send in as many answers as they wish, but only one answer can win a prize. (2) Only 1 person in each family will be allowed to compete. (3) No employees of ours or any relation of any employee will be allowed to compete. (4) Children under 12 years of age will not be permitted to compete. (5) Write only on one side of the paper. (6) All letters must be fully prepaid in postage. We will not accept answers upon which we will have to pay postage. (7) The decision of the judges must be accepted as final. The judging will be in the hands of 3 gentlemen of integrity who are absolutely disinterested. (8) This contest is absolutely free. You are not asked to spend one cent of your money or buy anything to enter. As soon as we receive your answer we will immediately tell you if you are right, and how the prizes will be distributed. We guarantee the awarding of the prizes described above according to decision of the judges.

Address all answers to **Contest Department. 8220**

NEW LIFE REMEDY COMPANY, TORONTO, ONT.

stinct it is what they need. It is the proper mixture of albuminoids and carbohydrates that the animals crave. Some people wonder that cattle will sometimes prefer dry hay when they have access to all the grass they want. This is because the grass happens to contain a little too much albuminoid matter, and they need the hay to balance the ration.

Pigs and the Bath Tub.

Recently I read an article in one of the farm papers about "Pigs and the Swill Pail," and I want to tell the readers of this pader, about a concrete bathing place that I made for my hogs. It has proved to be one of the best things on the farm.

It is seven feet by twelve feet inside and about twelve inches deep. I used twelve sacks of cement and coarse sand and gravel in the proportion of one to four.

The walls are about four inches above the ground and forms can be made with most any old lumber.

After the bath tub was finished I built a shade over it.

Now I will tell you some of the many advantages to be derived from one of these bathing places during the hot weather. At that time I keep water in it all the time and once a week I put dip in the water to kill the lice. I found this worked successfully and was much easier than dipping the hogs, as the herd, old and young, would go into the water and wallow. They kept the place busy all the time.

I never had hogs to thrive and do better. They got rid of the lice and had a glossy coat of hair.

This winter I used the bath tub to put ashes in, from the furnace and range, always throwing in a few handfuls of salt. Then I bought a ton of coal screenings from our coal dealer for seven cents a hundred and put these in also. The hogs have stayed right by it and have cleaned it all up.

The cost of making (counting material and labor) would not exceed ten dollars and the poorest runt on the place will pay for it. I would not do without mine for ten times its cost.—G. S. Babcock, in Successful Farming .

Why Use Artificial Fertilizers ?

Plants obtain their food from the air and soil, chiefly from the latter. Carbon is obtained from carbon dioxide in the atmosphere. Leguminous plants also obtain Nitrogen from the air but all other classes obtain it from the soil. Water and mineral foods are obtained through the roots from the soil.

The mineral elements, with the exception of Nitrogen, Phosphoric Acid, Potash and sometimes Lime, are in sufficient quantities, in available form, for all crop requirements. Those mentioned however enter more largely into the composition of the plants than the other foods and hence the soil becomes depleted of the foods named in the ordinary process of cropping.

Manure returned to the soil does not, by any means, contain the plant food taken from the soil and, moreover, it loses much of its value through leaking and evaporation. Therefore, unless some other means are found of returning the plant food to the soil the farmer will find that his land is becoming worn out and good crops become rare. This lack of plant food can be remedied by the application of artificial fertilizers. A farmer's soil may be very deficient in Potash—he cannot hope to grow a maxium crop if the land does not contain a sufficient quantity of this essential plant food. Thus, when buying his fertilizer material he should provide for a mixture having a high percentage of Potash. Remember the "substance in minimum rules the crop." You cannot hope to grow a first-class crop if your soil is deficeint of any of these indispensible plant foods.

The rapidly growing consumption of Artificial Fertilizers in Canada proves that farmers are realizing the benefits derived from their use and there is no doubt that each season will see a large increase in the number of consumers.

Expert advice regarding the economic purchase and use of artificial fertilizers will be readily given and copies of our bulletins on the important subject of fertilizing will be sent free on application to German Potash Syndicate, 1105, I. O. F. Temple Bldg., Toronto, Ont.

When you want a reliable medicine for a cough or cold take Chamberlain's Cough Remedy. It can always be depended upon and is pleasant and safe to take. For sale by all dealers.

Pink Sheep.

Almost any one can succeed with sheed in winter time, or in early suring, or in the fall months. Then it is only a question of wisely giving feed in sufficient amounts and of the right sort—things easily enough learned—and the flock will keep in the pink of condition. And, by the way, that phrase, "pink of condition," applies more directly to the sheep than to any other animal, for a healthy sheep is indeed "in the pink," as any one will discover who will part the wool and look at the skin. There is no surer test of condition; the young shephard should learn it, be governed by it in his purchases, and afterwards should learn to determine the state of health or disease if his flock by the appearance of the skin. He need not always catch the sheep in order to learn the color of the skin ; he can tell by the redness of the veins of the eyes, by the color of the nostrils, especially if the sheep is a white-faced one, and a little experience will show him unerringly the state of health of the animal as soon as his eye rests upon it. Unhappy me! I can detect sick sheep as far as I can see them, and Ialways see them.—Excoange.

WHEREVER the old wheelbarrow cleaning system is used you find a mussy stable.

It's too much to expect that a man will brush and sweep the passage ways every time he cleans the stable. He hasn't the time for one thing—and it's discouraging work for another.

But nowadays we think more about clean stables.

We know that dirty stables breed disease.

It's up to you, Mr. Farmer, to make your stable easy to clean — then it will always be clean.

You can learn something about how to do this in Dillon's Book on Clean Stables, which is sent free to Farmers. Dillon's make a Litter Carrier that lightens work about the stable. It's an equipment any man can put up, and is adaptable to stables large or small. The free book explains it fully.

DILLON'S Litter Carrier

Figure it out for yourself. Get our free book.

Dillon's sell direct to the Farmer. There are no Agents and no Agents' profits. The price is the same to all, and lower than you would expect for such substantial and well-built equipment. DILLON'S BOOK ON CLEAN STABLES gives you an exact idea of what you can accomplish for a small outlay. Write for a free copy. 1

R. DILLON & SON
OSHAWA, ONT.

In-Foal Mares INSURANCE

OF ALL the losses owners are liable to, none can be **less prevented or modified** in any manner whatsoever **than loss by foaling.** Notwithstanding the best care and attention, although a mare **may have foaled** many times successfully, she is always a cause of worry and anxiety to the owner through the fear of **losing by death** the often very **high cash value of the Beast,** not to mention service fee, care and expenses incurred for no avail. **Why risk such loss** when a payment of a few dollars in premiums would **cover you** should it happen. Reduce the amount **of the RISK** by insuring, only risking thereby the **loss of the Premium** if the mare foals allright. We issue 30 days, 6 months and 12 months policies with or without cover on foal.

Write for address of nearest agent. All kinds of live stock insurance transacted.

THE GENERAL ANIMALS INSURANCE CO. OF CANADA, Head Office: 71a St. James St., Montreal, Que.

THE HORSE.

Only a Horse.

Only a horse, and an old horse too,
working from day to day,
Only a worn-out nag, 'tis true,
plodding his weary way.

A horse that works and works in
vain for his master's word of
praise,
A slave that bows to the tightened
rein; a beast, that the master
flays.

Only a horse; but a horse with a
heart—a thin worn-out old bay;
But with spirit strong, he plods
along with an uncomplaining
neigh.

A beast of burden by man abused,
tortured with lash and with goad;
But a lesson in faithfulness, courage
and toil—this worn-out nag of the
road.

Only a horse—not a brute—but a
horse, a patient, tired old bay.
The brute is the one that applies the
lash, not the one who receives
the flay.

He labors hard for his master's
greed, he endures the toil and the
pain;
But the look of dispair from his eyes
is a prayer—an appeal to be hu-
mane.

Bog Spavin.

Recently W. West wrote concerning a colt said to have "strained his hock by galloping round the field, which has turned out to be bog spavin." "W. W." wanted "all particulars as to treatment," but omitted to mention whether the animal was lame or not. This is a matter of no small importance where treatment is concerned, and has some bearing on the question "Will it leave him in time?,'

CAUSE OF BOG SPAVIN.

So far as external appearance is concerned, bog spavin may be defined as a puffy, fluctuating swelling on the antero-internal aspect of the upper part of the hock joint, where, in a natural state there is a hollow or depression; but there are bog spavins that are associated with inflammation of the true hock joint where nearly all movement takes place, and which occurs from over-work, sprains, rheumatism, etc., and are accompanied by heat, pain, and lameness; and bog spavins arising from an excessive secretion of synovia, from over-exer. tion, or a dropsical effusion into the cavity of the joint, producing a swelling of exactly the same character, but without heat, tenderness, or lameness.

Professor Dick described such bog spavins as "Here stores of synovia for lubricating the joint, thus proving the best preventives of disease by preventing friction," and commenting on this, and pointing out that bog spavin is mostly found in very upright or in very crooked nocks, and in weak hocks of every description, because in all these forms concussion is most severely felt and likely to be injurious, the late professor Williams said. "In all probability the hypersecretion of synovia is due to some irritation not amounting to actual disease, and may be viewed as a provision of Rature to fulfil the purpose ascribed to it by Professor Dick, since it often happens that such hocks remain sound as long as those of better conformation."

A FREQUENT CAUSE OF LAMENESS.

There is no doubt about the correctness of this view of bog spavin, but all the same it is one of the most troublesome canditions of hock, not so much because it is a frequent cause of lameness or often incapacitates the animal for work, but because it worries the sensitive owner because it is a constant eyesore, because it undoubtedly depreciates the commercial value of the animal, and because the treatment for the reduction of the swelling is not attended by any great measure of success. It must, of course, be clearly understood that these remarks apply only to the soft swelling that is more in the natute of a blemish than an unsoundness or cause of lameness, and not to the bog spavin associated with inflammation of the hock joint due to sprain or other injury and accompanied by lameness. Fortunately, it is the least important form as regards the occurrence of incapacitating lameness that is the most commonly met with and but for the eyesore, and the possibility—though this is remote—of its assuming an aggravated form, it would attract very little attention. Bog spavins that are merely dropsical conditions of the articulation are not generally regarded as constituting actual unsoundness, but they certainly depreciate the selling if not the working value of the animal. Bog spavin is a technical unsoundness, since it is a departure from the absurd legal definition that "sound means perfect," and thus no veterinary surgeon would pass as sound a horse with bog spavin without directing the attention of his client to it, and a purchaser, if he detected the enlargement, would be foolish to give as much money for a horse with a bog spavin as if it had clean and well-shaped hocks, although it might last him just as long and do as much work. The period at which bog spavin generally makes its appearance is when the animal is first taken into work or during the breaking-in process. It is sometimes developed while the colt is running in the field, and is then due to galloping or jumping in play or mischief, which are, of course, causes of concussion and strain, and especially likely to occur where there is any defect in conformation. There is no evidence of hereditary transmission, but as bog spavin is frequently associated with mis-shapen or badly formed hocks, this should be borne in mind when selecting aaimals for breeding purposes.

TREATMENT FOR BOG SPAVIN.

With reference to the treatment of bog spavin, we cannot attempt to give " all particulars," for a great deal, of course, depends on the cause, and the existence or otherwise af lameness. To the owner of a horse with a bog spavin of the dropsical variety that does not cause lameness, and especially if he intends to keep it for work, the advice we always give is to let it alone, since the results obtained by treatment are very trouble expended and the expense inrarely in proportion to the time and curred. In cases due to sprain, and where there is heat, tenderness to touch, and lameness, the indications are rest, a high-heeled shoe to throw the parts more completely into a state of rest, and cooling lotions or cold water irrigation, until the lameness—which resembles that of bone spavin, but with a greater tendency to a jerking up of the limb—has somewhat abated, and then the application of a blister and a further rest. Generally the owner of a horse with a bog spavin, even when not lame, wants to blister it with a view of reducing the swelling, but vesication rarely—never in our experience—does anything towards causing absorption of the fluid that is of permanent value. Pressure is sometimes tried in those cases wnere neat and pain are absent, and is often more effective than blistering, but owing to the conformation of the hock joint ordinary bandages are disturbed at every movement of the limb, and pressure can only be effectively applied by means of a specially fitted spring truss. As already hinted, the results are rarely commensurate with the outlay.—Pately Bridge.

Horsemen Attention!

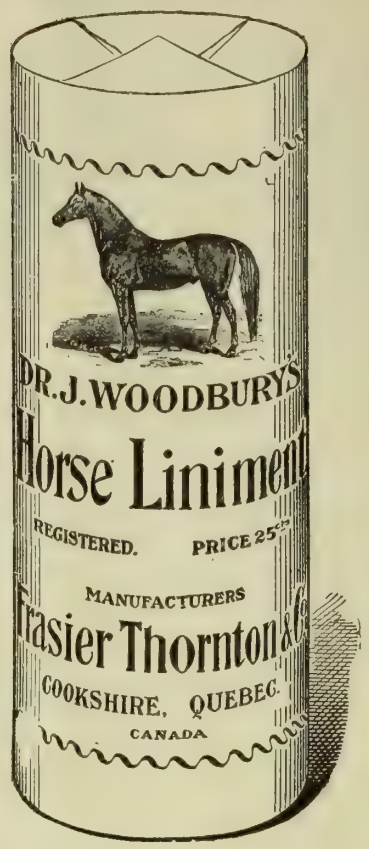
Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Their use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

BEFORE USING

Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

For Sale all Dealers

Price 25 cents



Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

Demand

DR. J. Woodbury's

Horse Liniment

AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

ABSORBINE

Will reduce inflamed, strained, swollen Tendons, Ligaments, Muscles or Bruises, Cure the Lameness and stop pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone. Horse can be used. $2 a bottle delivered. Describe your case for special instructions and Book 2 E free.

ABSORBINE, JR., the liniment for mankind. Reduces strained, torn ligaments, enlarged glands, veins or muscles—heals ulcers—allays pain. Price $1.00 a bottle at dealers or delivered.

W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca.

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POULTRY.

Where Market Poultry Pays Best.

STEPHEN B. TWINING, the genial proprietor of Afton Farm, Yardley, Pa., believes in the middleman. Notwithstanding that for years the poultry press in general and the poultry shippers in particular have been decrying the commission man, Mr. Twining has found him an excellefit adjunct to his farm operations. In truth, instead of "bleeding" the Afton Farm, he is saving labor and worriment to the management, besides adding considerable to the bank account. There are good and bad middlemen; there is no doubt about it. Before shipments are made to a house, the reliability should be investigated.

Thirty-odd years ago E. W. Twining, the father of the present owner, started in a small way what is now known as the "Afton Farm." From the beginning market poultry was the object, broiler-raising being the branch chiefly catered to. The original plant occupied but an acre of ground.

Mr. Twining not only made a deep study of the work, but he made tests and trials, until he got the plant up to successful operation. It was slow work, but as it progressed it was built upon a solid foundation. It is a noteworthy fact that all the large and successful poultry farms of today are those that had a small beginning, and by dint of energy and perseverance worked their way to the front. Every big, healthy enterprise must come by growth. Rome was not built in an instant.

The wants of the markets of Boston, New York, Atlantic City, Philadelphia and Washington were duly investigated and their whims strictly catered to. In this way Afton Farm became a paying proposition. In a great measure the success of Afton farm was due to the superior line of breeding stock that had been developed there. The birds were vigorous, had large, well-shaped bodies, set on short, stout legs, which were far apart; birds that were heavy layers and producers of the blocky, broad-breasted youngsters that dress so nicely for market and command fancy prices from the leading butchers.

Visitors usually wanted to procure some of this stock, and Mr. Twining got to sparing a little; later on he found it necessary to provide for this trade, and finding this branch of the business worth his while, he started in 1907 to advertise the stock. Up to the present time a large business has been established in the sale of breeders and eggs for hatching. But, with it all, Mr. Twinging is seriously considering going back to market goods exclusively. He says there is less clerical work, less worriment, and, in all, more profit.

The experience of Afton Farm has been that there is always a demand for good poultry at a price which makes production profitable. The supply of first-grade stock is not increasing in proportion to the demand. The market always has had, and probably always will have, a surfeit of cull stock, for the reason that people will persist in breeding from inferior birds. There is no good logic in it—a poor hen cannot be maintained at a less figure than can a good one. Pure-bred stock will not only do better laying as a flock, but will also produce offspring that will more quickly mature and develop the kind of carcasses that command the highest prices in market.

In 1899, having finished his school days, Stephen B. Twining returned home and entered into co-partnership with his father, under the firm name of S. B. & E. W. Twining. January 4, 1906, after a brief illness, the elder Mr. Twining died, and the sole proprietorship and management fell to the son, who is still a young man. Poultry is his life work. He believes that a square deal today means a big advertisement for tomorrow. He has become one of the best informed men in the country on market poultry.

The breeding is done principally for size, growth and heavy egg yield. Over 50,000 birds are annually raised, and only 2,000 pullets are reserved each year. They are, naturally, culled, selected from the flocks, and are the choicest of the lot. The rest—seconds, thirds, etc.—go to care for the large trade of dressed poultry that Afton Farm has acquired. The first year the breeders are used for the market egg trade, and then they are overhauled and mated for the "eggs for hatching" business during this yearling year.

When any business relying upon public support for success can point with pride to an honorable career for many years, it is proof of its sterling merit; for only a business possessing merit can survive in this progressive age. Afton Farm started with poultry in the pioneer days and is here today greater and stronger than ever.

There is nothing mysterious in success with poultry. The methods of successful poultry men are very simple. There are no wonderful secrets—it is merely common sense, which includes common honesty, backed by grit and well-directed energy.

Mr. Twining says: "Success with poultry? You get it the same way that you do with everything else—attending strictly to whatever happens to be in hand and not trust too much to hired help."

The rules that Afton Farm has followed from the start, and which made its career so successful, are:

1. Start with and keep nothing but the best of breeders.
2. Have comfortable houses; this does not necessarily mean expensive.
3. Feed plain, wholesome food.
4. Never use poor feed because it costs less money. It is the most expensive in the long run.
5. Fancy prepared foods, while oftimes good, are expensive and unnecessary.
6. Keep everything clean.
7. Never let it be too much trouble to do the right thing at the right time.
8. Above all things, always exercise just plain, ordinary, common sense.

The duck industry on Afton Farm has come to be one of the most important. Each carcass is banded, giving a trade mark that at once guarantees reliability of stock.

Raising green ducks for market is occupying considerable time on Afton Farm. Mr. Twining says the low prices of 1908, while expensive to the producers of that year have been a boon to the duck business. Heretofore consumers only thought of ducks as birds that were hatched in the spring by the farmers' hens, allowed to wallow in the mud all summer, feed on filth, etc., and then fattened in the fall when old, tough, and of coarse-grained flesh.

Mr. Twining, in his book, "Poultry Truths," says that in the early days it was hard for the producer of green ducklings to get the trade on his goods he deserved. The low price of ducklings in 1908, and the high price of other meats, caused summer resort hotelmen to sit up and take notice. For economy's sake they tried ducklings. Their guests liked them. They were served often. It was a common thing to hear on a hotel porch that summer: "I never thought I would care for duck, but the ducklings they are serving here are delicious."

From these summer hotels the guests went to their homes scattered over the country. They remembered that ducklings were truly good eating. Thus one year's low prices have advertised ducklings throughout the land. A demand has been established that assures good prices for years to come.

This remarkable development of the duck industry in this country was made possible largely through the introduction of the Imperial Pekin. They will lay earlier in the season. They will lay the most eggs per year. They are confined by a two-foot-high fence. They have white feathers. They are quick growers. They have long, low breasts that flesh up well. In fact, Mr. Twining has found in the Pekin the two essentials combined—the cheapest duck to raise and the best table duck.

On Afton Farm not less than 25,000 ducks are raised annually, and as one cent per pound additional cost in production or loss in sale means for the season one thousand dollars lost, Mr. Twining is continually watching for opportunity to reduce the cost of production, or how to get a better price.

Ducks do not require the expensive buildings as do chickens. They are gross eaters, but the cost need not be but a little more than half as much to produce a pound of duck flesh as a pound of chicken.

A man can go in the duck business on a more extensive scale than he can in any other branch of the poultry business, for the reason that he can depend more on hired labor, as there is not the fine labor required for ducks that there is for chickens, guineas or turkeys.

A sandy or a well drained soil is important. Too great care can not be used in the selection of the breeders. The stock should have long, low-hanging keel, with large heads and thick necks. The legs should be heavy and of a rich, reddish orange shade.

Mr. Twining says weakness in the vitality will show up as quickly in a duck's eyes as anywhere. Watch out for weak, watery eyes.

On Afton Farm the ducks are fed for eggs (bulk measurement) one part bran, one part middlings, one part low-grade flour, one part whole corn, two parts whole wheat, two parts corn meal, four parts cut clover hay, 12 per cent. beef scraps, sand, grit and oyster shell, all they will eat. Mix with water till crumbly. Should there be a looseness of the bowels, the amount of middlings is increased, and if too tight, the amount is decreased. The quantity of corn, too, is varied according to the weather. The amount of corn meal is so regulated that it will keep the breeders neither too thin nor too fat. Meat scrap affects the fertility—where too much is used there will be a lot of rotten eggs. If the fertility is low, the amount of beef scrap should be increased.

As a rule, the duck lays between four and eight o'clock in the morning. As ducks do not lay in nests, but drop the eggs anywhere on the floor, they should be gathered promptly at eight or some of them may be broken.

On Afton Farm the ducks are set daily instead of every four days, as used to be the custom. This gives better hatches. Duck eggs will not remain in good condition as long as will hen eggs.

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The Lawrence-Williams Co., Toronto, Ont.

Afton Farm believes in bathing water for the breeding ducks. This bathing affords exercise, keeping the stock in better condition, and there is better fertility. The ducklings raised for market are not allowed water excepting for drink. A muddy or dirty duck will not thrive.

When shipped to market all the ducks are dry-picked. Dry-picked ducks bring a cent per pound more than scalded ducks, or five cents per duck. The cost of picking dry is two cents per head over scalding. Thus there is a gain of three cents per head, or $600 a year.

"We, at Afton Farm, are thoroughly convinced that it pays to do things right," says Mr. Twining. "Haste makes waste, we are told. Do your work as rapidly as possible, but take time enough to do it well and at the right time."

At this season of the year green food will be in demand. It may be thought that so long as there is any green vegetation left fowls will not need planted crops. But such is not the case. The native vegetation is apt to be tough and woody. Fowls will not relish grass or native vegetation this late in the season when the weather is dry and frost is near. They should have access to rye, oats, wheat, barley, peanuts, rape, cowpeas, etc. This is a critical time with fowls that are moulting. They should have green food as well as plenty of grain and mash composed of concentrates rich in protein. By taking the proper precautions you may greatly assist the fowls in getting flesh for winter so that they will produce a normal supply of eggs.

In the fall, when roads are deep in dust, take a lot of twenty-five pound paper flour-bags, and strings, hoe and shovel, and gather toad dust for a bath for your hens during the winter. Dump in a tight barrel, and set in a dry corner, and scoop into the wallowing bin as you need it.

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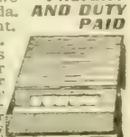

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David Copperfield.

By Charles Dickens.

(Continued from last issue)

I felt it rather hard, I must own, to be made, without deserving it, the subject of jokes between the coachman and guard as the coach drawing heavy behind, on account of my sitting there, and as the greater expediency of my travelling by waggon. The story of my supposed appetite getting wind among the outside passengers, they were merry upon it likewise; and asked me whether I was going to be paid for, at school, as two brothers or three, and whether I was contracted for, or went upon the regular terms; with other pleasant questions. But the worst of it was, that I knew I should be ashamed to eat anything, when an opportunity offered, and that after a rather light dinner, I should remain hungry all night—for I had left my cakes behind, at the hotel, in my hurry. My apprehensions were realized. When we stopped for supper I couldn't muster courage to take any, though I should have liked it very much, but sat by the fire and said I didn't want anything. This did not save me from more jokes, either; for a husky-voiced gentleman with a rough face, who had been eating out of a sandwich-box nearly all the way, except when he had been drinking out of a bottle, said I was like a boa-constrictor, who took enough at one meal to last him a long time; after which he actually brought a rash out upon himself with boiled beef.

We had started from Yarmouth at three o'clock in the afternoon, and we were due in London about eight next morning. It was Midsummer weather, and the evening was pleasant. When we passed through a village, I pictured to myself what the inside of the houses were like, and what the inhabitants were about and when boys came running after us, and got up behind and swung there for a little way, I wondered whether their fathers were alive, and whether they were happy at home. I had plenty to think of, therefore, besides my mind running continually on the kind of place I was going to—which was an awful speculation. Sometimes, I remember, I resigned myself to thoughts of home and Peggotty; and to endeavoring, in a confused blind way to recall how I had felt, and what sort of boy I used to be, before I bit Mr. Murdstone; which I couldn't satisfy myself about by any means, I seemed to have bitten him in such a remote antiquity.

The night was not so pleasant as the evening, for it got chilly; and being put between two gentlemen (the rough-faced one and another) to prevent my tumbling off the coach, I was nearly smothered by their falling asleep, and completely blocking me up. They squeezed me so hard sometimes, that I could not help crying out, "Oh if you please!"—which they didn't like at all, becahse it woke them. Opposite me was an elderly lady in a great fur cloak, who looked in the dark more like a haystack than a lady, she was wrapped up to such a degree. This lady had a basket with her, and she hadn't known what to do with it, for a long time, until she found that, on account of my legs beshort, it could go underneath me. It cramped and hurt me so, that it made me perfectly miserable; but if I moved in the least, and made a glass that was in the basket rattle against something else (as it was sure to do), she gave me the cruellest poke with her foot, and said, "Come, don't you fidget. Your bones are young enough I'm sure !"

At last the sun rose, and then my companions seemed to sleep easier. The difficulties under which they had laboured all night, and which had found utterance in the most terific gasps and snorts, are not to be conceived. As the sun got higher, their sleep became lighter, and so they gradually one by one awoke. I recollect being very much suprised by the feint everybody made, then, of not having been to sleep at all, and by the uncommon indignation with which every one repelled the charge. I labour under the same kind of astonishment to this day, having invariably observed that of all human weaknesses, the one to which our common nature is the least disposed to confess (I cannot imagine why) is the weakness of having gone to sleep in a coach.

What an amazing place London was to me whea I saw it in the distance, and now I believed all the adventures of all my favorite heroes to be constantly enacting and re-enacting there and how I vaguely made it out in my own mind to be fuller of wonders and wickedness than all the cities of the earth, I need not stop here to relate. We approached it by degrees, and got in due time, to the inn in the Whitechapel district, for which we were bound. I forget whether it was the Blue Bull, or the Blue Boar; but I know it was the Blue something, and and that its likeness was painted up on the back of the coach.

The guard's eye lighted on me as he was getting down, and he said at the booking-office door :

"Is there anybody here for a youngster booked in the name of Murdstone from Bloonderstone, Sooffolk, to be left till called for ?"

Nobody answered.

"Try Copperfield, if you please, sir," said I, looking helplessly down.

"Is there anybody here for a youngster booked in the name of Murdstone from Bloonderstone, Sooffolk, but owning to the name of Copperfield, to be left till called for?" said the guard. "Come! Is there anybody?"

No. There was nobody. I looked anxiously around; but the inquiry made no impression on any of the bystanders, if I except a man in gaiters, with one eye, who suggested that they had better put a brass collar round my neck, and tie me up in the stable.

A ladder was brought, and I got down after the lady, who was like a haystack not daring to stir, until her basket was removed. The coach was clear of passengers by that time, the luggage was very soon cleared out, the horses had been taken out before the luggage, and now the coach itself was wheeled and backed off by some hostlers, out of the way. Still, nobody appeared, to claim the dusty youngster from Blunderstone, Suffolk.

More solitary than Robinsbn Crusoe, who had nobody to look at him, and see that he was solitary, I went into the booking office, and, by invitation of the clerk on duty, passed behind the counter, and sat down on the scale at which they weighed the luggage. Here, as I sat looking at the parcels, packages, and books, a inhaling the smell of stables (ever since associated with that morning), a procession of most tremendous considerations began to march through my mind. Suppose nobody should ever fetch me, how lomg would they consent to keep me there? Would they keep me long enough to spend seven shillings? Should I sleep at night in one of those wooden bins, with the other luggage, and wash myself at the pump in the yard in the morning; or should I be turned out every night, and expected to come again to be left till called for, when the office opened next day? Supposing there was no mistake in the case, and Mr. Murdstone had devised this plan to get rid of me, what should I do? If they allowed me to remain there until my seven shillings were spent, I couldn't hope to remain there when I began to starve. They would obviously be inconvenient and unpleasant to the customers, besides entailing on the Blue Whatever-it-was, the risk of funeral expenses. If I started off at once, and tried to walk back home, how could I ever find my way, how could I ever hope to walk so far, how could I make sure of any one but Peggotty, even if I got back? If I found out the nearest proper authorities, and offered myself to go for a soldier, or a sailor, I was such a little fellow that it was most likely they wouldn't take me in. These thoughts, turned me burning hot, and made me giddy with apprehension and dismay. I was in the height of my fever, when a man entered and whispered to the clerk, who presently slanted me off the scale, and pushed me over to him, as if I were weighed, bought, delivered and paid for.

As I went out of the office, hand in hand with this new acquaintance, I stole a look at him. He was a gaunt, sallow young man, with hollow cheeks, and a chin almost as black as Mr. Murdstone's; but there the likeness ended, for his whiskers were shaved off. and his hair, instead of being glossy, was rusty and dry. He was dressed in a suit of black clothes which was rather rusty and dry too, and rather short in the sleeves and legs; and he had a white neck-kerchief on, that was not over clean. I did not, and do not supuose that this neck-kerchief was all the linen he wore, but it was all he showed or gave any hint of.

"You're the new boy?" he said.

"Yes, sir," I said.

I supposed I was. I didn't know.

"I'm one of the masters at Salem House," he said.

I made him a bow and felt very much overawed. I was so ashamed to allude to a common-place thing like my box, to a scbolar and a master at Salem House, that we had got some little distance from the yard before I had the hardihood to mention it. We turned back, on my humbly insinuating that it might be useful to me hereafter; and he told the clerk that the carrier had instructions to call for it at noon.

"If you please, sir," I said, when we had accomplished about the same distance as before, "is it far?"

"It's down by Blackheath," he said.

"Is that far, sir?" I diffidently asked.

"It's a good step," he said. "We shall go by the stage coach. It's about six miles."

I was so faint and tired, that the idea of holding out for six miles more was too much for me. I took heart to tell him that I had had nothing all night, and that if he would allow me to buy something to eat, I should be very much obliged to him. He appeared susprised at this—I see him stop and look at me now—and after considering for a few moments, said he wanted to call on an old person who lived not far off, and that the best way would be for me to buy some bread, or whatevir I liked best that was wholesome, and make my breakfast at her house, where we could get some milk.

Accordingly we looked in at a baker's window, and after I had made a series of proposals to buy everything that was bilious in the shop, and he had rejected them one by one, we decided in favor of a nice little loaf of brown bread, which cost me threepence. Then, at a grocer's shop, we bought an egg and a slice of streaky bacon, which still left what I thought a good deal of change, out of the second of the bright shillings, and made me consider London a very cheap place. These provisions laid in we went on through a great noise and

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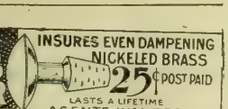

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uproar that confused my weary head beyond description, and over a bridge which, no doubt, was London Bridge (indeed I think he told me so, but I was half asleep) until we came to the poor person's house, which was a part of some alms-house, as I knew by their look, and by an inscription on a stone over the gate, which said they were established for twenty-five poor women.

The Master at Salem House lifted the latch of one of a number of little black doors that were all alike, and had each a little diamond-paned window on one side, and another little diamond-paned window above; and we went into the little house of one of these poor old women; who was blowing to make a little saucepan boil. On seeing the master enter, the old woman stopped with the bellows on her knee, and said something that I thought sounded like "My Charley," but on seeing me come in too, she got up, and rubbing her hands made a confused sort of half curtesy.

"Can you cook this young gentleman's breakfast for him, if you please?" said the Master at Salem House.

"Can I?" said the old woman. "Yes can I, sure!"

"How's Mrs. Fibbitson to-day?" said the Master, looking at another old woman in a large chair by the fire, who was such a bundle of clothes that I feel grateful this hour for not having sat upon her by mistake.

"Ah, she's poorly," said the first old woman. "It's one of her bad days. If the fire was to go out, through any accident, I verily believe she'd go out too, and never come to life again."

As they looked at her, I looked at her also. Although it was a warm day, she seemed to think of nothing but the fire. I fancied she was jealous even of the saucepan on it; and I have reason to know that she took its impressment into the service of boiling my egg and broiling my bacon in dudgeon; for I saw her, with my own discomfited eyes, shake her fist at me once, when these culinary operations were going on, and no one else was looking. The sun streamed in at the little window, but she sat with her own back and the back of the large chair towards it, screening the fire as if she were sedulously keeping it warm, instead of it keeping her warm and watching it in a most distrustful manner. The completion of the preparations for my breakfast, by relieving the fire, gave her such extreme joy that she laughed aloud—and a very unmelodious laugh she had I must say.

I sat down to my brown loaf, my egg, and my rasher of bacon, with a basin of milk besides, and made a delicious meal. While I was yet in the full enjoyment of it, the old woman of the house said tothe Master:

"Have you got your flute with you?"

"Yes," he returned.

"Have a blow at it," said the old woman, coaxingly. "Do!"

The Master, upon this, put his hand underneath the skirts of his coat, and brought out his flute in three pieces, which he screwed together, and began immediately to play. My impression is, after many years of consideration, that there never can have been any who played worse. He made the most dismal sounds I have ever heard produced by any means, natural or artificial. I don't know what the tunes were—if there were such things in the performance at all—which I doubt—but the influence of the strain upon me was, first, to make me think of all my sorrows until I could hardly keep my tears back; then to take away my appetite; and lastly, to make me so sleepy that I couldn't keep my eyes open.

(Continued next issue.)

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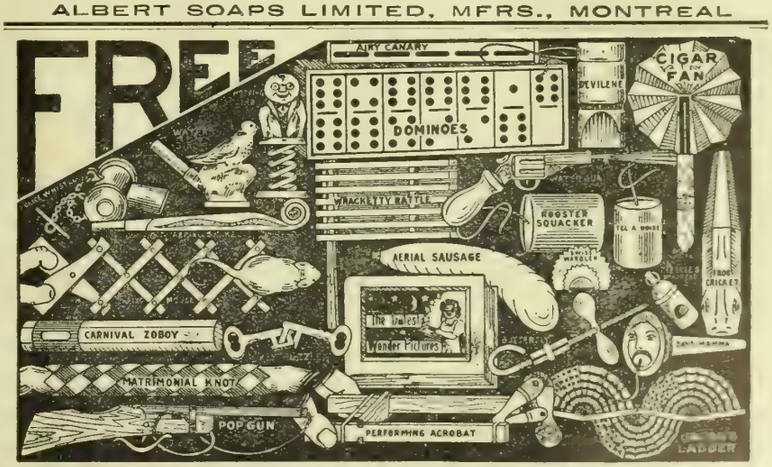

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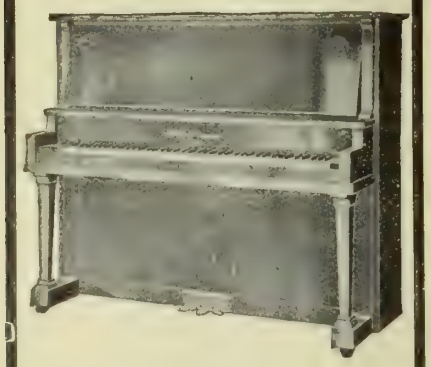


Style 70—Colonial

Sherlock-Manning 20th Century Piano

Examine the Sherlock-Manning 20th Century Piano. Listen to its exquisite singing tone. Ask about its many quality features —Otto Higel Double Repeating Action; Poehlmann Wire (the best **imported** piano wire); Weickert Felt Hammers; the famous Billings Brass Flange (the flange that endures); and other important features.

Then, when you've found out all there is to know about the **Sherlock-Manning 20th Century Piano**—when you've been **convinced** that this instrument represents the **best** piano value in the Dominion—then ask us the price. You'll find it much less than you expected.

But there are sound reasons to account for the lower price as for the greater excellence of these splendid instruments.

Write us to-day for full particulars and handsome art catalogue—and we'll tell you how **you can save $100** on the purchase of as fine a piano as can be made at any price. 27

Sherlock-Manning Piano & Organ Co.

LONDON, - CANADA

(No Street Address necessary)

Painful Neatness

I do believe that any women can be a reasonably neat housekeeper without making a bosom companion of the broom, the scrubbing brush and the dust-pan. I believe that cleanliness is next to Godliness, but I do not believe that it is necessary for a woman to clean the same thing on the same day of the week every month in the year just because she has a system to carry out, whether the thing needs cleaning or not. It is not the constant cleaning, but the keeping clean that tells for good housekeeping. One woman may work all the time and her house never looks neat or in order, while another seems to have plenty of leisure for rest and reading and recreation, and yet her rooms are neat and orderly and her house always reasonably clean.

The first will scrub her floors until they shine, and before they are dry she will begin to spill and slop and drizzle dishwater and milk and grease from table to stove, and from stove to pantry, aad the next day her floors need scrubbing again, and so she scrubs them. She will blacken her stove until you could see your lace in it, and then let things boil over while cooking, spill water on the shining surface and let the meat spatter as it fries, until another onslaught with the blacking brush is necessary. When getting a meal, everything she uses is laid down where it is used, instead of being put back in place and when she bakes, the table, stove, door-knobs and dishes all bear the marks of dough, flour, lard and sugar, and so it is necessary that they should all be cleaned, and the daily scrubbing goes merrily on, and this women never has any time for anything else.

Another woman is so devoted to "system" that she will sweep every room in the house an Friday, whether it needs sweeping or not, and so she will go through the house with broom and dust-pan, and sweep and dig and raise a cloud of dust that will settle on everything in the rooms which must all be dusted in turn, when a few passes with the carpet sweeper was all that was necessary to reasonably good housekeeping and the comfort of the family.

The reasonably good housekeeper manages to keep her house clean and comfortable and wholesome without slaving all the time. She may not always have "a time for things," but she has a place for things and keeps them in their place. She is careful about making work for herself, and so has a little time for other things than cleaning and scrubbing, and her home is a place of comfort and good cheer, even if it is not so painfully neat as some of her neighbors.—Exchange.

The Emergency Shelf

A housewife who evidently had her hands full and who yet seemed always prepared for the unexpected guest, explained that it was all due to the emergency shelf. One shelf in a cool closet is set aside for such dainties as will keep for some time and are ready for use at a moment's warning. In summer it is sure to contain a can of salmon and one of dried beef. Sealed cartons of crackers, biscuit or gingersnaps insure against trouble if the cooky jar is caught empty. Honey in the comb, if capped over, will keep for months in a dry place. Extracted honey is also a good keeper, and even if it does become "candied" it is still appetizing. If called upon frequently for picnic lunches, a jar of peanut butter is another of the indispensibles. With confectioner's sugar at hand, she can frost a plain cake and transform it into a company affair before her fire is even started, for

WILL GIVE $500 TO SICK READERS OF MARITIME FARMER

Famous Scientist Who Originated the Now Wonderful "Home Treatment" Offers $1.00 Package Free to Sick and Ailing.

In order that every reader of Maritime Farmer who may not have heard of this wonderful "Home Treatment" may have an opportunity to test this celebrated medicine, the now famous scientist, Dr. James W. Kidd, offers to give absolutely free a full size $1.00 package to five hundred readers of this paper, to prove the wonderful claims which have been made for it. In making this offer the scientist said: "I know that there are many people who have been suffering for years with some chronic disease and many of them have spent large sums of money seeking a cure. I know that these people hesitate about investing money in medicine because they have despaired of ever getting well. Thousands have told me that story and many thousands of the same people have told me afterwards that my treatment had cured them after doctors and everything else had failed. I want to prove to a limited number—no matter what the disease, no matter how long they may have suffered no matter how blue and discouraged —that my treatment really and actually does accomplish the wonderful results that have been reported."

People who suffer from Rheumatism, Kidney Trouble, Stomach Trouble, Liver or Bowel Disorders, Catarrh, Bronchitis, Asthma, Chronic Coughs, Weak Lungs, Lumbago, Piles, Urinary Disorders, Female Weaknesses of any kind, the weak, worn out, broken-down and despondent will be delighted at the effect of a few doses. This wonderful treatment creates a fine appetite and helps the digestive organs to carry on their functions as they should. It strengthens the kidneys, too, and drives rheumatism poisons from the blood as if by magic. That is why people who try it become so enthusiastic.

Any reader of Maritime Farmer who will try this extraordinary medicine that has created so much excitement by its cures can obtain absolutely free a full $1.00 treatment by simply filling in the coupon below or writing a letter describing their case in their own words, if they prefer, and mailing it today to James W. Kidd, Toronto, Canada. No money need be sent and no charge of any kind will be made.

As this offer is limited, you should write at once, in order to be sure to receive your free treatment.

Coupon CB-260 For Free Dollar Treatment

Dr. Jas. W. Kidd, Toronto, Canada.

Please send me a Full $1.00 Course of Treatment for my case **free and postage paid**, just as you promise.

Name _____

Post Office _____ Province _____

Street and No. _____

Age _____ How long afflicted? _____

Make a cross (X) before disease you have Two crosses (XX) before the one from which you suffer most.

....Rheumatism	....Kidney Trouble	....Impure Blood	....Female Weakness
....Lumbago	....Bladder Trouble	....Anemia	....Womb Trouble
....Catarrh	....Weak Lungs	....Pimples	....Ovarian Trouble
....Constipation	....Chronic Cough	....Eczema	....Painful Periods
....Piles	....Malaria	....Neuralgia	....Hot Flashes
....Diarrhoea	....Asthma	....Headache	....Bearing Down Pains
....Torbid Liver	....Hay Fever	....Dizziness	....Leucorrhoea
....Indigestion	....Heart Trouble	....Nervousness	
....Stomach Trouble	....Poor Circulation	....Obesity	

Give any other symptoms on a separate sheet. Correspondence in all languages.

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, **free** of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure — **you**, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience**, we know better than any doctor. I know that my home treatment is a safe and sure cure for **Leucorrhoea** or **Whitish discharges, Ulceration, Displacement** or **Failing** of the **Womb, Profuse, Scanty** or **Painful Periods, Uterine** or **Ovarian Tumors** or **Growths,** also **pains in the head; back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar** to our sex.

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address,** tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost,** my book—**"WOMAN'S OWN MEDICAL ADVISER"** with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers of Daughters,** I will explain a simple home treatment which speedily and effectually cures Leucorrhoea, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all woman's diseases and makes women well, strong, plump and robust. **Just send me your address,** and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 309 - - - - WINDSOR, Ont.

CHALLENGE BRAND WATERPROOF COLLARS

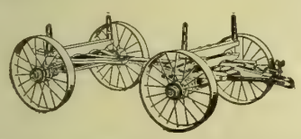
Look like linen—feel like linen, but outwear a dozen linen collars. No laundry bills—a little soap and water only required to keep them fresh and clean.

Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

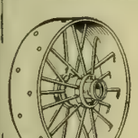
For the Man who works.

The Arlington Company of Canada Limited TORONTO 2

BUILT low, especially for farm use, a T-A Handy Wagon *saves much hard work.* It is easier to load and unload, and will haul bigger loads without tiring horses, more than a small load.



T-A Handy Farm Wagons and Wide-Tire Steel Wheels



T-A Wide-Tire Steel Wheels are lighter, stronger, cheaper, and better *in every way* than ordinary wheels. *Make your old wagons new* by fitting them up with these superb wheels.

Our *free booklet* (which, please ask for) tells how you can make farm work easier and more profitable.

TUDHOPE-ANDERSON CO., Ltd. ORILLIA, Ontario.

HOW TO CONQUER RHEUMATISM AT YOUR OWN HOME

If you or any of your friends suffer from rheumatism, kidney disorders or excess of uric acid, causing lameness, backache, muscular pains; stiff, painful, swollen joints, pain in the limbs and feet; dimness of sight, itching skin or frequent neuralgic pains, I invite you to send for a generous **Free Trial Treatment** of my well-known, reliable **Chronicure,** with references and full particulars by mail. (This is no C. O. D. scheme.) No matter how many may have failed in your case, let me prove to you, free of cost, that rheumatism can be conquered. **Chronicure** succeeds where all else fails. **Chronicure cleanses the blood** and **removes the cause.** Also for a weakened, run-down condition of the system, you will find **Chronicure a most satisfactory general tonic** that makes **you feel that life** is worth living. Please tell **your friends of this liberal offer, and send today for large free package, to MRS. M. SUMMERS, Box** E. 309—**Windsor, Ont.**

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

this sugar and cold water, with a little flavoring, are all that are necessary.

In winter a fruit cake is a part of the emergency shelf furnishing—will keep well. Cheese is another reliable relish, and if there are dry and dried apples—but she is sure it sometimes only enriched with pork crumbs they are grated and sprinkled over buttered crackers and placed in the oven to crisp.

The company shelf is kept replenished with the same care used in other departments, and as she makes it a rule never to draw upon it save for guests, she is sure not to be caught with an empty cupboard when the guest comes unannounced.—Bessie L. Putnam in Twentieth Century Farmer.

The Cooking and Serving of Vegetables

Vegetables do not hold the important place they should on the average family's table. We are called a nation of meat-eaters, and not only is this claimed by some of our leading physicians to be the cause of many bodily ills, but it is also productive of our greatest expense in the food-bills.

Wonderment is often expressed that the inhabitants of many foreign countries live so comfortably and work so hard on a diet in which meat has such an unimportant place. When foreign cooks behold our usual methods of cooking, they say that we throw away the most nourishing and ner of preparing them. From our tasty part of vegetables by our man-southern sisters we may learn the lesson of long, slow cooking and a clever combination and seasoning. Every farm should have a reasonably good garden so that healthful vegetables may appear at every meal.

Fried Tomatoes—Choose fine, firm tomatoes about half ripened. Remove skin, and cut in slic?s from one-half to an inch in thickness. Roll in cracker-crumbs, and fry in butter, seasoning liberally with salt and pepper.

Vegetable Stew—Cut a variety of vegetables into small cubes. Potato, parsnip, carrot and turnip can be used. To them add a large sweet onion, sliced, one head of celery, cut in small bits, a sprig of parsley, and a little summer savory, if liked. One large tomato, sliced, or an equal amount of canned tomato is a delicious addition for the sake of a change.

Melt a tablespoonful of butter in the kettle, place the vegetable in this, season with salt and a dash of cayenne, and cover very closely. Cook gently for about half an hour, or until the vegetables are well done.

Savory Rice with Thickened Gravy—A dish of boiled rice is often found accompanying a stew of beef or chicken on the southern table; and the combination is not only delicious, but extremely nourishing. Wash a turnip, cut in half-inch slices, pare, and cut into cubes. There should be two or three cupfuls of the prepared vegetable. Place in a kettle with a sliced onion, and cold water to cover. Bring to a boiling point, and simmer gently until the vegetables are cooked to pieces. Drain through a colander, and return the liquid to the kettle. Have ready a cupful of rice; add this, with salt, to the liquid, and cook until the fire is tender and has absorbed the liquid. Carrots may be used in the same way if the flavor is liked. This is an excellent way to use these vegetables when they are "woody" or pithy yet have a good flavor.

Potato Cakes with Roast—Pare good-sized potatoes, and let them stand half an hour in water. Wipe dry, and grate. Place a cheese-cloth in the colander, and let the potatoes drain for a few minutes. Sprinkle with salt, and form into flat cakes with the hands. Place these cakes on a plate in a steamer, and steam for fifteen minutes. Remove the roast from the roasting-pan, lay in the cakes carefully, and baste lor a moment or two. Serve all together on a platter.

Sca,loped Onions—Butter a baking-dish, and sprinkle with cracker-crumbs. Arrange a layer of sliced onions of a mild flavor, sprinkle with pepper and salt, dot with butter, and cover with crumbs. Repeat until the dish is as full as desired. Pour in enough milk to cover, and bake slowly until the onions are tender; thirty minutes usually will suffice.

Tomato Salad—A very attractive salad is made by using the tiny red and yel,ow tomatoes and tiny white onions. Steam the onions tender. Remove the skins from the tomatoes Have them all very cold. Line individual plates with lettuce-leaves, and place alternating red and yellow tomatoes to form a circle; pile onions in the center, and pour a salad dressing over all. If small tomatoes cannot be had, the salad is equally attractive when the onions are served in a large tomato from which the center has been scooped out.—Alice Margaret Ashton.

Quick Action on a Cold

NA-DRU-CO.

One of the most important points in treating a cold is to act quickly, at the first sign of trouble, before the cold has a chance to get "settled" anywhere.

The other point of vital importance is to take

NA-DRU-CO Syrup of Linseed, Licorice and Chlorodyne

This safe and reliable household remedy acts very quickly. It relieves the irritation and "stuffed up" feeling in the air passages, loosens the phlegm, promotes expectoration, soothes the tickling which makes you cough, and drives out the cold before it gets troublesome.

But even if the cough or cold has become deep-seated and persistent, Na-Dru-Co Syrup of Linseed, Licorice and Chlorodyne will break it up.

In 25c. and 50c. bottles, at your druggist's.

NATIONAL DRUG AND CHEMICAL CO. OF CANADA, LIMITED. 313

GREETINGS FOR 1913

AND A HAPPY NEW YEAR

To all our friends and patrons

We make Stoves - - you use them;
Thus we make friends--not lose them,
For every owner of an **Enteprise**
Stove, Range or Furnace of any size
Becomes our friend when the goods are tested
And knows the money's been well invested.
That's why when we say "HAPPY NEW YEAR,"
To friends and customers everywhere,
It covers thousands in homes and in trade
Who know us by proxy—through "GOODS WELL MADE."

The ENTERPRISE FOUNDRY CO., SACKVILLE, N. B.

— Makers of High Grade Stoves, Ranges and Furnaces —

To Make Old Sad Irons New

Old sad irons that have become rough from overheating or any cause may be made smooth and clean by painting them with aluminum paint, which can be applied by anyone who can use a brush. One housewife I know has painted her kitchen range with the paint mentioned, also her stovepipes, sinks, garbage pails, etc.

Green Tomato Pickle.

½ pk. green tomatoes.
½ doz. onions.
2 cups sugar.
2 tb. mustard seed.
1 tb. celery seed.
2 tb. salt.
1 tb. whole cloves.
1 qt. vinegar.

Chop all fine and squeeze out the water. Cook all together for one and one-half hours.—Mrs. Fox.

Troubled With Weak Heart.

Was All Run Down.

Many people are unaware of having anything wrong with their heart till some excitement, overwork or worry causes them suddenly to feel faint or dizzy, and have an all-gone sinking sensation.

On the first sign of any weakness of the heart or nerves, you should not wait until your case becomes so desperate that it is going to take years to cure you, but avail yourself of a prompt and perfect cure by using Milburn's Heart and Nerve Pills.

Mr. Thomas A. Stevenson, Harris, Sask., writes:—"I was troubled with weak heart, and was all run down for a long while. I was almost in despair of ever getting well again, until a friend recommended me to try Milburn's Heart and Nerve Pills. After the first box, I was much better, and three boxes cured me. I am now, as well as ever, and will highly recommend them to any one else troubled with a weak heart."

The price of Milburn's Heart and Nerve Pills is 50 cents per box, or 3 boxes for $1.25.

For sale at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

COMFORT IN THE RURAL HOME

The installation of a **GOOD HEALTH CHEMICAL CLOSET** in your home means health--convenience--comfort--for the whole family. Not a luxury but a necessity. A postal will bring you full particulars. Address

THE NATIONAL MFG. CO., Limited. MONCTON, N. B.

Gates' Nerve Ointment

For Frost Bites

C. Gates, Son & Co.,
Middleton, N S.

Gentlemen:--I had the misfortune to freeze my toe which caused me a great deal of suffering, and although I had it treated, yet without success till I used your Nerve Ointment, which has completely cured it, and I have no hesidency in recommending it to others as the best I ever used,

Yours sincereiy,
Matthew Wood,
Point Phillip, N. S.

Persons troubled with partial paralysis are often very much benefited by massaging the affected parts thoroughly when applying Chamberlain's Liniment. This liniment also relieves rheumatic pains. For sale by all dealers.

FLORICULTURE.

R. O. N., and Flower Lover ask for directions re care and general treatment of Rubber Plants, both as regarhs repotting and the use of special fertilizers. Also in regard to the application beef steak, castor oil, coffee, etc.

As the season approaches when a general overhauling of such plants as Palms, &ubbers, Dracenas is advisable, a few words of cultural advice may not be amiss. First, as regards fertilizers, of all the strange and unique remedies for all the plant diseases that are commonly used, the Rubber Plant seems to have the largest list. I have heard of the use of milk as a bath (no reflection on Anna Held); cream applied to the soil; sweet oil on the foliage tips; of unburned matches stuck into the soil; the leaves as a top dressing in addition to this castor oil and beef steak, etc. etc., as first mentioned. As to the efficiency of such fads I am unable to give any opinion, but I can assure our readers that the use of properly prepared soil and sufficient light, coupled with cleanliness of foliage and freedom from dust and insects will make the use of any such freak remedies or foods unnecessary.

Water the plants only when the soil becomes fairly dry and be sure that no water is allowed to stand in the jardiniere or saucer. Give as much light as possible and fresh air when warm enough. Sunlight is not absolutely necessary. In repotting do not make the cbmmon mistake of using a pot several sizes too large, use one size larger only, and remove the loose soil from the old ball of roots, taking care not to disturb the roots in any way. Simply remove the top or unused soilf Have a clean pot and thoroughly soak it in water. Use rich, light soil. Unless you have good materials at hand it is best to procure this from your florist telling him what you want the soil for. Put plenty of broken pots or charcoal in bottom of pot, so that drainage may be perfect and thoroughly pack in the soil with a flat thin stick, and do not water until necessary. In case of such plants and those that have lost their leaves, leaving simply a bunch at the top the best thing to do is to make a small incision with a sharp knife at an eye or joint close up to the leaves. Bind tightly around this a bunch of moss about the size of your fist and keep this thoroughly wet at all times. You will, in the course of several weeks, see roots appearing on the surface of the moss. When the top can be cut off below the moss which being removed will allow the new plant to be potted in a small pot and in this way a new plant will be secured, which will be even better than the old one. The stump will produce a bush plant of pleasing appearance and compact growth.

To sum up, the care of a Rubber Plant consists of: Plenty of light. Absence of drafts. Perfect drainage. Moderate amount of water when dry. Close potting, and most important of all, cleanliness of foliage.

Palms and Dracenas require much the same treatment and care, growing less rapidly, particularly palms, require potting less often. I have known palms to keep in perfect condition producing a good leaf each year and holding foliage well without repotting for a span of four years. Of course, this is rather exceptional, yet shows that it would be easy to overpot if the ordinary rules of plant culture were followed.

Any questions, regarding the culture of flowers, addressed to H. E. Goold, Florist, Susex, N. B., will receive prompt attention in this column.

Roofing

Free Samples
Free Catalogues
Free Plans

If you are interested, send us a Post Card with the word "Roofing" and your name and address—then we will send you valuable information about your roofing needs.

The Galt Art Metal Co. Limited
265 Stone Road, Galt, Ontario.

NEW COAL OIL LIGHT

Beats Electric or Gasoline

ONE FREE To Use On Your Old Lamp!

Our special introductory offer entitles one person in each locality to **one free.** Powerful white incandescent mantle light. Replacing common oil lamps everywhere. Burns 70 hours on one gallon of coal oil (kerosene). No odor or noise, simple, clean. Brightest and cheapest light for the home, office or store. Better light than gas or electric. Send postal for **FREE OFFER** and agents' wholesale prices.

AGENTS WANTED Experience Unnecessary. Make Money Evenings or Spare Time. Write Quick.

MANTLE LAMP CO., 282 Aladdin Bldg., Montreal and Winnipeg, Can.

How to Keep Fire All Night.

I have never had any trouble keeping the fire all night, and the plan is very simple. I consider it more economical to keep the kitchen fire all night and running continuously. I only average a medium-sized hod of coal for 24 hours. I get splendid results from my oven;

I start the fire about September 1 and it is never out until about June 1. We burn common nut coal and my husband brings in a hod each night and morning, although I never use it all only in the coldest weather. About 9 o'clock each night I shake down the fire until all the ashes are out and I have a good layer of red coals on the grate; rake a little. Be sure that all ashes and clinkers are out and a solid fire rests on the grate. Then I open the drafts and put on more coal to come level with the fire box, and as soon as a bright blue flame or blaze comes through I close all dampers and after waiting a moment or two for the gas to subside I open the cold air damper which new coal. I usually have the drafts is in front and near the top of the range. I let it entirely alone until 9 or 10 in the morning before adding new coal. I usually have the drafts open and shut several times before the coal is put on. My range has three dampers, the oven, funnel and front dampers and two cold air drafts, one of which is seldom used as it is used to cool the stove, and this is not necessary if care is used. If the heat is allowed to come too near the stove covers it causes them to warp.

In the morning shake the fire well again, let it burn up and you will have an apparently fresh fire. If you wish to bake, thoroughly shake it down, open the dampers and put on coal gradually, then close it up tight. By the time the coal has been renewed two or three times your oven is hot enough for biscuit; that is, if you have kept it level with the fire box. I can dress and have hot biscuits in forty minutes. Two very important items are, you must keep the ash pan clean, and also the under part of the top of the stove over the oven, if you want a hot oven.

Cinders are especially fine to bank a fire at night and every bit of coal should be sifted. Now remember, you can save coal, time and money by keeping a continuous fire. The kitchen is warm and cozy; the water is always hot.

After breakfast add the new coal as you did the night before. Close all dampers as before. If required for dinner and supper open and shut drafts as you need to. Do not let the coal get started; hold it back all you can. Keep a steady, even heat at all times.—Mrs Fred Orne in N. E. Homestead.

Mr. and Mrs. Manning K. Ells had a call on Tuesday evening Dec. 17 from a number of their immediate friends. It was the occasion of their tenth wedding anniversary and a most enjoyable evening was spent by all. Mr. and Mrs. Ells received many remembrances and an abundance of good wishes for the occasion.—Kentville Advertiser.

Mr. Ells who is Secretary of the Nova Scotia Fruit Growers Association is also a frequent contributer to the columns of the Maritime Farmer.

At this date the Maritime Farmer joins with Mr. and Mrs. Ells' friends in good wishes for many future years of usefulness.

Dates to be Remembered

Nova Scotia Farmers' Association Annual Meeting, Sydney, N. S., January 21 and 22, 1913.

Cape Breton Poultry Show, North Sydney, N. S., Jan. 21st to 23rd, 1913.

Annual Meeting of Nova Scotia Fruit Growers' Association, Middleton, N. S., Jan. 28th, 29th, 30th, 1913

Here is a remedy that will cure your cold. Why waste time and money experimenting when you can get a preparation that has won a world-wide reputation by its cures of this disease and can always be depended upon? It is known everywhere as Chamberlain's Cough Remedy, and is a medicine of real merit. For sale by all dealers.

Butter Parchment.

Possibly there is no commodity in common use by farmers of the Maritime Provinces so subject to fraud as the every-day parchment paper used for wrapping butter. This paper, in its pure state, is manufactured wholly in Germany. Attempts have been made in other countries to compete with the Germans for this trade but without success. The result is that many inferior papers, known to the trade as imitation parchments, have been offered for sale all over the country. A butter parchment is used because it is first grease proof and it will resist the passage of water as well. This guards effectually against contamination of the butter by contact with wood or other substances likely to affect the quality of the butter. The first essential of good parchment, therefore, is that it be pure and what it is represented to be.

The Maritime Farmer is in a position to offer its subscribers a pure parchment from the best mills in Germany and it proposes to do so at practically wholesale prices. The only condition attaching to the offer is that an order must be sent the Maritime Farmer for at least five reames of parchment, or 2,500 sheets, printed or plain. The plan is an easy one to work out. When you want parchment ask your neighbors to make up and order with you, until you have five reames or over and send it to us or, better, write us for prices and we will be able to save you a good round sum on your order. We will give you the paper at the same price you would pay a wholesale dealer. Moreover, the Farmer will guarantee that every sheet of parchment will be pure. It will not taint your butter but will preserve it in every case. What we want is the opportunity to show you how much money we can save you. It will represent a very nice percentage on the usual prices you have been paying.

Hollow Potatoes.

During the past season there have been a good many complaints from potato growers that, although the yield has been good, many of the largest and finest tubers are found, on cutting, to be hollow. This is an occurrence which is not uncommon in seasons which have favored the rapid growth of the tuber, and for a similar reason it is found more commonly in large tubers than in those of small or medium size. A potato grows by the addition of new layers of tissue slightly below the skin. The cells composing this tissue are at first small but rapidly expand to their full size, and in so doing set up a state of tension. The layers of cells towards the outside, being young, are capable of dividing and expanding in a similar way so that an external cracking or splitting is avoided. It is different, however, with the tissue in the interior. This in a state of growth, and if the tenis composed of mature cells no longer sion becomes too great a tearing or rupture of the tissue will result, followed by degeneration and the formation of a cavity.

Cavities of this nature are much less serious than injuries on the outside of the tubers, since the latter permit of the entrance of numerous organisms of various kinds which cause rotting. They do, however, necessitate increased trouble in preparing potatoes for the table since the discolored surface of the cavity must be cut away. Hollow potatoes are also particularly objectionable for baking. However, the factor of rapid growth which is liable to bring about this condition is in the main one necessary to the securing of a large yield, and most farmers will probably prefer to so stimulate growth by cultivation and fertilizers as to attain this end and take the risk of a certain proportion of tubers becoming hollow.

If your children are subject to attacks of croup, watch for the first symptom, hoarseness. Give Chamberlain's Cough Remedy as soon as the child becomes hoarse and the attack may be warded off. For sale by all dealers.

The Moncton Poultry Show.

Another milestone in the history of the Westmorland Poultry and Pet Stock Association has been reached and marked by their Pouftry Show, which was held recently in Moncton.

The various breeders, as well as the principal business men of that town, were jubulant over the success of the show, both in point of number of entries and in attendance.

The best birds in New Brunswick, from ehe Nova Scotia ,ine up to Carleton Co. were exhibited and George Robertson, of Ottawa, who placed the awards, found lots of quality among the farmer's feathered frriends there exhibited.

A banquet was held during the Fair by the exhibitors, and the many optimistic points which marked the addresses of the after-dinner speakers, bids well for the future of the poultry industry.

Much credit for the success of the show is due J. V. Jackson, President and Geo. Seaman, Secretary of the Association.

Following is a list of the prize winners :

RHODE ISLAND REDS, S. C.

Cocks—1, F. M. Merritt; 2, Dr. E. A. Smith; 3, Glenview Poultry Yards.

Hens—1, Dr. E. A. Smith; 2, Hartland Poultry Yards.

Cockerels—1, F. M. Merritt; 2, Glenview Poultry Yards; 3, Miss Louise C. Brown.

Pullets—1, F. M. Merritt; 2, Miss Louise C. Brown; 3, Hartland Poultry Yards.

RHODE ISLAND REDS, R. C.

Cocks—1 and 2, Geo. H. Seaman; 3, Hartland Poultry Yards.

Hens—1 and 2, Geo. H. Seaman; 3, Hartland Poultry Yards.

Cockerels—1, 2 and 3, Geo. H. Seaman.

Pullets—1, 2 and 3, Geo H. Seaman.

BUFF WYANDOTTES.

Cocks—1, Hartland Poultry Yards.

Hens—1, Hartland Poultry Yards; 2 and 3, Alex Donald.

Cockerels—1 and 2, Alex Donald; 3, Hartland Poultry Yards.

Pullets—1 and 2 Alex Donald; 3, Hartland Poultry Yards.

SILVER WYANDOTTES.

All prizes went to E. S. McKie.

GOLDEN WYANDOTTES.

Cocks—, Hartland Poultry Yards; 2, F. Mf Merritt; 3, D. Brace.

Hens—1, F. M. Merritt; 2, Geo. H. Seaman; 3, Hartland Poultry Yards.

Cockerels—1, Geo. H. Seaman; 2, D. Brace; 3, Hartland Poultry Yards.

Pullets—1, D. Brace; 2, Geo. H. Seaman; 3, D. Brace.

PARTRIDGE WYANDOTTES.

Cocks—1, F. M. Merritt; 2, A. A. Leaman.

Hens—1, F. M. Merritt.

Cockerels—1i A. A. Leaman.

Pullets—1, A. A. Leaman.

COLUMBIAN WYANDOTTES

Cocks—1, Orchard Hill Farm; 2, Hartland Poultry Yards.

Hens—2, Orchard Hill Farm; 6, Hartland Poultry Yards.

(Continued on page 254)

You can't judge quality by size— and this applies to bread as well as to men.

YOU may have an idea because western wheat flour makes a big loaf of bread, that the quality is in keeping with the size. The largest men have not accomplished the greatest deeds.

Size is the only feature that can commend western wheat flour to any cook. And the good cook quickly discovers that quantity without quality is not worth buying.

"BEAVER" FLOUR GIVES BOTH QUALITY AND QUANTITY, because it is a blended flour. It is mostly the choicest Ontario fall wheat with sufficient Manitoba spring wheat to equalize the strength.

In "Beaver" Flour, you get the famous pastry-making qualities of Ontario wheat—you get the fine texture, the evenness and the delicious flavor of Ontario wheat—you get the nutriment of Ontario wheat—with the "strength" of Manitoba wheat which makes the dough "stand up" in the oven.

One of the big conveniences of "Beaver" Flour is the fact that it is equally good for bread and pastry—and best for both.

"Beaver" Flour is superior to any western wheat flour for any and all kinds of baking, and is the cheapest flour you can use because the most economical.

DEALERS—write us for prices on Feed, Coarse Grains and Cereals.

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Have City Conveniences

REPLACE the pestilent, draughty, dangerous and offensive out-of-doors closet with an in-doors closet which requires no sewer, no plumbing and no flushing system Have city conveniences in your home.

Safeguard Family Health

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"TWEED CLOSET" SANITARY and ODORLESS

"Tweed" Closets can be installed in the bathroom, cellar, or any other convenient place indoors, merely requiring to be connected by a pipe for ventilation with a chimney hole. "Tweed" Liquid Chemical, used in connection with Tweed Closets, is both a deodorant and a disinfectant. Many hundreds of Tweed Closets have been sold in Canada. Send for illustrated price list. Sold on 30 Days trial.

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9 James Street, TWEED, Ont.

GIRLS WANTED

To work in Paper Box Factory and Printing Office. Good board and lodging provided. Write for terms and particulars to

The D. F. Brown Paper Box Co., Ltd.
ST. JOHN, N. B.

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

25 HANDSOME POST CARDS FOR **25c**
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45 YEARS OLD AND THE LAST YEAR THE BEST OF THE 45

The same enterprise, earnestness, ability and devotion to students' interests which have given this college its present standing, will be continued and every effort made to be worthy of the generous patronage enjoyed.

Next term will begin Thursday, January 2nd.

Send for Catalogue.

THE ST. JOHN Business COLLEGE. S HEAR & SON.

S. KERR Principal.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.
DR. BELL, V. S.
Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

The Shape of Thin and Fat Horses.

The changes which occur in a horse's form during fattening iwere studied by Prof. W. A. Cochel during the feeding test he conducted at the Pennsylvania experiment station. By means of an ingenious linked measuring device the exact outlines of the horse's girth at the chest, middle and flank were recorded at different stages in the fattening process. It was found that in chest, for example, the location of the point of greatest width was nearly 2 inches lower when a horse is thin than after he is fat. In the outlines of the paunch of thin horses there is a flattened appearance above the middle of the body which is filled out during fattening so that the cross section then makes nearly a perfect circle.

Both of these changes result in giving a horse considerably more width of back and loin after he is fat. Average measurements of a carload of horses showed 3.6 inches more width of chest after fattening, 3.7 inches larger heart girth, 3.3 inches more of middle girth and 2.1 inches greater girth at the flank. The measurements also show an increase of .4 of an inch in the height of the withers and .7 of an inch at the croup, while the croup increased .6 of an inch in width and .7 of an inch in length. When the horses were put to hard work so that they lost the surplus fat, they returned almost to their original outlines.

The changes in measurements due to fattening indicated that the large thick muscles along the upper part of the body attract the greatest deposit of fat, presumably to a large extent intermixed with their muscle fibres. As heavy muscles lie over the croup and loin the height at the hips increases during fattening, while the height of the withers remains practically the same.

Winter Hard on Small Pigs.

Many small farmers buy fall pigs and fail to make them do well, but do not know the reason. Fall pigs will not winter well and make a good profit unless several restrictions are carefully submitted to. First, make arrangements to let them have access to out of doors whenever they are disposed to go out. Pigs shut up indoors languish. They want to run out when the weather is severe, even if they return at once some days. Swine carry so much of a coating of fat that they will stand more cold than many suppose. Frequently the kind-hearted owner closes the doors and expects pigs to go on growing. But they refuse. The larger the pigs when severe weather comes on the better they will do. Do not buy late pigs unless you expect to slaughter them for roasters by Febuary at latest. Of course, if you live where the climate is mild, this does not apply. But all young animals must have plenty of exercise.

Second, do not let them work or lie in heating manure. The warmth appeals to them, they spend too much time in it and then rush into the cold, only to be attacked by lung and other kindred troubles. The rooting over of manure in summer will not harm. Give plenty of bedding and a sleeping room where drafts cannot blow over them. And let it be dry. Dampness is detrimental to swine any time, but especially so in winter.

Third, milk is likely to be scarce in winter, and for this reason many persons are not situated right to take on young pigs. They need milk because they are young, and all the more because the weather is trying to digestion. Persons with young swine that do not grow forget some of these things. A hot slop (not too hot) winter mornings is relished by

RAW FURS

Are you a trapper? Are you a dealer? Are you seeking a reliable firm to ship to? Many thousands of shippers say we give best returns, good reasons—we pay as we quote, give a square grade and send your money as quick as the return mail can bring it to you. We post you reliably.

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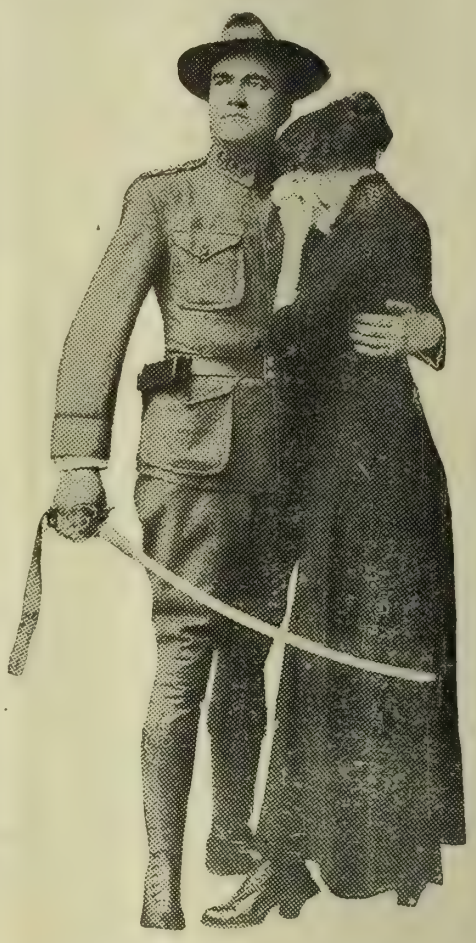
147 West 24th Street, New York. (Mention this paper.)

References. Greenwich Bank, N. Y. East River National Bank, N. Y.

For New Vitality Send Me The FREE COUPON

There is to-day no excuse for any man remaining weak. The vital, manly man is admired by all men as well as all women; there is an influence about him no one can resist; he knows no fear; he knows no weakness; he knows no result of debility. It is this same VITALITY which carries our young soldiers to war without thought of death. Vitality, reader, is what you MUST have if you would enjoy a life of health, strength and manly vigor. I can give you this same life and vitality; if I can do for you what I am doing for thousands of others I can put the vigor of youth into your blood and nerves; I can make you feel young again and keep you feeling young; I can drive away all dibility, weakness and despondency. You will laugh at trouble, you will tackle obstacles with the vim to win, just as all other hearty vital men may do. I don't ask you to use drugs. I ask no change in your present mode of living; just cease all dissipation and then use my HEALTH BELT. All else will come. My Health Belt with suspensory attachment is the greatest nature cure and VITALITY supply that the world has ever known or probably ever will know. Nothing is taken for granted: you feel better immediately, at once, from the first time used. Worn all night, while you sleep, it pours a great stream of Vitality and energy into your weakened system: it is a wonder-working giant of power; made as I now make it, I am getting results of which no man ever dreamed. Just think, over ten thousand men applied to me during the month of February. I am now sending great shipments of my Health Belt to every part of the civilized world. There is a reason, I am curing; I am giving men back their lost strength. It makes you feel ambitious, full of vim; you awaken mornings sparkling with bright, clear-eyed, clear-brained health; the weakness has all disappeared from your back; you are "just feeling fine." Special attachments to my Health Belt cure rheumatism, kidney, liver and stomach trouble.



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Fill in the coupon; let me send you at once my free booklet in plain sealed envelope; it is profusely illustrated with half-tone photos; keep it in your pocket for easy reference; read the chapter on Vitality; read the chapter on Debility; read the chapter on those subjects which interest every man, young or old, who would be strong in manly vigor. It is a word of hope, a carefully written, interesting booklet, which should be in everyone's possession. Therefore, send to-day. If in or near the city, call at my office. Free

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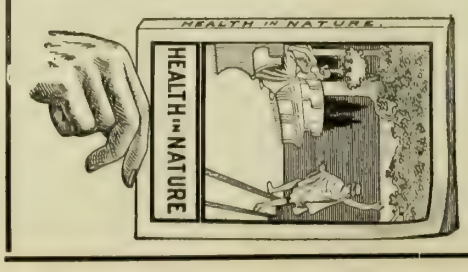

NAME.....

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ADDRESS.....

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all hogs, and seems needful where the pigs are making their first growth.

Fourth, constipation, that enemy of all animals is more than likely to attack young pigs that are deprived of green food, and under stress because of any lack of nutrition. It must be guarded against. Give fruits, vegetables, sods, branches of apple trees, bran, middlings, molasses, small doses of wood ashes, and lastly, if necessary to get the bowels in order, persistent driblets of glauber salts in the food. Their internal and external functions must all be active and harmonious. Then winter pigs will grow and pay.

The Sire Half the Herd.

This statement has been made so often that it has come to be generally accepted as true, although few breeders know just how it works out. The following table shows the rapidity with which the blood of a sire accumulates in the high grades. The same figures hold when sire of one breed or family are used on a herd.

Generation.	Blood.	Improved p. c,	Unimproved p. c.
1	½	50	50
2	¾	75	25
3	⅞	87.5	12.5
4	15-16	93.75	6.25
5	31-32	96.87	3.12
6	63-64	98.43	1.56

Founding a Sheep Flock.

Since the new edition of the bulletin "Sheep Husbandry in Canada" was issued a few weeks ago, there has been a constant stream of requests for it flowing into the publications Branch at Ottawa. A great many of the applicants state that they are just commencing, or are about to commence, sheep raising and that they wish to learn how to handle a flock successfully. This bulletin contains a chapter specially prepared for such persons describing how best to establish a flock of commercial sheep. The author, Mr. J. B. Spencer recommends a flock of fifteen ewes as the minimum for a farm of one hundred acres. Such a flock can be increased with experience, but not beyond twenty to twenty-five unless it is desired to make a special business of sheep raising. With the management and care described in the bulletin, an increase through lambs can be expected of from 150 to 175 per cent. and it should be the latter.

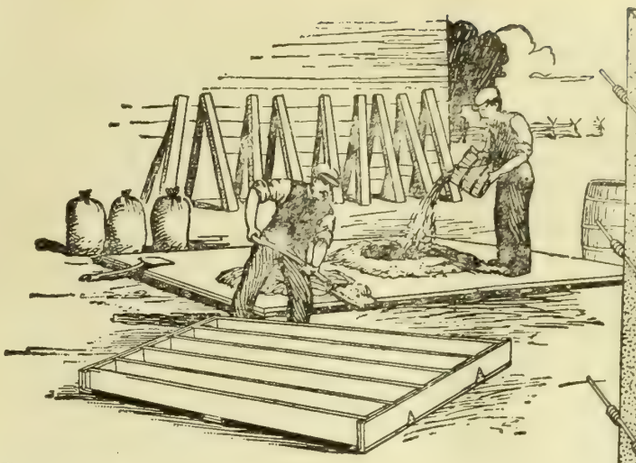
The early weeks of autumn is stated to be the best time to purchase ewes as then one can select those that have raised good lambs.

Before the present edition of the bulletin is fully exhausted a still further one will be ordered so that no one need hesitate about ordering a copy which will be sent free to all who apply for it to the publications Branch, Department of Agriculture Ottawa.

Twelve Years of Persistent Showing.

Public interest in the poultry departments at the Maritime Winter Fair is maintained and growing. At the recent Fair, Craig Bros. were the sole survivors of the first exhibitors there twelve years ago. During the twelve years, Craig Bros. have been consistent winners and have always courted a strong rivalry in the variety of their choice, Barred Plymouth Rocks. When they were beaten in the Utility classes this year they had the satisfaction of seeing the winnings go to their patrons.

In commenting on Craig Bros. persistency in showing one of the Amherst papers said: "Men may come and men may go in the poultry show but Craig Bros. apparently are in the game for keeps."



Turn idle hours into concrete fence posts

EVERY farmer finds himself now and then with a few idle hours in which both himself and his help must look for "odd jobs" to keep them busy. Use these hours to make concrete fence posts. You can make a few at a time, storing them until needed. Then when you want a fence in the new field, your posts—everlasting, concrete posts—are all ready to use. The making of fence posts is only one of scores of every-day uses for concrete on the farm described in the book,

"What The Farmer Can Do With Concrete"

NOTE—This 160 page book will be sent to you free upon request. You do not have to agree to use cement or place yourself under any other obligation. Just send us your name and address. Address,

Publicity Manager

Canada Cement Company Limited

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WHEN you buy cement, remember that the farmers of Canada have found that "Canada" Cement is best. Look for the label on every bag and barrel.

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Prove the "BISSELL" by Its Work

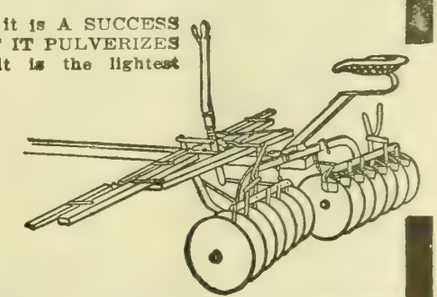
Do the gangs on your Harrow crowd together and raise out of the ground if it is hard? They won't do this on the "Bissell." The "Bissell" is so designed that THE GANGS CAN'T CROWD OR BUMP together no matter how hard the ground may be.

Tough soil won't stick the "Bissell." It stays right down to its work and pulverizes the ground thoroughly.

We ask you to take a "Bissell" out into the field and test it beside other Harrows. Then you will HAVE PROOF that it is A SUCCESS ON HARD LAND—THAT IT PULVERIZES THE BEST—and that it is the lightest draught.

Post yourself fully on Harrows before buying. We put our name on every Harrow so that you will know it is genuine. Ask your local dealer, or write to Dept M for free catalogue.

60



T. E. Bissell Company, Limited, Elora, Ont.

Fruit Growing in Canada.

A year ago the Department of Agriculture at Ottawa, through the Branch of the Dairy and Cold Storage Commissioner, undertook an investigation of the fruit growing conditions throughout Canada. The enquiry was intrusted to Mr. Wm. H. Bunting, an extensive fruit grower at St. Catherines, Ont., who secured as much information as possible on the following paints:—

1. The possibilities of an extension of the fruit growing industry of Canada in the different localities visited.

2. The tendencies in the matters of the planting and growing if different kinds of fruit, and with regard to apples, the varieties which are being most extensively planted in the different districts.

3. The difficulties which are likely to be encountered in the further development of the fruit growing industry.

4. Methods of production and orchard management which have been most successful in the different districts, and the probabilities of over production.

5. The conditions under which British Columbia, Ontario and Maritime Province fruit is marketed in the prairie Provinces as well as the character and the effect of American competition.

The enquiry was concluded in due time and the report has been printed for general distribution. It contains a large amount of detailed information gathered in every province making it an invaluable guide to persons who desire to take up fruit growing as an industry.

In his general conclusions Mr. Bunting points out that while the growing of fruit offers ample reward to the man of energy, patience and perseverance, there is perhaps no phase of agricultural endeavour which requires to be more closely studied and in which a wider range of information is more desirable and necessary. The future of the industry he states, was never brighter than it is today, the prospects never more attractive nor the field of extensive effort in all fruit growing provinces more inviting.

The report which contains eighty-four printed pages and many illustrations is available to all who apply for it to the Publications Branch of the Department of Agriculture, Ottawa, Ont.

A COLD
However Slight
MAY TURN INTO BRONCHITIS.

You should never neglect a cold, however slight. If you do not treat it in time it will, in all possibility, develop into bronchitis, pneumonia, asthma, or some other serious throat or lung trouble.

On the first sign of a cold or cough it is advisable to cure it at once, and not let it run on for an indefinite period.

For this purpose there is nothing to equal Dr. Wood's Norway Pine Syrup, a remedy that has been universally used for the past twenty-five years.

You do not experiment when you get it.

Mrs. Louis Lalonde, Penetanguishene, Ont., writes:—"When my little boy was two years old he caught a cold which turned into bronchitis. I tried everything to cure him, even to doctor's medicine, but it did him no good. One day I was advised to give Dr. Wood's Norway Pine Syrup a trial, and before he had half a bottle used, he was cured. I would advise all mothers to try it, as good results will follow. My home is never without it."

See that you get "Dr. Wood's," as there are numerous imitations. It is put up in a yellow wrapper, 3 pine trees the trade mark; the price, 25 and 50 cents. Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

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We can save you just half of the money you pay now and remember we sell nothing but Pure Parchment.

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Direct Parchment Importers, Sussex, N. B.

Moncton Poultry Show Prize Winners.

(Continued from page 251)

Cockerels—1, Orchard Hill Farm; 2, Hartland Poultry Yards.
Pullets—1, Orchard Hill Farm; 2, Hartland Poultry Yards.

WYANDOTTES, A. O. V.

All prizes won by Hartland Poultry Yards.

AMERICAN A. O. V.

All prizes went to F. M. Merritt.

BUFF ORPINGTONS.

Cocks—1, Watson Lutz; 2, John Stewart.
Hens—1, John Stewart; 2, Hugh Jardine, Jr.; 3, Watson Lutz.
Cockerels—1 and 2, Watson Lutz; 3, John Stewart.
Pullets—1, Watson Lutz; 2, Hugh Jardine, Jr.; 3, John Stewart.

BLACK ORPINGTONS.

Cocks—1, Chas. E. Norton; 3, Hartland Poultry Yards.
Hens—1, ———; 2, Hartland Poultry Yards.
Cockerels—1, ———; 2, Chas. E. Norton; 2, Hartland Poultry Yards.
Pullets—1, Chas. E. Norton; 2, Hartland Poultry Yards.

DORKINGS, A. V.

Corks—1, Harry Day; 2, Hartland Poultry Yards.
Hens—1 and 2, Harry Day; 3, Hartland Poultry Yards.
Cockerels—1, Harry Day; 2, N. J. Govang.
Pullets—1, N. J. Govang; 2, Harry Day.

BLACK SPANISH.

Cocks—1, Robert Swetnam; 2, Hartland Poultry Yards.
Hens—1, Robert Swetnam; 2, Hartland Poultry Yards.
Cockerels—1, Robert Swetnam.
Pullets—1 and 2, Robert Swetnam; 3, Hartland Poultry Yards.

ANCONAS.

Cocks—1, Hartland Poultry Yards.
Hens—Hartland Poultry Yards.
Cockerels—1, ———; 2, N. J. Govang.
Pullets—1 and 2, Jos. G. Stockford; 3, Hartland Poultry Yards.

HOUDANS.

Cocks—1, Harry Day.
Hens—1 and 2, Harry Day; 8, Hartland Poultry Yards.
Cockerels—1, Hartland Poultry Yds.
Pullets—1, Hartland Poultry Yds.

POLANDS, W. C. B.

Hens—1, Hartland Poultry Yards.

FRENCH, A. O. V.

All prizes went to Hartland Poultry Yards.

POLANDS, A. O. V.

Cocks—1, Hartland Poultry Yards; 2, Harry Day; 3, W. Wilson.
Hens—1, Harry Day; 2, Hartland Poultry Yards; 3, W. Wilson.
Cockerele—1, W. Wilson; 2, Hartland Poultry Yards; 3, W. Wilson.
Pullets—1, Harry Day; 2 and 3, W. Wilson.

HAMBURGS, PEACILLED.

Cocks—1 and 2, H. C. Lemmon; 3, Hartland Poultry Yards.
Hens—1 and 2, H. C. Lemmon; 3, Hartland Poultry Yards.
Corkerels—1, F. M. Merritt; 2, Hartland Poultry Yards.
Pullets—1, Hartland Poultry Yards; 2, F. M. Merritt.

HAMBURGS, BLACK.

Cocks—1, Hartland Poultry Yards.
Hens—1, H. C. Lemmon; 2, Hartland Poultry Yards.
Cockerels—1, Scott and Warren; 2, Hartland Poultry Yards; 3, F. M. Merritt.
Pullets—1, Scott and Warren.

BLACK LANGSHANS.

Cocks—1, Alex Donald.
Hens—1, Hartland Poultry Yards; 2, Alex. Donald.
Cockerels—1, N. J. Govang; 2, Alex Donald.
Pullets—1, N. J. Govang; 8, Alex Donald.

HAMBURGS, SPANGLED.

Cocks—1, Geo. McEachren; 2, N. J. Govang; 3, Hartland Poultry Yards.
Hens—1, Geo. McEachren; 8, N. J. Govang; 3, F. M. Merritt.
Cockerels—1, Scott and Warren; 2, F. M. Merritt; 3, Hartland Poultry Yards.
Pullets—1, N. J. Govang; 2, Hartland Poultry Yards; 3, F. M. Merritt.

GAME, B. B. RED.

All prizes won by William H. Jackson.

PLYMOUTH ROCKS, BUFF.

Cocks—1, A. E. S. Hatfield; 2, Hartland Poultry Yards.
Hens—1, John Stewart; 2, A. E. S. Hatfield; 3, Hartland Poultry Yards.
Cockerels—1, ———; 2, A. E. S. Hatfield.
Pullets—1, A. E. S. Hatfield; 2, Hartland Poultry Yards.

PLYMOUTH ROCKS, BARRED.

Cocks—1, Watson Lutz; 2, N. A. Rae; 3, Hartland Poultry Yards.
Hens—1, Watson Lutz; , Hartland Poultry Yards; 3, Watson Lutz.
Cockerels—1, Watson Lutz; 2, Glenview Poultry Yards; 3, Watson Lutz.
Pullets—1, Watson Lutz; 2, Glenview Poultry Yards; 3 and 4, Watson Lutz.

MINORCAS, R. C. BLACK.

Hen—1, John Stewart.

RED CAPS.

All prizes went to Hartland Poultry Yards.

INDIAN WHITE GAME.

All prizes won by William H. Jackson.

GAME PYLE.

Hens—1, 2 and 3, William H. Jackson.

GAME BLACK SUMATRA.

All prizes went to H. C. Lemmon.

GAME A. O. V.

All prizes won by William H. Jackson.

WHITE WYANDOTTES.

Cocks—1, Watson Lutz; 2, Samuel Steeves; 3, Maritime Poultry Supply Co.
Hens—1, Watson Lutz; 2 and 3, Maritime Poultry Supply Co.; 3, Samuel Steeves.
Cockerels—1, Joseph Crockett; 2, George Proud; 3, F. McFarlane.
Pullets—1 and 2, Samuel Steeves; 3, Joseph Crockett; 4, Watson Lutz.

PLYMOUTH ROCKS, WHITE.

Cocks—1, Harry McGee; 2, Allison Lutz; 3, Hartland Poultry Yards.
Hens—1, Harry McGee; 5, Allison Lutz; 3, Hartland Poultry Yards.
Cockerels—1, Harry McGee; 2, Hartland Poultry Yards.
Pullets—1, Harry McGee; 2, F. M. Merritt; 3, Hartland Poultry Yards.

LEGHORNS, S. C. WHITE.

Cocks—1 and 2, Maritime Poultry Supply Co.; 3, F. M. Merritt.
Hens—1, Odbur James; 2 and 3, Maritime Poultry Supply Co.
Cockerels—1, Joseph Landry; 2, Odbur James; 3 and 4, Maritime Poultry Supply Co.
Pullets—1, 2 and 3, Maritime Poultry Supply Co.; 4, F. M. Merritt; 5 and 6, Joseph Landry.

LEGHORNS, R. C. WHITE.

Cocks—1, N. J. Govang; 2, H. C. Lemmon; 3, Hartland Poultry Yards.
Hens—1 and 2, N. J. Govang; 3, Hartland Poultry Yards.
Cockerels—1, N. J. Govang; 2, William H. Jackson; 3, H. C. Lemmon.
Pullets—1 and 2, N. J. Govang; 3, Hartland Poultry Yards.

WHITE ORPINGTONS.

Cocks—1, M. B. Jones; 2, R. P. R. Fraser.
Hens—1 and 2, R. P. R. Fraser.
Cockerels—1, Ml B. Jones.
Pullets—1, M. B. Jones.

WHITE MINORCAS.

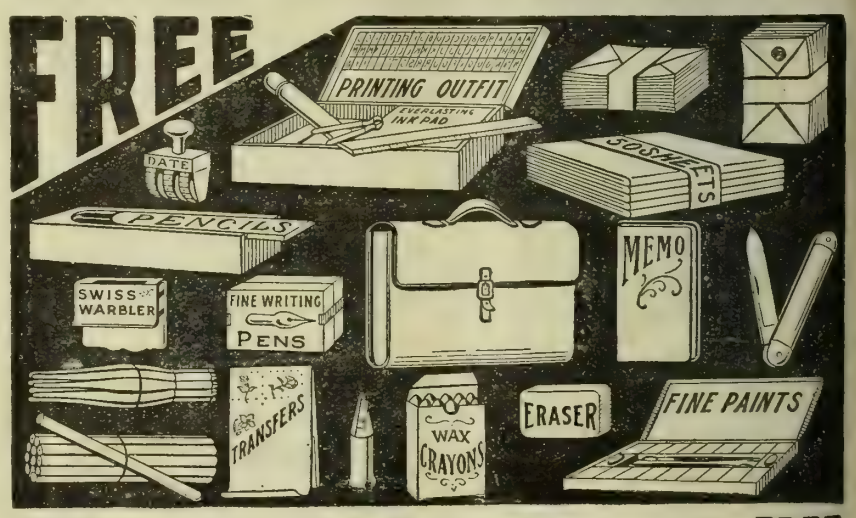
All prizes won by Hartland Poultry Yards.

WHITE COCHINS.

All prizes won by Robert Balser.

LIGHT BRAHMAS.

Cocks—1, Chas. Smith; 2, Hartland Poultry Yards; 3, Harry Day.
Hens—1, Hartland Poultry Yards; 2, Dr. E. A. Smith; 3, Harry Day.



FREE This 150 PIECE Complete Scholar's Outfit FREE

BOYS AND GIRLS, NEVER BEFORE IN CANADA HAS SUCH A GRAND PREMIUM BEEN OFFERED AND SO EASY TO GET.

READ WHAT THIS GRAND SCHOLAR'S OUTFIT CONTAINS.

1 large leather bound school bag, 1 dozen fine quality H. B. pencils, 6 steel tip pen holders, 1 dozen 292 pennibs, 50 sheets of writing paper, 1 dozen envelopes to match, 1 box of 15 water color paints with brushes and pots, 10 beautiful drawing crayons of different colors, 1 fine quality steel blade penknife, 1 large hardwood slide top pencil box, 1 complete printing outfit containing type, ink, tweezers and stamping pad, 1 twelve inch ruler, 1 large memorandum book, 1 complete dater good for five years, 1 large rubber eraser, 1 steel blade pencil sharpener, and last but not least, 1 Swiss warbler the greatest invention for imitating birds and animals.

Think of it this scholar's complete outfit is **FREE.** We are determined to sell a million packages of Marvel Bluing this year and are sparing no expense to reach this mark.

Marvel Bluing is a great improvement on the old style of bluing and goes twice as far. Everybody buys it because it is so good and a present is given away with every package.

We will give you one of these grand scholar's outfits **IF YOU WILL AGREE TO SELL ONLY 25 PACKAGES OF MARVEL BLUING AT ONLY 10c. PER PACKAGE.** Any boy or girl can sell 25 packages easy. No trouble at all.

We send you the Marvel Bluing free and trust you with it until sold. Simply send us your name and address to-day. Every girl and boy should win one of these grand scholar's outfits.

Try. If you can't sell the Marvel Bluing send it back to us.

Address to-day **THE MARVEL BLUING CO., Dept. S. 101 Toronto, Ont.**

EXTRA SPECIAL PRIZE FOR PROMPTNESS

A $2.50 fountain pen has 14k solid gold nib, with Iridium tip, large hard rubber bowl, a guaranteed writer. Every boy and girl has an opportunity to secure one of these fountain pens, just for being prompt in answering this advertisement.

Come again, Pie Time, and often.
For wholesome, *digestible* "eats"
—give us PIE.
At its very *best* wrapped in a FIVE ROSES crust.
Upsets Pie Prejudice *without* upsetting the Eater's Insides—FIVE ROSES flour.
Great for Pie Crust — top and bottom.
And Puff Paste and *Difficult* Things.
Close-grained — melting — even textured.
Flaky, too, and crinkly — crisp yet *tender*.
Put into *your* bake things the rare nutlike sweetness of *Manitoba* wheat kernels.
All soppy with the rich red juice of the cherry—or lemon pie—or apple—or healthy custard—meat, may be, or mince—
Put the FIVE ROSES "crust end" about 'em.
See the hungry *wedges* fade behind busy milk teeth.
At Pie Time—
Use FIVE ROSES.

Five Roses Flour

Not Bleached Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED MONTREAL

Cockerels—1, Dr. E. A. Smith; 2, Hartland Poultry Yards.
Pullets—1, Dr. E. A. Smith; 2,——. 3, F. M. Merritt.

DARK BRAHMAS.

Cocks—2 and 3, Harry Day.
Hens—1 and 2, Harry Day.
Cockerels—1,——; 2, and 3, Hartland Poultry Yards.
Leghorns, A. O. V.—1, Cock, hen and pullet, Hartland Poultry Yards.
Langshans, Black, cocks—1, Alex. Donald.
Hens—1, Hartland Poultry Yards; 2, Alex Dobald.
Cockerels—1, N. J. Govang; 2, Alex Donald.
Pullets—1, N. J. Govang; 2, Alex Donald.

BUFF COCHINS.

Cock—1 and 2, William A. Balser; 3, D. D. Leger.
Hens—1, 2 and 3, William Balser.
Cockerele—1 and 2, William Balser; 3, Hartland Poultry Yards.
Pullets—1 and 2, William Balser; 3, Hartland Poultey Yards.

PARTRIDGE COCHINS.

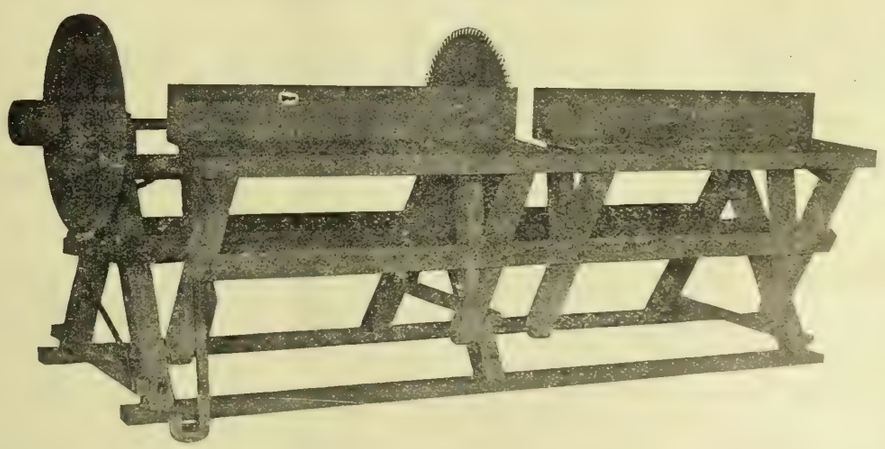
Cocks—1, Harry Day; 2, Hartland Poultry Yards; 3, Harry Day.
Hens—1, 2 and 3, Harry Day.
Cockerels—1. 2 and 3. Harry Day.
Pullets—1, 2 and 3, Harry Day.

BLUE ANDALUSIANS.

Cocks—1, Hartland Poultry Yards; 2, Geo. McEachren.
Hens—1, H. C. Lemmon; 2 and 3, Geo. McEachren.
Cockerels—1,——; 2, Hartland Poultry Yards.

SUSSEX WOOD CUTTERS

Made in Four Different Sizes



We are offering these machines to the public with the belief that they are the best wood cutting machines on the market for the money. The Frame is made of the best seasoned hardwood, and well bolted. The Arbor is of the best turned steel, and runs in bearings made of the finest quality babbit. The Balance Wheel is a solid web and weighs 180 lbs. The Table is of heavy Steel Plates and indestructable. Wood Cutters are shipped with 28 in. saws unless otherwise ordered.

Remember we manufacture the celebrated Little Giant Thresher, The Sussex Root Pulper, Farmer's Feed Boilers, Grain Grinders and Hay Presses.

The SUSSEX MANUFACTURING CO., Limited, SUSSEX, N. B.

GAME INDIAN CORNISH.

Cocks—1, Geo. McEachren; 2, F. M. Merrit; 3, Hartland Poultry Yards.

Hens—1, Hartland Poultry rds; 2, H. C. Lemmon; 3, Geo. McEachren

Cockerels—1, Geo. McEachren; 2, F. M. Merritt; 3, Lloyd J. Murray.

Pullets—1, Hartland Poultry Yards; 2, Geo. McEachren; 3, F. M. Merritt.

LEGHORNS, S. C. BROWN.

Cocks—1 and 2, Glenview Poultry Yards; 3, Scott and Warren.

Hens—1, Hartland Poultry Yards; 2, Glenview Poultry Yarhs; 3, Scott and Warren.

Cockerels—1 and 2, Glenview Poultry Yards; 3, Scott and Warren.

Hartland Poultry Yards

Pullets—1, Scott and Warren; 2, Hartland Poultry Yards; 3, Glenview Poultry Yards.

LEGHORNS, R. C. BROWN.

Cocks—1, Scott and Warren; 2, Hartlana Poultry Yards.

Hens—1, Scott and Warren; 2, Hartland Poultry Yards.

Cockerels—1, Hartland Poultry Yds.

Cockerels—1, Hartland Poultry Yds.

Pullets—1, Hartland Poultry Yds.

LEGHORES, R. C. BUFF

Cocks—1, Maritime Poultry Supply Co.; 2, Hartland Poultry Yards.

Hens—1, Maritime Poultry Supply Co.; 2, Hartland Poultry Yards.

Cockerals—1,——— ; 2, Hartland Poultry Yards; 3, Maritime Poultry Supply Co.

Pullets—1, Hartland Poultry Yds.; 2 and 3, Maritime Poultry Supply Co.

BANTAMS, COCHIN, Black.

Cocks—1, R. B. Stewart; 2 and 3, Arthur E. Stone.

Hens—1, Arthur E. Stone; 2, R. B. Stewart; 3, Hartland Poultry Yards; 4, F. M. Merritt.

Cockerels—1, Alex. Donald; 2, F. M.Merritt; 3 and 4, R. B. Stewart.

Pullets—1, Alex. Donald; 2 and 3, Arthur E. Stone; 4, F. M. Merritt.

BREEDING PENS.

PLYMOUTH ROCKS, BARRED.

Cockerel Mating—1 and 2, Watson Lutz; 3, Hartland Poultry Yards.

Pullet Mating—1, Watson Lutz; 2, Glenview Poultry Yards; 3, Hartland Poultry Yards.

BROWN LEGHORNS.

Cockerel Mating—1, Glenview Poultry Yards; 2, Hartland Poultry Yds.

Pullett Mating—1, Glenview Poultry Yards;2, Hartland Poultry Yds.

LEGHORNS, A. O. V.

1 and 2, Maritime Poultry Supply Co.; 3, F. M. Merritt.

WHITE WANDOTTES.

1, Watson Lutz; 2, Glenview Poultry Yards; 3, Hartland Poultry Yds.

AMERICAN BREEDS, A. O. V.

1, Miss Louise C. Brown; 2 and 3, Hartland Poultry Yards.

ANY OTHER VARIETY.

1, R. B. Stewart.

WHITE WYANDOTTES, Utility.

Cockerels—1, F. P. McFarlane.

RHODE ISLAND REDS, S. C.

Miss Louise C. Brown, 1st cock and 1st and 2nd hen.

PLYMOUTH ROCKS, BARRED.

Cocks—1, Allison Lutz; 2, C. W. Osburne.

Hens—Prizes went to C. W. Osburne

Cockerels—1 and 3, A. E. Lutz; 2, Allison Lutz.

Pullets—1 and 3, A. E. Lutz; 2, Allison Lutz.

ANY OTHER VARIGTY.

Pullets—Prizes went to Aubrey E. Lutz.

UTILITY BREEDING PENS

WYANDOTTES, A. V.

1— J. Titus Barnes.

PLYMOUTH ROCKS, A. V.

1, Aubrey E. Lutes; 2, Allison Lutz; 3, Harry Magee.

BANTAMS.

GAME, B. B., RED.

Cocks—1, F. M. Merritt; 2, William H. Jackson.

A PAGE OF

UNDERGARMENTS FOR WOMEN

AT MID-WINTER SALE PRICES

There is Value in Each of These Garments

22-720 — Ladies' Underskirt of fine Cambric; deep flounce of two rows of wide fish lace insertion and wide lace at bottom to match, and dust ruffle. This skirt is made on the new narrow model. Lengths 38 to 42. **Only** ..... .98

22-580—Ladies' Chemise, made of fine quality Cambric, square yoke of eyelet embroidery, threaded with silk ribbon. neck and arms finished with fine embroidery edging. Bust sizes 34 to 44. **Only** .... .. .69

22-457 — Ladies' Princess Slip made of fine Cambric; with fine embroidery V-shaped yoke, threaded with ribbon and finished with lace edging; arms finish- to match; bottom of skirt finished with a wide frill of tucked lawn and open embroidery flounce. Bust sizes 34 to 44. **Only** **$1.19**

22-1094 — Ladies' Underskirt of fine Cambric; wide flounce of dainty open work embroidery; finished with several pin tucks and dust ruffle This is our leader. Lengths 38 to 42. **Only** ..... .98

22-2309 — Ladies' Combinations of fine quality Cambric, with yoke of embroidery and lace insertion, threaded with silk ribbon; neck and arms are edged with fine lace edging; drawers trimmed with frill of lawn, finished with tucks and lace edging. Bust sizes 34 to 44. **Only** **$1.19**

32-2308—Ladies' Princess Slip of fine Cambric; square yoke of embroidery and lace insertion, threaded with silk ribbon; neck and arms edged with fine lace edging, and the skirt is finished with wide open work embroidery. Bust sizes 34 to 42. **Only** 98

22-560 — Ladies' Short Chemise, made of fine quality Cambric; round yoke of embroidery, lace beading, and lace edging around neck and arms. Good full sizes, 34 to 44 bust. **Only** .... .49

DO NOT FORGET TO GIVE CATALOGUE NUMBER AND SIZE WHEN ORDERING.

WE PREPAY CHARGES.

The Largest Store in Canada's Largest City

Goodwins Limited

MAIL ORDER DEPT.

MONTREAL, CANADA.

Send for our Mid-Winter Sale Catalogue

Hens—1 and 3, F. M. Merritt; 2, William H. Jackson.

Cockerels—1, F. M. Merritt; 2, Lloyd Seaman.

Pullets—1 and 2, F. M. Merritt; 3, Lloyd Seaman.

GAME, A. O. V.

All prizes went to William H. Jackson.

BLACK COCHINS.

Cocks—1, R. B. Stewart; 2, Maritime Poultry Supply Co.

Hens—1 and 3, R. B. Stewart; 2, Maritime Poultry Supply Co.

BUFF COCHINS.

Cocks—1, Lloyd Seaman; 2, Alex. Donald; 3, Jos. Crockett.

Hens—1, Maritime Poultry Supply Co.; 2 and 3, Lloyd Seaman.

Cocnerles—1, F. M. Merritt; 2, Maritime Poultry Snpply Co.; 3, Alex. Donald.

Pullets—1, Alex. Donald; 2, F. M. Merritt; 3, Lliyd Seaman.

Cockerels—1, F. M. Merritt; 2, Lloyd Seaman; 3, Maritime Poultry Supply Co.

Pullets—1, F. M. Merritt; 2 and 3, Maritime Poultry Supply Co.

WHITE COCHINS.

Cocks—1, S. E. McKie; 2, H. C. Lemmon; 3, F. M. Merritt.

Hens—1, H. C. Lemmon; 2, S. E. McKie.

Cockerels—1, Maritime Poultry Supply Co.; 2, F. M. Merritt.

Pullets—1, Maritime Poultry Supply Co.; 2, F. M. Merritt.

R. C. WHITE.

Cocks and Hens—Prizes went to Maritime Poultry Supply Co.

R. C. BLACK.

Cocks, Hens, Pullets—Prizes went to Maritime Poultry Supply Co.

SEABRIGHT, A. V.

Cocks—1 and 2, F. M. Merritt; 3, Dr. E. A. Smith.

Hens—1, F. M. Merritt; 2, William H. Jackson; 3, Dr. E. A. Smith.

Cockerels—1 and 2, Robert Swetman.

JAPANESE.

Cockerels and Pullets—Prizes went to Maritime Poultry Supply Co.

Free to Stock and Poultry Raisers

We will send absolutely free, for the asking, postpaid, one of our large sixty-four page books, with insert, on the common diseases of stock and poultry. Tells how to feed all kinds of heavy and light horses, colts and mares, milch cows, calves and fattening steers; also, how to keep and feed poultry so that they will lay as well in winter as summer. No farmer should be without it.

NOW is the time to use Royal Purple Stock Specific. At a cost of only two-thirds of a cent per day per animal, it will increase it 25 per cent. in value. It permanently cured Bots, Colic, Worms, Skin Diseases and Debility. Restores run-down animals to plumpness and vigor. It will increase the milk yield three to five pounds per cow per day and make the milk richer.

Royal Purple is not a stock food. There is no filler used in its manufacture, and we import from Europe all the seeds, herbs, barks, etc., and grind them on our own premises. Therefore, we can guarantee it to you as being absolutely pure. We do not use cheap filler to make up a large package. We give you the best condition powder ever put on the market in a concentrated form.

A tablespoon levelled off, once a day, is sufficient for a full-grown animal. It prvents disease, keeps your animals in perfect health, and is absolutely harmless. It makes six-weeks-old calves as large as ordinary calves at ten weeks. You can develop six pigs ready for market in just one month's less time than you can possibly do without it, at a cost of only $1.50, saving you a month's work and food.

A 50c. package will last a horse 70 days. A $1.50 pail or air-tight tin, containing four times as much as a 50c. package, will last an animal 280 days.

If you have never used it, try it on the poorest animal you have on your place, and watch results. If it does not produce better results than anything you have ever used, or give you satisfaction, we will refund your money.

Toledo, Ont., July 1, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—I have used a part of a package of your "Royal Purple Stock Specific." I fed it to one cow according to directions. She gained six pounds of milk while using part of a package. The rest of my herd reduced in milk while this one gained. I consider it has no equal.

T. G. BELLAMY.

Bondhead, Ont., Aug. 31, 1912.

The W. A. Jenkins Mfg. Co., London, Ont.

Gentlemen,—After experimenting with a great many stock foods, I was about convinced that there was very little virtue in any of it, but your dealer insisted on me trying Royal Purple Stock Specific, saying it was different from all others. I have since used a great lot of it, as I keep from ten to twenty horses and about the same of cattle. This Specific, in my opinion, is certainly in a class by itself as a conditioner, and is the best I have ever used.

GEORGE MAPES.

Clear Creek, Ont., Sept. 19, 1912.

W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Your "Royal Purple" Stock Specific is the best stock conditioner I have ever had in my stables, and am never without it. I had a brood sow that had milk fever very bad. Your "Royal Purple" saved her life. Put her on her feet in three days. I had three calves last spring that got scouring very badly. Could not get it stopped until I used "Royal Purple." It did the work O.K.

Yours truly, H. B. MOULTON.

Saskatoon, Sask., Sept. 20th.

The W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—Some months ago we bought some of your Royal Purple Stock Specific from Mr. Vogan here. We have been using it ever since, and we find it the best conditioner for driving horses we have ever tried.

H. F. McCALLUM, "The Palace Livery."

Scott, Sask., May 22nd, 1911.

The W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Do you want a man to represent your Royal Purple goods in this district. I am from Ontario, and have fed your Stock Specific—got it from Mr. J. Corbett, of Brownsville. My cows, while us ng it, made the largest average, and tested five points over average at C.M.P. at Brownsville. I know your goods are the highest class Stock Specific on the market, and take great pleasure in representing you in this district

NORMAN G. CHARLTON.

Royal Purple Poultry Specific

will make your hens lay in winter, as well as summer, and yet a 50c. package will last 25 hens 70 days, or a $1.50 pail or air-tight tin, containing four times as much as a 50c. package, will last 280 days. It prevents poultry from losing flesh at moulting time, cures and prevents all the ordinary diseases, makes their plumage bright, and keeps them in prime condition.

Port Colborne, May 11.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—This is to certify that I have used one $1.50 tin of your "Royal Purple" Poultry Specific, and there is nothing that can equal it. I wanted yours again and your agent did not have any, so he gave me another brand, and I can assure you it was not worth carrying home, for my hens layed better without it. I have been from 12 to 15 dozen eggs short every week since I have not used your "Royal Purple."

CHARLES RICHARDSON.

Sherbrooke, Que., Aug. 1, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—I have used your Specific for one year, and have given it to my birds with good results. See my winnings at the different fairs, which will tell the tale.

MISS GEORGINA CAMIRAUD.

Royal Purple Cough Specific

During the last four years there has been an epidemic cough going through every stable in Canada, which has been a great source of annoyance to horsemen. Our Royal Purple Cough Cure will absolutely cure this cough in four days, will break up and cure distemper in ten days. Absolutely guaranteed. 50c. per tin; by mail, 55c.

Royal Purple Gall Cure

will cure all sorts of open sores on man or beast. Will absolutely dry up and cure scratches in a very few days.

MR. SAM OWEN, coachman for the Hon. Adam Beck, says: "By following directions, I find your Royal Purple Gall Cure will cure scratches and make the scabs peel off perfectly dry in about four or five days." Price, 25c.; by mail, 30c.

Royal Purple Sweat Liniment

will reduce lameness in a very short time. Mr. John M. Daly, coalman in London, says: "We have nine horses constantly teaming coal, and have all kinds of trouble with them being lame at times. I have used your Sweat Liniment for a year back, and have never known it to fail to cure sprained tendons, etc." Price, 50c., 8-ounce bottles; by mail, 60c.

Royal Purple

STOCK AND POULTRY SPECIFICS

A second from Mr. Richardson as follows :—

Port Colbborne, Ont., Aug. 24, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—Please find enclosed express order for $3.00, for which please send me two tins of your "Royal Purple" Poultry Specific.

C. RICHARDSON.

A third letter from Mr. Richardson as follows :—

Port Colborne, Ont., Aug. 29, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—I received two tins of "Royal Purple" Poultry Specific all O.K. I have tried all kinds of specific to make my hens lay, and I find that you are the only ones that manufacture the genuine article. All the rest, I think, is a waste of time and money to bother with. As an egg-producer, I cannot praise your Poultry Specific high enough, for I would not be without it if I had to pay double the money.

C. RICHARDSON.

Royal Purple Lice Killer

This is entirely different from any lice killer on the market. In order for you to understand the process of manufacture of this lice killer, you will have to send for one of our booklets, as we give you a full history of it there. It will entirely exterminate lice on fowls or animals with not more than one or two applications. It smothers them. Price 25c.; by mail, 30c.

Royal Purple Disinfectant (Sheep Dip)

In this line we give you the largest value for the money of any disinfectant on the market. A tin containing 1 3-8 qts. Imperial measure will cost you only 50c. Also put up in 25c. tins.

Royal Purple Roup Cure

Mr. Dulmage, the great breeder, of White Rocks, tells us that he has never used a Roup Cure that will give relief so quickly to hens suffering from Roup or kindred diseases. Our book tells you all about it. 25c. per tin; 30c. by mail.

Royal Purple Worm Powders

For animals. 25c. per tin; by mail, 30c.

In using our Stock Specific, we guarantee you better results by using the ordinary food grown on your farm, such as good hay, oats and bran, and so forth, than you can possibly obtain by using any of the many patent foods on the market. In these the percentage of nutrition is usually very small for the amount of money paid for the same. You know exactly what hay, oats, bran, chop or any farm products cost you, and ROYAL PURPLE makes animals digest these foods properly.

What we wish to impress on your mind is that we manufacture nothing but pure, unadulterated goods. Our booklet gives over 300 recommendations for our different lines from people all over Canada. While we give you above the names of a few who have used it, our best recommendation is for you to ask any person who has ever used any line we manufacture. 26

These goods may be obtained from, Halifax Seed Co., Halifax; Amherst Trading Co., Amherst; A. Horne & Co., Charlotte town; Maynes & Riley, St. John.

W. A. JENKINS MANFG. CO., London, Ont.

AN ASSORTED ORDER AMOUNTING TO $5.00 WE WILL PREPAY.

A. O. V.

Hens—1, D. M. Merritt.

Cockerels—1 and 3, F. M. Merritt; 2, Lloyd Seaman.

Pullets—1 and 2, F. M. Merritt; 3, Lloyd Seaman.

SILKIES.

Cocks and Hens—Prizes went to F. M. Merritt.

Cockerels—1, Lloyd Seaman.

Pullets—1, Lloyd Seaman; 2, F. M. Merritt.

SILXER CAMPINES.

Other Breeds, A. V.

Cockerels—1, ——; 2, Arthur E. Stone.

Pullets—1, Wm. A. Balser.

TURKEYS.

Bronze—Old.

Cocks—1, J. Titus Barnes; 2, Dr. E. A. Smith; 3, Hartland Poultry Yds.

Hends—1, J. Titus Barnes; 2, Hartland Poultry Yards.

Bronze—Young.

Cockerels—1, J. Titus Barnes.

Pullets—1, J. Titus Barnes; 2, Hartland Poultry Yards.

White—Old.

Cocks and Hens—Prizes went to Hartland Poultry Yards.

White—Young.

Cockerels and Pullets—Prize went to Hartland Poultry Yards.

A. O. V.—Old.

Cocks—1, Hartland Poultry Yards.

A. O. V.—Young.

Cocverels, Pullets—Prizes went to Hartland Poultry Yards.

GEESE.

Toulouse—Old.

Gander—1, Hartland Poultry Yds.; 2, Hartley G. Steeves.

Goose—1, Hartley G. Steeves; 2, Hartland Poultry Yards.

Toulouse—Young.

Gander—1 and 2, Hartley G. Steeves; 3, Hartland Poultry Yards.

Goose—1 and 3, Hartley G. Steeves; 2, Hartland Poultry Yards.

Embden—Old.

Gander—1, J. T. Barnes; 1, Hartlabd Poultry Yards.

Goose—1, J. T. Barnes; 2, Hartland Poultry Yards.

Embden—Young

Gander—1, J. T. Barnes; 2, Hartland Poultry Yards.

Goose—1, J. T. Barnes.

GEESE.

Prizes went to Hartland Poultry Yards.

DUCKS.

Pekin—Old.

Drake—1, C. W. Osburne; 2 and 3, Maritime Poultry Supply Co.

Duck—1, 2 and 3, Maritime Poultry Supply Co.

Pekin—Young.

Prizes went to Maritime Poultry Supply Co.

Rouen—Old.

Prizes went to Hartland Poultry Yards.

Rouen—Young.

Prizes went to Hartland Poultry Yards.

Indian Runner—Young.

Drakes—1, J. Titus Barnes; 2, Hartland Poultry Yards; 3, Maritime Poultry Supply Co.

Ducks—1, J. Titus Barnes; 2, Hartland Poultry Yards; 3, Maritime Poultry Supply Co.

Indian Runner—Old.

Ducks—1, Hartland Poultry Yards; 2, Wm. H. Jackson; 3, Watson Lutz.

Drakes—1, Hartland Poultry Yds.; 2, Wm. H. Jackson; 3, Watson Lutz.

A. O. V.—Old.

Drake—1, Geo. McEachren; 2, F. M. Merritt; 3, Wm. H. Jacksbn.

Duck—1, F. M. Merritt; 2, Wm. H. Jackson; 3, Geo. McEachren.

A. O. V.—Young.

Drake—1, Wm. H. Jackson; Hartland Poultry Yards.

Duck—1, Wm. H. Jackson; 2, Hartland Poultry Yards.

PIGEONS.

1, 3 and 5, Maritime Poultry Supply Co.; 2 and 4, R. P. R. Fraser.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE.—Hampshire Ram, registered. Three years old. Box 45, Hillsboro N. B.

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100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Four Ayrshire bulls, five to eleven months old from good producing stock. JOHN F. FROST, Hampton, N. B.

BROTHER—Accidentally discovered root will cure both tobacco habit and indigestion. Gladly send particulars. S. T. STOKES, Mohawk, Florida.

10,000 COON AND SKUNK WANTED—Do not sell until you have my offer. Nine trapping secrets for stamps. E. W. DOUGLAS, Stanley, N. B.

JERSEY BULL FOR SALE. Four years old, sire Ferror (Imp.) No. 391, dam Brampton Regan, No. 439. Apply to J. J. CLARK, Sect. Tatamagouche, N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

GUERNSEYS FOR SALE—1 yearling bull, and 4 between the ages of 4 and 10 months, all very fine animals. WILLIAM COX & SON, Canard, N. S.

IF YOT HAVE REAL ESTATE OR STOCKS and Bonds of any kind to sell, write me, as this is my business A. R. AARESTRUP, Real Estate Broker, 206 Creighton St., Halifax, N. S.

WANTED—I would like to buy some early Ohio, Bliss Triumph, and Garnet Chili potatoes, must be good samples. Spring delivery. Write to C. FRED FAWCETT, Upper Sackville, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co,, Queen Street, Montreal.

HAVE YOU INVESTED OR DO YOU WISH to invest in Western Real Estate? I can sell your Western lots or send you particulars and prices of CALGARY lands that will make you money. I represent the best Realty Co's in the West. A. R. AARESTRUP, Broker, 206 Creighton St., Halifax, N. S.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shediac, N. B., during the week ending April 20th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, Sussex, N. B.

BELTING FOR SALE—500,000 feet, all kinds and sizes. New and second hand. Also 500,000 iron pipe. All sizes, good as new for water, steam-heating, greenhouses. construction, fencing posts, etc. Also enormous stock of wire fencing, gates, pulleys, cable, rails, new roofing, saws, vises, forges, all at 25 p.c. to 75 p.c. less than regular value. Catalogue on request. IMPERIAL WASTE & METAL CO., 5 Queen St., Montreal.

BANKRUPT BELTING BARGAINS—Positively 85 p.c. to 70 p.c. saved, New and Second hand all kinds and sizes for every purpose. Also enormous stocks of Iron Piping, Pulleys, Shafting, Hangers, new and relaying Rails, Saws, Chains and Cables, Roofing, etc. Write us for prices and tell us what you need. Catalog on request. The IMPERIAL WASTE & METAL CO., 3 Queen Street, Montreal.

FOR SALE—Pure bred and grade Shorthorns of good milking qualities along with good beef type. Males and females all ages. Also extra well bred grade Clydesdale mare six years old bred to foal in June after an extra good pure Clydesdale stallion. Also her seven months old filly sired by same horse which she is in foal after at preseat. This stock is extra large and perfectly sound. LAURIE M. ANDERSON, Sackville, N. B.

FOR SALE Yearling Jersey bull, Foxhall Keene 2nd at late St. John Exhibition; led 2nd prize young herd. Sire Foxhall, dam by Hood Farm Pogis 40th next dam by son of Exile of St. Lambert. The dam gave 20 pounds a day as a two year old. She was exhibited six times, at St. John, Halifax, Fredericton and Chatham, winning four firsts, on second, one third. Has repeatedly defeated every animal placed above her. Would sell 6 months brother of this bull if preferred. Don't want both. L. I. FLOWER, Central Cambridge, N. B.

Green Goods Again.

Far be it from us to offer advice, but may we not make, in a quiet way, the startling and noble suggestion that it would be a good idea for everybody now to begin thinking about his garden? You don't need to be an expert to make your spare land a source of revenue. Neither do you have to know anything about botany to begin raising flowers. Your land is good enough for something, no matter how unpromising. If you can't do anything better, put a nickel's worth of Sunflower seed or Wild Cucumber between the ash barrel and the back fence. The watch results. If you once begin gardening, even in this modest way, you aren't likely ever to stop. From things needing no care you will go to others needing a little, and by and by, working in the garden, feeling the soft ground under your feet, getting the fresh frangance of the morning air, watching the little green shoots come up and develop seeing the brilliant colors take the place of the dirty browns and grays of winter, will be more fun than anything you have done since you were a boy.

There is a greater incentive for gardening now-a-days than ever before. Fresh produce costs more to buy and home gardens are better than they used to be. There are finer varieties of vegetables and flowers. It is within the memory of some of our readers that Sweet Corn and Celery and Tomatoes came to be generally known; and the flowers of today—how they have come into their own! Sweet Peas and Asters and Cosmos, Pansies, Giant Morning Glories, California Poppies and all the other Poppies, these and many more a generation ago were unknown in their present glory.

Think about it. Make your plans now. When ready to plant get seeds that have been proven by some tried seedman of national repute. Experienced gardeners buy only thoroughbred seeds: they don't waste their time on inferior or unknown quality. They depend on some old standby, some firm with large capital, experience and a reputation to maintain. But as we said to begin with—far be it from us to offer advice. We merely suggest that you do not let another springtime go by without being a part of it.

Potash.

Potash in Canadian agriculture is chiefly used in the forms of Muriate of Potash ana Sulphur of Potash. The former is the most generally used but Sulphate of Potash should invariably be used on potatoes, sugar beets and tobacco as the chlorine content in the Muriate of Potash is liable to have a detrimental effect on the quality of these crops.

It should be remembered that artificial fertilizers are not used up by the first crop. This does not apply to Nitrate of Soda or Sulphate of Ammonia, which are generally taken up wholly by the crop tp which they are applied. An application of Potash would be only half used up by the first crop and the two succeeding crops will benefit from the remainder. From this illustration it can be seen that a farmer ought not to charge the fall cost of his fertilizers to the first crop except in the case of the nitrogenous materials mentioned.

Each fertilizer material has its own functions to perform; no one ingredient can replace another.

Potash adds to the quality and promotes the maturity of crops in addition to increasing the quantity. It is necessary for the production and transfer of starch in plants, for the stiffening of straw; it gives color and flavor to fruit and adds to the size of roots and tubers. Potash should be the dominant ingredient of a fertilizer for potatoes.

Free, educative bulletins and advice on the Economic Purchase and Use of Artificial Fertilizers may be obtained by applying to German Potash Syndicate, 1505 I. O. F. Temple Bldg., Toronto.

Liming.

Liming plays a very important part in agriculture. Nearly all land needs liming sooner or later, some more than others. When land is manured heavily for several years, and not limed, it begins to get sour, crops fall off, and diseases appear. The best time in the rotation to apply lime is on lea. It should not be ploughed in, but spread on the furrows, and harrowed in. It will sink soon enough.

Lime is lost to the soil in various ways. Crops carry it away, it sinks, and is lost by drainage, as nitrates and chlorides. Roots take a very considerable amount of lime out of the soil.

It is very little use applying lime unless there is plenty of humus in the soil. Years ago farmers were under the impression that lime was a manure in itself, consequently much land was limed excessively. Now they go to the other extreme, and do not lime enough. Lime should never be brought into contact with farm-yard manure or any other manure containing ammonia, as it will drive off the ammonia.

It encourages the decomposition of organic matter, and renders it more available to the plant. It neutralizes organic acids, and thus sweetens the soil and improves the herbage. It assists in the liberation of potash, and aids in the production of nitrates. It opens up heavy clay soils and makes light ones more retentive. It helps to purify soils by rendering harmless salts of copper and iron, and it also acts as a fungicide and insecticide. The amount of lime to apply per acre varies with different soils. About the average quantity used is two tons and this can be recommended. On per acre every seven or eight years, pasture 20 to 25 cwts. every three or four years, and on newly-cultivated land from three to six tons is required. More lime is required on wet land than on dry. When lime is exposed to the air it absorbs carbon dioxide, and turns back into limestone again, therefore it should be spread as soon as possible.

HOMESTEAD FARM

Holstein--Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

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Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

FOR SALE

My Harness Business in the town of Shubenacadie doing a good business. Also my Farm consisting of six acres in good cultivation, only 200 yards from depot and school. Good house and barn, wood house; all in good repair. For further particulars apply to

W. H. HENRY,
Shubenacadie, N. S.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
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FOR SALE

Several yearling Guernsey Bulls, sired by "Golden Opinion" and "Prince of Willow." All prize winners at the Maritime Shows and Ottawa.

ROPER BROS., Charlottetown, P. E. I.

FOR SALE

Two Jersey bulls, one twenty-three months old, and one eleven months, both from heavy milking dams.

Robt. Robinson, Meadowview Farm, Phone 157-3 Sussex, N. B. Box 232

For Sale

A few young Hereford bulls, heifers and cows. Six choice White Wyandotte cockerels $2.00 each.

R. R. BLACK,
Amherst, N. S.

WANTED—Small or large timber tracts. Give all particulars when writing to A. R. AARESTRUP, 206 Creighton St, Halifax, N. S.

FOR SALE—Two yearling pure bred Guernsey Bulls from good size stock. T. D. BLAIKIE, Great Village, N. S.

CHOICE WHITE ORPINGTON COCKERELS $3.00 to $5.00 each. (Philo Strain direct) May hatched. Capt. C. W. GILLIATT, Freemason's Home, Windsor, N. S.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A, Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.

Shropshires

C' A. Archibald, Truro, N. S.

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Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

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Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

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Bred for Eggs and Meat

Bellevue Strain of White and Columbian Wyandottes, S. C. White Leghorns, and Light Brahmas. Stock for sale. Over 30 years in business.

MICHAEL K. BOYER,
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Offers for sale at reasonable prices a number of bull calves from record of performance dams and grandams with large records. I expect to be to Amherst Dairy test with the dams of these calves where they and their performance can be seen. For particulars write,

R. L. HICKS, Dalhousie Jct., N.B.

EVERYHING you want in the line of Poultry Feed Remedies or Supplies. Send for catalogue.

Maritime Poultry Supply Co.,
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CORNING TURNIP SEED
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About 1000 lbs. of the famous Gr. Top "Corning" Turnip Seed, crop 1912, grown from selected roots. Price 50c., postpaid 55c.

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Again we maintained our prominence as breeders of B. P. Rocks at Maritime Fair by winning Silver Cup for the best display of this variety. In heavy competition won 1st and 6th on hens; 1st, 5th and 6th on pullets; 2nd, 5th and 6th on cockerels; 1st and 2nd Mating pens (pullet); 1st breeding pen, and special for best female. High class stock for sale.

CRAIG BROS., Amherst, N. S.

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FOR SALE

One Jersey bull two years old by Pogis 40th of Hood Farm and bull calves by Foxhall's St. John O'Dreamwold, also pigs one to six months old, both sexes.

Josselyn & Young, St. John, N.B.

Columbian Wyandottes

Winners at Amherst

See Maritime Farmer Xmas issue. Prize winners for sale. Also a few Rhode Island Reds (both combs). New "Peerless" Incubator cheap.

Orchard Hill Farm, Brown's Flats, N.B.

LAWNDALE STOCK FARM

We have a special lot of 3 young bulls for sale at a bargain—Two roans dropped December 1911. One, all red, dropped February 1912. Splendidly bred and excellent specimens. Also other pure bred Shorthorns.

Write for particulars.

J. M. LOVITT, M. D., Proprietor,
P. O. Box 353 Yarmouth, N. S.

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We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H EATON,
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Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

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I can offer about 20 birds for immediate sale at 75c each.

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White and Columbiam Wyandottes, Single Comb White Leghorns, and Light Brahmas. We use trap nests. In business over 30 years. Brahma eggs, $3 for 15; $5.00 for 30. The other varieties $2 for 15, $5 for 50, $10 for 100. Address,

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We are offering for sale to make room a number of pure bred Hereford bulls from 5 months to 4 years old. Write for prices and description.

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FOR SALE--Pure Bred Shropshires

20 to 30 Shropshires.
6 Cheviots.
5 Leinsters.
A few Southdowns, Oxfords and Lincolns.

These sheep are from one to two years old, extra choice, being picked from noted flocks by Mr. R. H. Harding of Mapleview farm, Thorndale, Ont. Write or wire,

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Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

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We have the type that gives best profit. Write your wants to

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Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

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We have over 60 head of HOLSTEINS to choose from. Can part with a few more young cows, also some nice heifers. One bull fit for immediate service and several about one year old. Don't you want a nice brood mare on your farm? We have some fine Clydesdale fillies one and two years old.

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offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

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We have a choice 25 months old bull for sale. We also have a number of choice cockerels of Barred Plymouth Rock, White Wyanndotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Apply to

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A few dandy turkeys left, $10 a trio. Charming Sicillian Buttercups, get a pair and be in the swim, $5.00 a pair.

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Twenty complete Lessons. The successful Poultry Book a simple and comprehensive treatise in the care and culture of domestic fowls. This book is sent free on request.

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The Cost To Operate Your Own Line is Low

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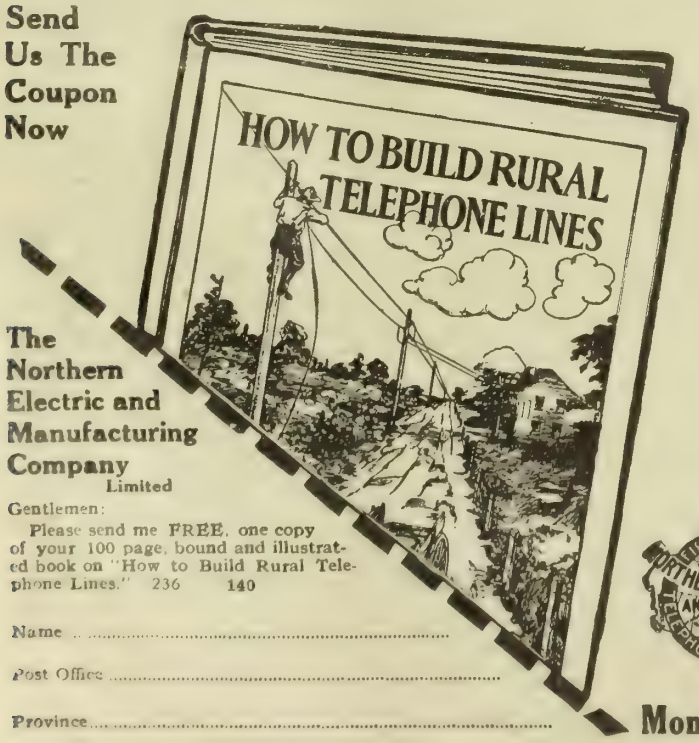

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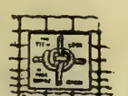

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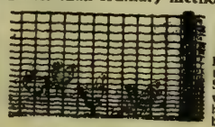

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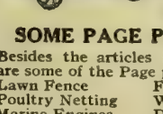

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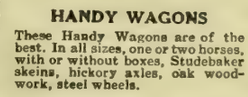

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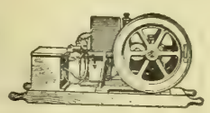

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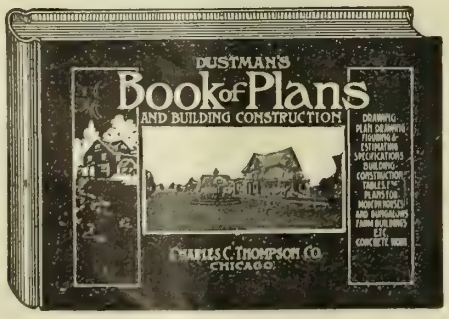

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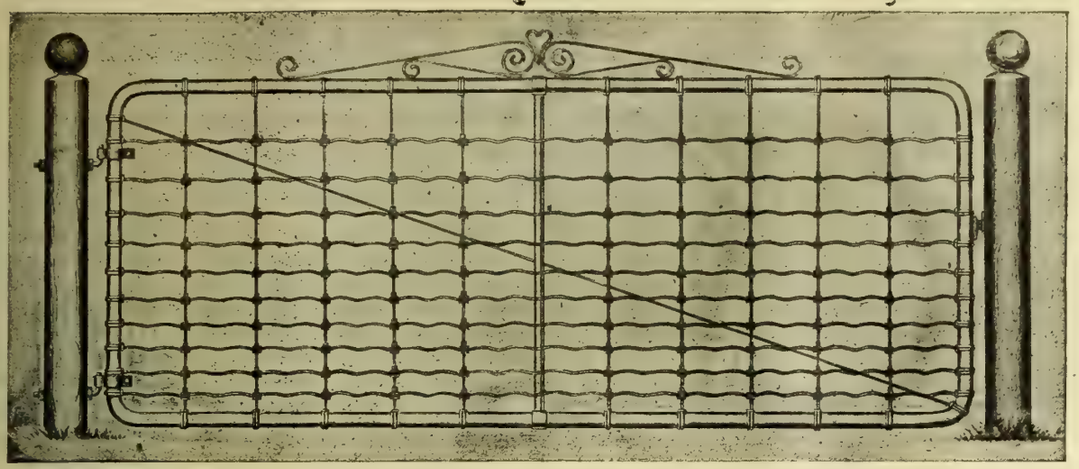

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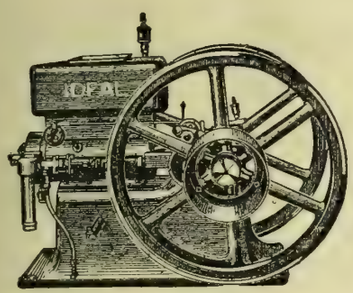

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Volume 18. SUSSEX, NEW BRUNSWICK, JANUARY 21, 1913. Number 8.

How a Former Nova Scotian Encourages the Boys

Furnished Cash For Turnip Growing Competition

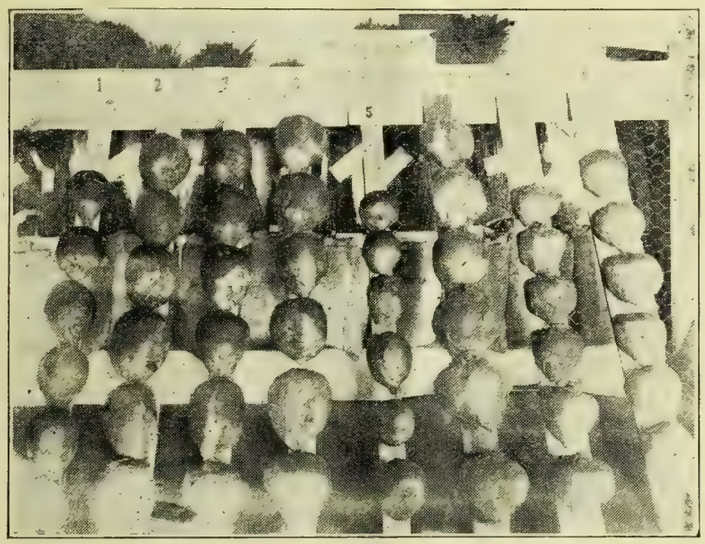
An Example Worthy of Emulation.

QUITE early in the old year we made reference in our columns to the generous donation of a former Nova Scotian for the purpose of encouraging the farm boys of his native district.

Following is an account of the proceedings by Prof. M. Cumming :

"I was born in Nova Scotia but am now living in New York. I have made a little money and I want to do something to help the boys on the farms down home. Can you assist me ?" So ran a letter received at the Nova Scotia Department of Agriculture about a year ago. The letter continued: "I have an idea myself that more cattle should be fed down East and if the farmers would grow more turnips they could feed more cattle cheaply. What would you think of a Turnip Growing Competition ?"

"Just the thing," we replied, and so it was arranged and a check covering the prize money and enough extra to pay for the advertising was deposited to the credit of the Turnip Growing Competition which was to be managed by Charles Hill, of Onslow; F. L. Fuller, of Truro, and the writer. "I want the competition confined to Colchester and Cumberland Counties and I do not want my name mentioned," was added.



Prize Winning Turnips at the Maritime Winter Fair.

Exhibit of turnips from the eight prize-winning fields in the Colchester and Cumberland Turnip Growing Competition.

And so the competitions were arranged. The prizes in each county were to be : First, $75.00; second, $50.00; third, $30.00; fourth, $20.00; four prizes in each county, making in all $350.00, to be given for the best one-acre of turnips grown by boys between fifteen and twenty years of age and living on farms not assessed at more than $3,000.00. Finally the prize money must be used for some such purpose as improving the farm, adding to the live stock, paying for an agricultural education, etc., the method to be agreed upon by the committee in charge. The donor was a business man and thought of almost every essential for a good competition, namely, substantial prize money to be spent for some permanent improvement eligible only to boys on the average farms of the country and the competition a practical one—such were the features.

Twenty-eight boys entered the competition, fifteen in Cumberland and thirteen in Colchester. All could not be successful and some had very hard luck. Cut worms spoiled the chances of some early in the season. Too much cold wet weather proved fatal to all who tried to grow their turnips on heavy or low undrained land and so on. But to show how good some of the fields were the five best averaged 1,210 bushels per acre and the highest scoring one produced 1,400 bushels.

Did you ever think how much feed a good acre of turnips will yield ? Consider the best one grown in this competition by Baxter Fulton, of Bass River. His yield was 1,400 bushels, equal to 42 tons. An acre covered with corn ten feet high (far above your head) will yield 20 tons of silage and it looks an enormous quantity. But this field yielded over twice that. Why, it would provide twenty cattle with forty pounds per day each of the very best succulent feed for three and a half months and along with straw and a little grain would produce more than treble the amount of beef raised on the average farm of the East.

According to the returns of the Census Statistics Division issued from Ottawa in December last, the total acreage in turnips in Canada was 227,141 acres and the average yield was 373.92 bushels, making a total of 84,933,000 bushels. Had these fields been brought up to the standard of the five best fields in this boy's competition (1,210 bushels) it would have amounted to 274,840,610 bushels, an increase of 169,907,610 bushels, worth ten cents per bushel, $16,990,761. Surely these boys, in their teens, who participated in this competition have taught Canada something.

Beauty's Bell—score 223.38. **Gipsy of Willow**—score 200.88.

Prize winning Guernseys in the 1912 Maritime Winter Fair Dairy Test. Note the well balanced udders and tortuous milk veins. Owned and exhibited by Hugh A. Dickson, Onslow, N. S.

WHAT DID THEY LEARN ?

And what of the boys who did not win a prize and what of the mistakes made ? One said : "I bet I will win next time." "I have taken a better piece of land, better drained and it is in better shape now." Several voiced his sentiments. One boy's father said : "Well, we did not win but we grew the best field of turnips we ever grew and we learned enough to grow a better crop next year." Another boy coaxed his father to put on too much barnyard manure and he grew too much tops and too many coarse necky, split and hollow turnips. Next year he will use less barnyard manure and add a

little mineral fertilizer containing some phosphoric acid and potash. That's what the boys did whose fields produced the best quality along with quantity. Several bought cheap seed. It was the best the storekeeper had. But next year they will use what the winners used—the best grade of turnip seed, and if the storekeeper will not get that kind, they will order it by mail. Some had their rows too far apart and lost in yield per acre. Twenty-eight inches between the rows and the plants from twelve to fourteen inches in the row gave the maximum results. Early seeded fields generally surpassed the late ones. Those sown between May 20th and June 1st in general, scoring the highest.

EXHIBITED AT WINTER FAIR.

Turnips from the exhibit prize winning fields were exhibited at the Maritime Winter Fair. The awards there did not quite agree with the awards in the field for the reason that the selection counted and the product at Amherst did not represent the averl age of the field, all of which snows that it is the Field Competition that is the practical one.

And what are the boys planning to do with their money? That is not decided but here are some of their requests. One wants to buy pure-bred sheep and hopes with the profits to help pay for an agricultural education. Another has his eye on a pure bred Holstein heifer. Another wants to clear, this winter, a field to the rear of his father's farm and grow more turnips. Another wants a half interest in a manure-spreader. Another hopes to pipe water from a spring into the house and so make home more comfortable for mother. The horseman of the lot wants to buy a pure-bred filly. And still another wants to improve the stable for his cows.

The donor of this gift has certainly had the satisfaction of having accomplished something tangible for his that they are trying to figure out how to get other competitions of the same sort started elsewhere in the province.
have been so heartily participated in. It was a splendid patriotic investment and the Department of Agriculture are so pleased with the result native province. Few competitions have been so talked about and few

Steps That Have Been Taken in an Endeavour to Secure Cheaper Ditching Machines, and Thus Lead to Their More General Introduction Into Canada

1. Four years ago the firm making traction ditchers in the United States was approached with a view to having them establish a factory in Canada. They sent their Secretary-treasurer and later a committee consisting of their President, Vice-President and Sales Manager to investigate, but took no action. Apparently they came to the same conclusion as the Canadian Manufacturers Association (see Mr. Breadner's letter farther on), viz., that "the number of ditchers required in Canada would not warrant a factory starting to build them as a speciality." This conclusion is borne out by the fact that in the three years 1909-'10-'11 the total number of these machines imported into Canada was only 35, of an average of 12 machines a year.

On several occasions the proposition has been discussed with Canadian manufacturers and Capitalists, the same conclusion being reached by all of them.

During these negotiations a situation not anticipated was forcibly brought into prominence: The United States makers, and every Canadian capitalist or manufacturer with whom the situation was discussed, in estimating the probable profits, determined the selling price in Canada of a Canadian made ditcher by adding the duty to the United States selling price, since they would have no competition. Under those conditions the establishing of a factory in Canada would not have cheapened the machines to any appreciable extent.

2. When it seemed for the present and some considerable time to come we were unlikely to have ditchers manufactured in Canada an effort was begun to have the duty on these machines removed.

When his attention was brought to the matter Mr. C. C. James enlisted the sympathy and assistance of the Hon. Clifford Sifton of the Commission of Conservation.

Prof. M. Cumming of Truro, Nova Scotia, was also interested and through him Premier Murray and Sir Frederick Borden.

In the meantime a memorial entitled "Statement re Duty on Ditching Machines," copy hereto attached, was prepared and transmitted to the Ministers of Customs, Agriculture and Finance in the late Government, and most of the prominent men who had become interested made personal representations to the departments mentioned.

Meanwhile also the Canadian Manufacturers Association was furnished with a copy of the memorial and some of the manufacturers of tile making machinery urged the Association to support the movement for duty free ditching machines. Their reply is contained in Mr. R. W. Breadner's letter of March 7th 1911.

On October 28th. 1911, a month after the general election the matter was laid before the Ministers of Customs, Agriculture and Finance in the new Government.

By this time several members of the Dominion House had become interest-through their constituents and some of them made representations to the Government.

In October 1912 several Farmer's Organizations passed resolutions asking that the duty on ditching machines be removed. One association asked for a suggestive resolution, which was drawn up and sent to them.

In December 1912, Mr. McCoig gave notice in the House of his resolution declaring that ditching machines should be placed an the free list.

Since the foregoing was dictated word has been received that the Canadian Manufacturers Association has again considered the matter and this time they decided that they "will recommend the removal of the duty"—their former stand was that they would "not oppose the proposition."

Toronto, 7th, March, 1911.

W. H. Day, Esq., B. A.
Professor of Physics O. A. C.
Guelph, Ont.

Dear Sir:—

With further reference to our correspondence respecting traction ditching machines being placed on the tariff free list, I may state that this question was submitted to the tariff Committee at a meeting held on the 15th ultimo, and was transferred by the Committee to the Executive Council for consideration. I am pleased to advise you that so far as this Association is concerned the proposition will not be opposed.

When I was in Ottawa last week I advised the Commissioner of Customs that traction ditching machines were not made in Canada, also that the number required in Canada would not warrant any factory starting to build them as a specialty; therefore it would not be detrimental to any Canadian industry if they were made free of duty. This information was corroborated by copies of letters from manufacturers which I mailed to the Honourable the Minister of Customs. I trust this will meet with your approval.

Yours faithfully,
(Signed)
R. W. Breadner,
Mngr. Tariff Dept.

STATEMENT RE THE DUTY ON DITCHING MACHINES

First:—It has been demonstrated that wet lands when underdrained produce annually increased crops to the value of $20 to $40 per acre, that in many ordinary farm lands drainage will give crop increases valued at from $10 to $20 per acre, that according to carefully complied reports the average increase due to underdrainage is a shade over $20 per acre.

Second:—That in "Old" Ontario alone some 4,000,000 acres of ordinary lands are in urgent need of underdrainage; also that there are today in the same province no less than 5,000,000 acres of slash, swamp, marsh, and waste lands now comparatively useless but most of which may be reclaimed by underdrainage. If then a conservative estimate allows that 3,000,000 acres may be reclaimed, which if reclaimed would add $60,000,000 to the earnings of the farmers of the Province of Ontario, this added to the increased crops from the drainage of lands now under tillage, would mean a total increase exceeding $100,000,000 per year. This vast increase would materially benefit all classes of citizens in the Province.

Third:—That which underdrainage will do for the Province of Ontario it will also do, to a lesser or greater extent, for all the other provinces.

Fourth:—To secure underdrainage two and only two requisites are necessary, tile and labour on the farm. Tiles are being manufactured in Ontario at a rate that has increased from 15,000,000 in 1905 to 35,000,000 in 1910. Clay from which tile are made is found in nearly every township, but certainly in every county. The plant necessary for the manufacture of tile is inexpensive and can be quickly procured. This manufacture employs considerable labour—their are 213 tile yards in Ontario alone—its expansion would be the means of finding steady employment for more labour, and therefore such expansion would be to the benefit of Canada. The same applies to the manufacture of tile machinery. Tile or tile machinery will not be purchased unless labour can be secured for the making of the necessary trenches in which the tile are to be placed by the farmer. The digging of those trenches is very arduous labour, and has to be undertaken just at that time of the year when farm labour, in Canada, is most in demand for regular farm work of a less arduous description. Under those conditions it is often impossible to hire labour for digging the trenches.

Fifth.—The traction ditcher obviates this trouble. A couple of men with one ditcher, neither of whom has unusually hard work, can dig as many trenches in one day as twenty men by hand.

Sixth:—No Traction Ditchers are manufactured in Canada.

Seventh:—Owing to the fact that these machines can do an enormous amount of work the total number of ditchers required will not for a long time to come be such as would warrant the commencement of their manufacture in Canada.

Eighth:—The number of Canadians who might be employed in the manufacture of these ditchers would be less than the number of men who would be employed in producing the increased number of tile required owing to the use of the ditchers, and less likewise than the number that would be employed in building the extra tile-making machinery that would be required.

Ninth:—It is admitted in Europe that the underdrainage of land has a marked effect upon the health of human beings—an especially beneficial effect upon that dread disease, consumption. It is therefore of material importance that everything that may be possible should be done to encourage underdrainage.

All that now seems to be required, in order to secure the quick underdrainage of large areas of land, is the extensive employment of ditching machines, but the high rate of duty is preventing their introduction—already several men considering the purchase of a machine have abandoned the project on account of the duty.

Therefore for all these several reasons and for others not herein given, which are nearly as important, the Government is respectfully requested and urged to place this special machine known as the traction ditcher and parts thereof upon the Free List, and the request is made with the more confidence because the Government in granting it would be making no new departure, but would be doing for agriculture, for the Tile Making Industry and for the Manufacture of Tile Machinery, that which the Government has on several occasions done for one or more of the different sections of the Manufacturing Industry.

RESOLUTION THAT AGRICULTURE BODIES MAY SEND THEIR REPRESENTATIVES

Moved by ....
SECONDED by .... that

WHEREAS large areas of land in this vicinity are in urgent need of underdrainage.

AND WHEREAS we as farmers have this year, and for many years, lost heavily by portions of our farms being too wet.

AND WHEREAS owing to the scarcity of hand labour it is practically impossible for us to secure help to lay the drains.

AND WHEREAS the traction ditcher if introduced into this locality would solve the difficulty.

AND WHEREAS traction ditchers are not manufactured in Canada.

AND WHEREAS the duty, which is 27½ per cent, amounts to from $500 to $750 on a machine suitable for this locality, depending on size of machine.

AND WHEREAS a sum of this magnitude in addition to the cash payment on this machine is prohibitive to many men considering the purchase of one of those machines.

AND WHEREAS this prohibition is a direct monotary loss to us as we are unable to get our drains put in.

AND WHERE AS the late manager of the Tariff Committee af the Canadian Manufacturers Association has stated that the number of those machines required in Canada would not warrant any factory starting to build them as a specialty, and therefore it

would not be detrimental to any Canadian industry if they were made free of duty, and that therefore the said Manufacturers Association will not oppose the removal of the duty.

THEREFORE be it resolved: That we members of ....at .....

(Name of society). (Post Office) in the Township of ..... County of... in meeting assembled, hereby place ourselves on record emphatically and unanimously as favoring the removal of the duty from traction ditchers and parts thereof.

That we hereby respectfully urge upon the Honourable the Minister of Customs that the said duty be removed at as early a date as possible.

And further, that the Honourable the Minister of Agriculture for the Dominion be hereby respectfully asked to support the suggestion for the removal of the said duty.

And further, that the member of Parliament for this riding be hereby respectlully asked to use his best endeavours to secure the removal of the said duty.

And that the Secretary be hereby instructed to send copies of this resolution to the Honourable the Min... ...toms, Agriculture and Finance at Ottawa, and the member of the Dominion Parliament for this riding.

Of What Good is Humus.

It was with a hope of answering a part of that question that Bulletin 128 of the Minnesota Agricultural Experiment Station, St. Paul, was published. While the bulletin is classed as "technical" or scientific it has much of value in it for the reading farmer.

There is no subject on which "the doctors" disagree so much as that of humus. They do not even agree as to what it really is. The agronomist think of one thing, the chemist of another. But they all agree that humus comes from organic matter and is a complex chemical compound. For all practical purposes we can use the term organic matter and express ourselves so far as the action of manures on plant growth is concerned. Here, however, we will use the term humus to be consistent with the bulletin, which uses that term.

The author of the bulletin, George W. Walker, tells of experiments performed to determine what relation humus in soils bears to the kind of rotation followed, and what, if any, changes occur in the humus plant foods when land is cropped in different ways. In other words, what is the difference between continuous cropping of soils and rotating of soils so far as the humus is concerned. The field tests extend over a period of ten years.

The conclusions which are several bring out some very significant and interesting points. A few of them follow:

1. "Generally, rotation of crops increases the amount of humus, the increase being greatest when clover is plowed under.."

This is not a new idea at all but it points toward a verification of the statement that one of the best ways to increase the fertility of average soils is to grow clover and plow under the second crop.

2. Except in the case of wheat, no marked decrease in total phosphoric acid has occurred in the continuously cropped plots."

This is rather novel. The results came as a surprise to the investigators. Likewise they state that "generally, under systems of crop rotation, the plots have maintained the total phosphoric acid content for the ten-year period." This is contrary to many experiments which have been conducted in other states. The author himself does not place a great deal of emphasis on these results because of the fact that the number of soil samples was limited and that the period of test extended over but ten years.

3. He does lay emphasis on another point which, to his mind, the experiments practically point out.

"The relatively large proportions of nitrogen, phosphoric acid, and potash associated with the humus indicate the great importance and value of the latter as a source of plant food."

In other words, we need to realize the value manure (both barnyard and green) has for the soil in supplying the elements for plant growth. True it supplies much more than it benefits the physical condition of the soil, but the author of the bulletin would say, "Grow green manure crops, add manure to your soils, for these results show us the importance and value of humus as a source of plant food."

But even then the reader of this bulletin is not satisfied in his own mind as to exactly what the statements mean. The stated conclusions say that "rotation of crops increases the amount of humus," that "under systems of crop rotation the plots have maintained the total phosphoric acid content for the ten-year period," and that humus is of great value as a source of plant food. In other words, by rotating crops the humus is increased and consequently the phosphoric acid maintained. Our query is, "Where does that phosphoric acid come from?"

We can see how the nitrogen might increase and likewise the carbon, but as for the phosphoric acid and potash we are in darkness. It is possible, perhaps, that the manure applied balanced the loss of phosphoric acid and potash but the writer seems to credit the system of rotation with that work. In the meantime we will continue to buy raw rock phosphate and apply it with the manure, for we know that that is a means of increased profits on Hoard's Dairy farm. Perhaps soon the chemical tangle will be straightened and we will be clear in our minds as to what really took place on these Minnesota plots.—Hoara's Dairyman.

J. D. Irving's Holsteins at home, Sea View Farm, Buctouche, N. B.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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JANUARY 21, 1913

DATES OF ISSUE.

February 11-25
March 11-25

SOWING GOOD SEED

One of the best evidences of the results of sowing good seed is to be found among the farmers who have been carefully germinating the seed of information that the agricultural colleges, experiment stations and other sources of distribution have been so liberally passing out to the people. The seeds of knowledge, information as to the right and wrong methods of handling the crop and farm work, has been falling upon fertile soil in the brain of the intelligent farmer, and the evidences are now everywhere apparent in a better understanding of how to do things. The experiment stations are sometimes criticised for spending too much time in finding out that certain things are a failure, that it does not pay to do things in a certain way at certain times.

It is just as important to learn what not to do as to learn what to do. This is a fast age; man cannot afford to experiment on failures; it is enough to know that some good authority tried it and proved it a failure. The ordinary observing business man is steering clear of other men's failures, because he knows that life is too short to take chances in the uncertain things when he has a sure thing in plain view. Thus it may be observed that improved agriculture is moving along now at a rapid pace, just because we have had these agencies of education employed in going in advance and blazing the way that we may proceed intelligently, doing things as directed and keeping clear of the mistakes and pitfalls that otherwise we would plunge into.

It is quite frequently remarked, "Did you ever see such a stand of oats as is all over the country this year; almost every grain seemed to be of good germinating quality?" Now there is nothing wonderful about this most any year, since the farmer has learned how to select his seed oats, how to test its germinating qualities, how to prepare his seed and how to plant to get a good stand. It is now a question of good seed with the farmer first, then he must be shown, and his final evidence is his own test. The farmer of today who is conducting his affairs successfully is not the farmer of forty years ago, or twenty years ago. The progress that is being made on the farm of the twentieth century is rapid; it takes a live, active, thinking man to keep up to the procession.

In this text of sowing good seed it is only necessary to look around and see how uniformly the agricultural colleges are engaged in the work of teaching the benefits of better seed in all crops grown and produced on the farm for field or commercial advantage. No farmer is complete in his preparation to do satisfactory work on his farm who is not supplied with the latest and best improvements to assist in the preparation of seed for sowing and planting. The seed grader, seed cleaner and seed tester have become necessities in the successful operation of crop-growing.

A practical machine or implement for the performance of special work on the farm is not an extravagance or waste if properly handled and properly cared for. It is not every farmer who buys machines that appreciates or understands the care the machine demands when not in use. Each machine sold should have printed instructions accompanying it, defining how it should be taken care of in order to get best results of work and wear. This is a good time for the farmer to study his needs in the matter of good, clean seed and provide himself with this class of machinery in advance of next spring's work.

The Maritime Farmer,

Sussex, N. B.,

Dear Sirs,

I did not realize my subscription had expired until I recd. your bill which has been mislaid. I am sending herewith express order for $1.60 to cover two years subscription, as I would not like to be without your paper, which FOR AN ALL ROUND FARMERS PAPER is easily first, although I take several.

Yours very truly,

W. E. READ.

Bear River, N. S.,
January 9th, 1913.

ENCOURAGEMENT OF THE SEED INDUSTRY.

Thirty thousand dollars was set apart last year to reimburse the provincial departments of agriculture for approximately half the cost of organizing and conducting seed fairs, provincial seed exhibitions and field crop competitions according to the Census and Statistics Monthly. All who know the advantages of using good seed realize the value of these organizations in the improvement of field and garden crops. The new and superior strains of seed produced at experiment stations may be increased in quantity by farmers who make a specialty of growing registered seed under the supervision of the Canadian Seed Growers' Association. Such registered seed is much in demand by farmers who compete in field crop competitions. The product of their crops, though not eligible for registration, ultimately becomes disseminated, either directly or through seed fairs, among the less progressive farmers in the locality.

Experience has shown that the expenses for advertising and for judges at seed fairs and field crop competitions amount on the average to about $25 for each organization---frequently less for seed fairs and sometimes more for field crop competitions where judges are required to travel long distances. Either of these organizations is well provided for when the prize list amounts to $75, making a total expenditure of approximately $100. Under the new plan of reimbursing the provincial departments of agriculture by money subventions, on receipt of certified statement showing the amount of work done and the total amount expended in cash prizes to seed growers, a check for two-thirds of that amount is iussed to the department which conducted the competitions. Such subventions, however, must not exceed $50 for each field crop competition (allowing competitions in three kinds), and $400 for a provincial seed exhibition. Any province with less than a million acres in field crops may receive an amount up to but not exceeding $1000. For any province having more than a million acres under cultivation in field crops the amount of the subvention is increased pro rata, $1000 for each million acres.

The total area under field crops, as is how by the unrevised census, returns for 1911, and the amount of the subvention each province may be able to earn on account of this educational work for the improvement of field crops is as follows:

Prince Edward Island, area under field crops, 465,765 acres; total subvention available, $1000.

Nova Scotia, area under field crops, 573,040; total subvention available, $1000.

New Brunswick, area under field crops, 918,057; total subvention available, $1000.

Quebec, area under field crops, 5,164,487; total subvention available, $5165.

Ontario, area under field crops, 9,473,240; total subventsion available, $9473.

Manitoba, area under field crops, 4,932,032; total subvention available, $4932.

Saskatchewan, area under field crops, 8,006,421; total subvention available, $8006.

Alberta, area under field crops, 3,277,006; total subvention available, $3277.

British Columbia, area under field crops, 43,024; total subvention available, $1000.

ONE GREAT NEED.

If one has one hobby more than another in connection with the advancement of the business of agriculture, it should be the improvement of that end of the business which has to do with the distribution of the products of the farm to the consumers so as to make farming more profitable for the people who are actually engaged in the business.

No one who is interested in the progress and improvement of this great business can have the slightest objection to the efforts of any institution, organization or individual to encourage the adoption of any methods or practices by which such improvement can be brought about and through which such progress will be made.

It is the implied imputation that farming is so much behind any other business that it needs the assistance and encouragement of other and outside interests to bring it up where the people's bread and butter will be safe, that is objected to. It is the oft-repeated assertion that farmers are a hundred years behind the times; that they need to be taught to adopt modern methods of growing crops, and that they ought to finance their farming operations; these libels, direct and insinuated, are not calculated to help the farming business. Any assistance in broadening and spreading the influence of the progressive work that is being done will be welcomed by every lover of the farm, but nothing can be gained by raising up a bogey man in order to show how he may be frightened away, not by exaggerating the evils of present conditions or belittling the progress that has already been made.

Growth and Selection of Seed Potatoes

No variety of farm crop deteriorates or becomes worn out more quickly than the potato. The profitable life of any variety, however good it may be, is, at the most, nine or ten years. For this there are several reasons. Disease is a formidable item to which every variety, no matter how robust it may have been on its introduction, falls a victim sooner or later; no absolute disease-proof potato ever has, and never will be, brought out.

Loss of vogor and initial disease-resisting properties are undoubtedly hastened by the methods of culture employed. I have frequently seen two growers start level, as it were, with a certain variety; A finds that with him the sort becomes unprofitable much sooner than it does with B. Let us see how this may come about. Too close planting of sets, the use of too small tubers for seed, and the harvesting of the crop before it is ripe, are methods which tend to early deterioration.

Potatoes grown for seed should receive more carefal attention than is bestowed upon the main crop, and it may be well to direct attention to a few weak points in the cultivation of this important crop which should be carefully avoided in growing for seed purposes.

Potatoes reserved for seed should be perfectly ripe before being lifted, and when taken out of storage in spring, any that are spotted with disease, dry rot or mould, or are unsound or misshapen should be rejected. The seed tubers should not have too many eyes, as they produce a number of undesirable stems, preventing the free access of light and air to the plants. In experimental work I have noticed that those sets which produced few stems only yielded larger-sized tubers, and although the number per root might not be so large, yet the weight of the produce of such a set compared favorably with those which produced a larger number but smaller tubers. Many persons who grow for exhibition use as seed, whole potatoes of medium size, from which all but three or four eyes are carefully cut out before planting; others, too, cut out the stems from the plant if too numerous, but such mutilation when full growth is in progress is not desirable. Large potatoes may be cut into pieces, and, in general, it is correct to say they should be cut in direction of their length, and with an even distribution of the eyes on the cut parts.

The distance at which the sets should be placed from each other is a matter of great importance, but no rule can be laid down that will apply in every case. The vigor and development of the variety, the season, soil and manuring, have all to be taken into account. It must not be forgotten that free circulation of air between the plants renders the crop less liable to disease. There is a limit in close planting and wide planting, by going beyond which the yield of the same area will be comparatively diminished. In raising the main crop for market purposes it must be taken as a rule that close planting within modern limits, is best for large yields, but for the production of good seed it is desirable to plant as wide as economy permits.

The importance of absolute soundness in seed potatoes cannot be overestimated, and nearly every season affords good examples of this. We have all seen numerous instanres in which apparently sound and firm potatoes either rotted badly after planting, or, at best, threw up a single, weak, spindly stem. In some cases the seed makes no growth whatever, and, when dug up some weeks after setting, is in exactly the same condition as when planted. When ever disease is very prevalent, it may be taken as a certainty that much of seed stock available for use the following spring will be of very low vitality. Now, when it is suspected that the seed is of low vitality and no other can be obtained special treatment is required. Seed of this kind should be kept in an absolutely dormant condition until the time of planting. This will seem a reasonable statement, for if the weak seed is allowed to sprout and the shoots are rubbed off, its energy is further lowered, and it has not strength enough to make a decent above-ground growth. Another point to bear in mind in cutting seed potatoes—the cause of much seed rotting after planting is due to cutting with a heavy, thick-bladed knife; the remedy is to use a sharp, thin blade in cutting seed stock, handle carefully, and avoid exposure of the same to sun or wind.

The next point to which I would draw attention, and one which is more especially opportune, is the method of selecting the potatoes which are to be kept over for seed. Where a special growth for seed purposes is not made, a common practise is to riddle out potatoes not of marketable size and to save them for next year's crop. These tubers are of course, of small size, and although I quite admit that choice quality produce may be raised from small seed, the fact that this is so often deceives many as to the true value of small seed.

From experiment and observation, I have noted that small tubers may be divided into two classes; the one has plenty of vigor, but has been set too late to attain full growth; the other includes all the unfortunates of the crop—those whose vitality is weak and impaired. The first class makes fairly good seed, only, as a rule, they have too many eyes. The second kind are obtained from plants where, when dug, yield but six or eight little tubers, all under market size; neighboring roots may yield the same number of good-sized tubers, and there is no apparent cause for the diminutive size of the others. Lack of vitality, however, is evident, and in the usual way these six or eight weaklings would go into the lot reserved for seed, and cause disappointment in six or eight roots next year. From these facts I conclude that the indiscrimin. ate use of "seconds" for seed is inadvisable, causing a risk which it is as well not to run.

An expert may be able to tell these "run-out" tubers, by their shape. In kidney varieties they are slender, and in rounds the tendency is to form a pointed seed end, thickly studded with eye. But who watches for these little points?

When taking up potatoes in the field and selecting seed therefrom, the best way is to mark the good-yielding plants, and to choose from these, but to draw the seed supply from the heaps into which all the under-sized tubers grown on the field are placed, is a method which cannot but lead to deterioration.—C. G. Freer in Maine Farmer.

Taking Care of Farm Implements

The care of farm machinery may be treated under three heads: First, housing or protecting from the weather; second, repairing; third, painting.

Housing.—On the average 160 acre farm there will be needed an equipment which will cost at least $1,000. Let this stand out during each winter and it will not do good work for five years. If well housed, every tool will do good work for from 10 to 15 years,or longer. An implement shed to house all these implements can be built for $200. If a $200 shed will double or treble the life of machinery costing $1,000, it is a splendid investment.

Repairing.—Repairs should be systematically made in order to have the machines ready for use at the time wanted. It is a good plan, when putting the machines away, to make a note of what is needed in the way of repairs. This note may be attached to the implement. If repairs are needed which must come from the factory, NOW is the time to let the local agent know, so that they can be obtained in time.

The question as to how far to undertake to do repair work on the farm will depend largely upon the personality of the farmer himself and his ability to handle tools and execute the work. With a little training and practice, he can repair all ordinary injuries to the farm equipment, and, as a rule, in less time than it would require to go to the blacksmith shop.

The taking apart of machinery should be avoided, except in cases where it is absolutely necessary to do so. The binder and mower and machines of this class are securely put together in the factory, and if taken apart it is difficult to restore them to their proper adjustments. There are, however, many minor repairs which the farmer can make himself.

Painting.—This is an age when appearances count for much, and a farmer's standing in the community is often governed by the appearance of his farm equipment. Paint not only adds to the appearance of an implement, but acts as a preservative to many of the parts, especially if they are made of wood. Always have the surface dry and clean before applying the paint.... As a rule, hand-mixed paints are the best. A good metallic paint may be made by mixing red lead and raw linseed oil.

The use of tools on the farm is of great value as an educational feature, especially when the work is carefully performed. The boys should be encouraged to use tools, and held responsible for their care and the character of the work performed. The tool outfit will be of special service in keeping the boy employed and interested, and contented to remain at home.—F. C. N.

About Feed Grinding

It frequently happens that the advertising matter sent out by the manufacturers of agricultural and farm implements and machines contains good suggestions for the farmer. In some cases statements are made with which we do not agree, but we all know that there is still necessarily a great difference of opinion about many matters agricultural. Thus we find in some matter recently sent out by manufacturers of grinding mills, the following suggestions among others:

"It has been frequently found that where ear corn is fed to fattening steers, the droppings from one animal alone contain enough food value to sustain two hogs. This is an unnecessary drain on the animal, a waste of food, and a disgusting manner of feeding hogs, which some farmers have been known to do.

"Regardless of what animals you are feeding, remember that food, to be digested, must first be reduced to a liquified form. The nutritive value of food must be assimilated into the system through the red and white corpuscles of the blood before it becomes a living substance in the animal, and this can be accomplished only after the food is converted into liquid form.

"The grinding of food for animals is not only a great economy of food, value from the food it consumes. Therefore, if nature's first act is to grind and masticate food, why not assist the process by grinding the food before it reaches the animal? This insures a better digestion, and certainly makes a surety that all the food the animal consumes will properly allow the digestive organs to assimiate life from it, thus overcoming the bad features caused by animals bolting their food.

"Every farmer should have a good feed grinder. The most valuable kind is one that will grind wet grain as well as dry. Its saving in feed and increased value of stock pays back its cost many times over."

Erroneous Ideas About Soil Analysis

The idea that many people have, that a chemical analysis of soils will show just how to treat land to increase crop production, is erroneous, according to Professor F. E. Bear, of the Ohio College of Agriculture. "To the average farmer a chemical analysis of soil means nothing, and it is a waste of time and a needless expense,"says Professor Bear. "Two soils may have the same analysis chemically and still give different returns in crop yields. The chemist can determine the total amount of the plant food elements in the soil, but he cannot tell how much of this is available for plant use.

"There are many conditions, other than plant food content, that must be taken into consideration in increasing crop production. The experienced soil chemist by knowing these conditions, can often give much helpful advice without making no actual analysis. A personal visit to the chemist by the farmer seeking information is always advisable." That there is a place for the chemical analysis of soils, Professor Bear believes but it requires a knowledge of chemistry to interpret it.

Curing Swale Hay

I have seen so much spoiled swale hay that I think a few words of counsel will not be out of place. It is a common mistake with farmers to think they must secure their best grass first. If anything must stand too long, let it be the upland grass. I cut my swales before they are fully grown, and never put it in the barn until it is thoroughly dried. When well cured, I would try to find a place to put it where it would not come out first or last. Would like to get it when I want it.

Don't think you must put it in the barn if not made quite enough because it looks likely to rain to morrow. Spend the time required to load and get in the hay in cocking it nice, and risk it. When I feed out hay made in this way, the stock knows no difference between that and the best English hay. It looks green and smells sweet. It doesn't hurt the upland grass to stand too long as bad as it does swale grass.—M. Campbell, in Maine Farmer.

How to Thresh Out Clover Seeds

The following arrangement of the common grain thresher to enable it to thresh out clover seed is suggested and described by Mr. John Fixter of the Conservation Commission:

To thresh out clover seed it is necessary to run the clover through the grain thresher as is done with grain. The short clover material will pass through the full length of the cylinder. This is done by placing a strong board or a piece of sheet iron directly behind the cylinder, leaving nine inches open at one end to prevent the chaff from going through. Also arrange a board in front of the cylinder, leaving the opposite end open; this will make the clover material pass the full length.

It is necessary to put sheets of sheet iron upon the concaves to prevent the seed from going through, and by having the machine so arranged the seed can be perfectly hulled.

HORTICULTURE.

Care is Needed in Planting Trees.

How many attempts at planting shade or ornamental trees have been failures, in whole or in part, and how many times is the tree planter at a loss to understand the cause of his failure? The following discussion by Dr. B. A. Fernow, Dean of the Faculty of Forestry, University of Toronto, will throw much light on this problem, and should assist many who will plant trees next spring or fall.

The first cause of trouble and of death in transplanted trees is not unfrequently to be found in the ignorance and lack of care exhibited before and during transplanting. Many trees set out are dead or are doomed to death before they reach the plant hole. Transplanting a tree from one side to another is a surgical operation during which the patient needs special attention.

FEEDING SYSTEM IMPAIRED

It is rarely, if at all, possible to take up all the fine rootlets with their root-hairs intact; these adhere closely to the soil particles, hence, in the attempt to remove them, a portion of the feeding apparatus is always mechanically destroyed. Next, the delicate root-hairs, and fibrils are not apt to dry out when exposed to the air, especially in windy, sunny, dry weather, and thus another portion of the feeding apparatus is lost. Lastly, with larger specimens, the far-lying roots can practically not be reached and a third portion of the root system is cut off. Furthermore, if the plant material is shipped any distance, the vital activities are interrupted, temperature and moisture conditions may be unfavorable during transhipment, and a partial dry. ing out of roots, buds, or foliage is the consequence.

As a result of these losses, the balance between crown and root, between consumption and supply of water, is disturbed, and, unless this balance is at once re-established by pruning at the top and by favourable conditions for replacement of lost parts at the root, a part of the crown must die.

HOW TO TRANSPLANT TREES

This trouble may be nearly or entirely avoided by transplanting with a ball of earth, when the root system is not at all disturbed. This is usually practicable only with small trees; as a rule, transplanting is done with the naked roots. Care should then be had to take up as much as practicable of the root system, keeping it intact, using a fork rather than a spade, and keeping in mind that the root tips are the important part, then the roots should be immediately protected against drying out by covering with moist soil, wet bagging, moss, etc., and be kept moist until the tree is reset.

If it has not been possible to secure the entire root system practically intact, then a proportionate amount of the crown system should also be removed by cutting back branches, using at the same time the opportunity for correcting the farm. This pruning is best done before setting the tree, or, more conventiently, at once after setting while the knowledge of the conditions of the root system is still fresh in mind. If it is neglected parts of the crown will die, and these may not be the parts we are willing to spare. It does not matter much if the pruning at the top is more severe than necessary; sparing the knife unduly matters much more.

Nursery stock, when received, should be opened at once in a shady cool place and the root packing examined. If it is dry and hot, the chance of securing a living plant is small. Nevertheless, by proper treatment, plants may sometimes be resuscitated; some species especially will stand a good deal of maltreatment and are able to recover. "Heeling" them in deeply in a trench under shade and in fresh soil, and drenching them thoroughly with water, keeping them drenched for a day or two, or even keeping them entirely submerged under water may restore what appeared quite hopeless material. Even if the leaves of conifers have suffered, so long as the buds are still fresh looking, the case is not quite hopeless provided proper care is applied in keeping roots and tips moist, and, especially, if rainy weather sets in.—C. L.

New Brunswick Apples in Montreal.

The New Brunswick Department of Agriculture has attempted a new feature in advertising the fruit growing possibilities of that province this year. A splendid window display of apples grown in the St. John River Valley and other parts of New Brunswick, is now on view at 757 St. Cathrine St., West, Montreal where a store has been rented for the purpose by the Department. Twenty-five boxes of McIntosh Reds, Fameuse and Yellow Bellefleur are shown in the window and are of a size and quality that cannot be excelled on Montreal Island, the home of the Fameuse, and where, it is claimed, the McIntosh Red grows to perfection. In the store proper are a dozen more boxes of Fameuse and a number of boxes of King of Tompkins and Merits, while on the counters are display cones and plates of McIntosh and Fameuse.

Mr. R. P. Gorham, Assistant Horticulturist of the Province of New Brunswick is in charge of the exhibit and is assisted by Mr. J. H. Ross and Mr. Kenneth Emberly of Macdonald College.

Literature descriptive of the fruit growing possibilities of the province is distributed and full information given on orchard planting and management.

The exhibit is attracting a great deal of attention and favorable comment. It opened on Dec. 28th, 1912 and was to close on Jan. 11th but so great was the interest manifested by the public that the Department decided to continue for a week longer.

Fruit growing in New Brunswick has gone ahead very rapidly during the last two years and promises to become one of the chief industries of the province. Nearly 60,000 apple trees were planted in 192, and the nomber of orders already placed for spring delivery indicates that an even larger number will be set in 1913. The McIntosh Red, Fameuse and Bethel are being most largely planted as these varieties seem to attain their greatest perfection in New Brunswick and command the best prices on the market.

Orchard and Garden.

The lime-sulphur wash developed from a solution which was used in California as a sheep dip. A number of years of experiments changed this first formula considerably, and it was not until 1906 that the formula for home-made lime-sulphur most generally used at present was worked out. This formula is as follows: Lime, 15 pounds; sulphur, 15 pounds; water, 50 gallons.

While experiments were being conducted to establish a standard home-made lime-sulphur solution, the scale was spreading rapidly. As a result of this general spread, large quantities of lime and sulphur were being used, and before the formula for the home-made solution was perfected, the wash was being manufactured on a commercial scale and placed on the market. Even as it took a number of years to perfect the home-made wash, it has also taken some time to perfect the commercial lime-sulphur. However, this has been done, and today the lime-sulphur wash, put on in a concentrated form by the best manufacturers, is a standardized solution and much more regular in its composition than any home-made lime-sulphur washes.

The commercial wash, however, is not in as general use as it should be, and the main reason is that most farmers and orchardists think that it is too expensive, when used strong enough successfully to combat the scale. During the past winter a large series of tests was conducted by the Department of Entomology of this Station in order to establish a comparison between the home-made and commercial washes.

Three different brands of commercial lime-sulphur were used, and in order to test the various strengths, three different dilutions were made.

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Medley, Two-Step—That Babboon Baby Dance, Pollywogg Wiggle.
Medley, Two-Step—My Sumurun Girl, Way Down on Sunny Tampa Bay.
Medley, Waltz—A Little Bit of Irish, You May be Irish, Murphy, But I Think That You're in Dutch.
Medley, Two-Step—Make Me Love You Like I Never Loved Before: I've Got a Ragtime Bee in My Bonnet.
Medley, Waltz—Come Back, Marguerite: Tell Me Again You Love Me.
Medley, Two-Step—Big Blonde Baby; Loving Chimes.
Medley, Waltz—The Garden of Allah; I've Got a Girl From My Home Town.
Medley, Schottische—Roo-Ti-Toot (On Your Ragtime Flute);The Turkey Gobbler's Ball.
Medley, Waltz—Roll Me Around Like a Hoop, My Dear; Carmia.
Medley, Schottische—How Do you Do, Miss Ragtime, Sally.
Medley, Barn Dance—Billy's Melody: Dat Lovin' Touch.
Medley, Waltz—Somehow, Sometime, Someplace; There a Little Girl That's Lonesome. (In My Old Kentucky Home).
Medley, Two-Step—I'll Never Have Another Pal Like Mary Mine; Sarah's Hat.
Medley, Gavotte—(Ragtime Nick) Every Moment You're Lonesome, I'm Lonesome Too;
Medley, Waltz—If All the Girls In All This World Were Just as Nice as You; Come Love and Play Peek-a-boo.
Medley, Waltz—When a Girl Whose Heart is Breaking Loves a Boy Who Does Not Care: Just For You Sweeheart.
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Strains From the Rheine, Two-step, Polka—Fingertanz, Herr Schmidt; Lot is Tot; Der Kleine Rekrut; Student Song.
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Flower of Japan, Two-step—Fou so ka. (National Air of Japan); and Original Melodies.
The Grenadiers; Two-Step Patrol—The British Grenadiers; Sally in our Alley; Cherry Ripe; Rule Britannia.
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Honey Moon Love.
If You Talk In Your Sleep.
I'm Going Back to Oklahoma.
I Want One Like Pa had Yesterday
Just as Long as the Swanee Flows.
Little Millionaire, The.
Love's Dreamy Strain
Mysterious Moon
Oceana Roll, The
Only Pal I Ever Had Came from 'Frisco Town. The.
Oh That Navajo Rag.
Oh, You Beautiful Doll
Red Rose Rag, The
Serenade Me Sadie
Skeleton Rag, The.
That Slippery Slide Trombone.
That's the Kind of Fellow That I Could Love.
When I Was Twenty-one and You Were Sweet Sixteen
When You're Away
Wonderful Girl

Waltzes.
Come on Get Busy and Clap Your Hands
Hand In Hand.
Harbour of Love, The.
Hour That Gave Me You.
If the Garden of Roses Should Change to Thorns
Island of Roses and Love, The.
Little Boy Blue.
Month of June is a Song of Love, The
Somebody Else Will If You Don't
Under the Love Tree
Wedding Trip, The.
When the Dew is on the Rose.

Barn Dance Schottische
By the Light of the Jungle Moon.
I Like Your Apron and Your Bonnet and Your Little Quaker Gown.
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Two-step—Driving Home the Cows From Pasture.
Waltz—I Love Love. From "The Red Widow."
Two-step—Art is Calling Me. (I Want to be Prima Donna), from "The Enchantress."
Barn Dance—Baby Rose.
Waltz—Good-bye My Love, Good-bye.
Two-step—As Long as the Band Will Play
Waltz—Wild Rose. From "Sweet Sixteen."
Two-step—Keep Away From a Married Man. From "The Quaker Girl."
Waltz—Dream Love. From "Betsy."
Barn Dance—For Every Boy Who's Lonely There's Girl Who's Lonely Too. From "Dr. De Luxe."
Two-step—Come Kiss the Blarney, Mary Darling.
Waltz—If All My Dreams Were Made of Gold, I'd Buy the World for You.
Two-step—My Toledo Man.
Waltz—The Girl I'll Call My Sweetheart, Must Look Like You. From Chauncy Olcott's "Macushla."
Lanciers—The Campus.

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As the brands were practically equal in killing power, the average result is given in the table below. The average cost of washes is also used:

Kind of Wash	Time of Preparation	Cost of Preparation	Amount Material Used	Cost Material in Orchard	Total Cost	Per Cent Scale Killed
Commercial 1—11	1 man 5 minutes	1 cent	4 gallons	$0.80	$0.81	89.1
Commercial 1—9	1 man 5 minutes	1 cent	5 gallons	1.00	1.01	94.6
Commercial 1—7	1 man 5 minutes	1 cent	6 1-4 gals	1.25	1.26	94.8
Home-made 15—15—50	2 men 1 hour 15 minutes	36 cents	15 lbs. lime 15 lbs. sulfur	.15 .45 .60	.96	95.1

Two batches of home-made lime-sulphur were tried and the average cost and killing power of the two are used in the table of comparisons. Actual labor cost is charged to each but no fuel is charged to the making of the home-made lime-sulphur. The basis of comparison is made on one barrel—50 gallons—of diluted solution ready to apply.

The above figures on the cost of commercial washes are based on the market price at the time the spray was applied and estimated in half-barrel lots. Of course, when buying in large quantities for use on a large scale in commercial orchards, the price per gallon is not nearly so great. The cost of sulphur is based upon 200-barrel lots, and of lime, the retail price per 100 pounds. The orchard used was fairly heavily infested with scale.

A careful examination of the table given, reveals a number ol interesting facts. First, commercial lime sulphur used at the rate of one gallon of wash to 11 gallons of water did not give a satisfactory control of the scale. Second, the commercial lime-sulphur wash used at the rate of one gallon of wash to seven gallons of water does not justify its application on account of its greatly increased cost, with only a slight increase in killing power. Third, commercial lime-sulphur used at the rate of one gallon of the wash to nine gallons of water kills practically the same percentage of scale, cost five cents more per barrel and took only one-fifteenth as much time to prepare as did the home-made lime-sulphur.

The question naturally arises, especially if the orchard is of any size, "Would it not pay to use the commercial wash, rather than to use half the time in making up solutions?"

The most important phase of the subject, however, has not yet been touched upon. It is as follows: While it makes no material difference whether flour or flowers of sulphur is used, except in cost, the grade of lime has a great deal to do with the effectiveness of your wash. The grade of lime commonly found on the market usually contains from 10 to 30 per cent of impurities. Then, too, few men who own orchards know how to make a good wash, and even if they did, the variation in quality of lime, time of cooking, etc., will give no two solutions of the same density.

At best, the home-made wash, made in the open air, is a variable solution, while all the leading brands of commercial lime-sulphur on the market are manufactured according to a standard.

Taking all the above facts into consideration; cost, variability in strength of home-made washes, standardization of commercial brands and amount of time consumed in preparation of a barrel of spray, it would seem that it would pay the home orchaedist to use the commercial brand at a one-to-nine solution. As to whether it will be the most economical for large orchards, it depends upon the following: labor conditions, distance from stock of commercial wash and mechanical facilities for making the wash at home.

Whatever you do, however, if your orchard is infested with San Jose scale, use one or the other of the mixtures. If the infestation is light or medium, make the application as late in winter as possible and just before the buds begin to swell. If the infestation is heavy, two applications might be necessary. Should this be the case, made one application in the near future, and the second just before the buds begin to swell in the spring.—J. A. Dew, Alabama Experiment Station.

Care for Shade Trees.

This is a season when the shade trees should be carefully inspected. All dead and decaying branches should be removed before the rot fungus finds its way into the heart of the tree. Care should be taven to cut the branches off close up to the body of the tree as stubs left often cause disease and insects to enter the main body of the tree and eventually kill it.

If the land is rather thin it would be a good plan to spread manure around the trees. This gives them a good start when spring opens. Trees that are badly infested with borers or other insects and disease may be greatly benefited by manure. The manure may cause the tree to get a start on insects and diseases so that the pests will not injure it further.

A coat of whitewash often gives some protection against diseases and insects. It always gives the place a cheerful, clean appearance that is desirable. The whitewash may be applied with a brush and the trunks may be covered up as high as one can reach.

Be liberal in your use of shrubs, flowers and ornamental plants. Landscape gardeniag is a very necessary work in making the farm home attractive. Money invested in ornamental plants brings returns in pleasure.

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23

DAIRYING.

Curdy Butter and How Remedied.

As a great deal of the farmhouse butter on the market is spoiled by the presence of casein, or caseous matter, it is thought that the chief circumstances which determine the the amount of casein left in butter may be of some interest to many butter-makers.

Milk consists of several different constituentsi namely:—Water, butterfat, casein, milk sugar, and ash, or mineral matter. The chief constituent of milk required for the production of butter is the butterfat. This substance exists in milk in the farm of small globules, which vary in size according to the breed of the cow, and the lactation period.

Owing to the fat globules having a lower specific gravity than the milk serum, they rise to the surface naturally, or may be separated from the milk serum in a very short space of time by means of a centrifugal cream separator; but by whichever means the separation takes place, cream is obtained, and not pure butterfat. Cream consists of the same constituents as milk, but they exist in different proportions, the fat, of course, being the highest, and varying from about 25 to 50 per cent. Where cream is produced expressly for butter-making, it seldom contains more than 15 per cent. of butterfat.

Another constituent of cream is the casein, which, like the fat, is in suspension, but is of a vicious nature, and adheres to the fat globules. When fresh or sweet cream is churned, it results in a lot of casein being present in the finished butter. The churning of sweet cream is the cause of a great deal of butter on the market being poor in quality. Casein is of such a nature that its viscosity is destroyed by lactic acid, which is naturally produced in milk and cream by bacteria. In order to ensure a minimum amount of caseous matter in butter, the cream must be ripened or soured to the extent that it contains from 5 to 6 per cent. of lactic acid. Cream sours quickly in summer, but it is advisable to assist the ripening in winter by the addition of some starter to the cream. It is best to test the cream for acidity by the use of the ordinary acidimeter, as unsuccessful results often obtain when the ripeness of cream is estimated by taste and smell only. When once the fat globules are freed from the casein, they may be collected together in the churn.

It is necessary to churn cream at the right temperature, as having the cream too warm makes it practically impossible to churn to a nice grain, and also causes the butter to contain an excess of caseous matter. The larger the butter grains, and the softer the butter when in the charn, the more casein will there be in the butter when it is made up for market. During the process of churning, as the butter breaks, that is, when it is in a fine, mealy condition, some breakwater is added, which serves to prevent the butter going to a lump, and also washes away the caseous matter adhering to the grains. If at this stage of churning the caseous matter is not removed from the butter grains, it gets pent up in them, and any subsequent washings will not extract it.

The next factor influencing the amount of casein in butter is the washing. It is essential to wash the butter grains thoroughly, in order to remove the caseous matter from them. After drawing off the buttermilk, the butter should be washed with two or three lots of water, until the last lot of water is free from buttermilk on leaving the churn. The more butter is washed the less caseous matter will it contain, but, of course, that actually confined in the butter grains will not be affected by the washings. The use of brine instead of dry-salting butter tends to facilitate the removal of casein from the butter, but the practice of brining butter is only resorted to where small quantities of butter are made at a time. A sample of good butter would not contain more than 5 per cent. of caseous matter, and this would be necessary to give the finished article a prime flavor, while an excess of casein gives butter a bad flavor, as well as short-keeping properties.

When to Feed the Cows.

The question of when to feed the cows, whether before, during or after the milking, is one which has been discussed a great deal by farmers and farm journals. The custom of allowing the cows to eat while they are being milked is quite common, but it never seemed to me to be a wise one, especially if it is the grain feed that is given the cows at that time, and that is undoubtedly what is understood in what is said on this subject.

An investigation which was recently made by the Connecticut Agricultural College seems to show that the conclusion of many dairymen is wrong in thinking that cows will stand more quietly and give their milk down better if they are eating while being milved.

The conclusion of the College investigation is that the man who has once adopted the plan of milking before any feeding is done, seldom, if ever, cares to go back to the old method of having the cows eating whi,e being milked.

The average cow seems to be unable to divide her attention satisfactorily between two operations, and the result is that either she pays most of her attention to eating or else she pays more attention to the man who is milking her, and is, therefore, unable to eat quietly during the milking process, and probably will not see the milker when he approaches,, and the first intimation she has of his presence is when he speaks or touches her, and if she is a nervous cow she will probably either jump or kick, and then continue to annoy him with her tail during the entire process of milking.

If the feeding is being done at the same time as the milking, the annoyance is even greater, since the cow is uneasy until she gets her feed and does not stand quietly or give down her milk freely.

Cows which have been accustomed to eating during the milking process may bother for a few days if the feeding is postponed until after the milking, but they become accustomed to the new order of things very quickly and after a few days will be have much more satisfactorily than they did when the two operations were done at the same time.

It is not only more pleasant to do milking before the feeding is done as a result of the better behavior of the cows, but the sanitary and keeping qualities of the milk are also better than when feeding has been done before or during the milking period.

All of the dry feeds, such as the common grains, hays, etc., contain large quantities of dust, which is thrown into the air by the handling. This dust is heavily charged with bacteria and the atmosphere of the stable thus becomes filled with these micro-organisms.

As this dust settles into the milk pail, it carries down with it the adhering bacteria and the germ contents of the milk is thereby increased

At the same time the restlessness of the cow results in the dislodgement of a greater amount of dust and bacteria from the cow and the milker, and these also fall into the milk.

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HALIFAX, N. S.

Discoulored Milk.

Very annoying to the dairyman and cowkeeper are those departures from the normal in quality and appearance in the secretion of the udder known as bloody milk, red milk, blue milk, and other degrees of discolouration, because the customer has a prejudice against milk that is anything but of a rich creamy yellow. Bloody milk and red milk are very commonly confounded together in spite of the fact that they are entirely different troubles. In the one case blood as blood is present, while in the other it amounts only to a discolouration, and often consists of a red sediment apparent only after the milk has been set up in the pans for creaming, or has stood for some time in the customer's jug. A variety of very different causes are alleged to cause cows to yield bloody milk. The occurrence of oestrum is a reputed cause, so is the continued milking of cows which ought to be dried off. The feeding is considered by many to be at fault, and acid plants such as ranunculus, colchicum, heaths, bracken, and astringent and resinous shoots are mentioned. A sudden accession of rich food is alleged to be a cause, and is supposed to result in the yielding of bloody milk by casual local congestion of the udder, along with an increased secretion. Blows on the udder or commencing inflammation is also mentioned, but the thin red serous fluid yielded in inflammation of the gland structure is something quite distinct from the occurrence of pure blood from one or two quarters, most commonly the front pair, about which so many complaints are made. In the majority of cases of this kind the trouble is due to weakness of capillary blood vessels whieh ramify through the udder, and the blood comes in the strippings. They are often most troublesome to cure, and sometimes the only way out is to dry off the cow. When she is stale it is generally the best course to adopt, but when the cow is in full milk, treatment becomes a necessity. The udder should be bathed with cold water and afterwards anointed with camphorated oil, or a mixture of soap liniment and spirit of camphor in equal parts. Acrid plants should, of course, be as far as possible avoided, but we should expect these to cause digestive derangement, dysentery, liver disorder, or red water, rather than bloody milk.

Notwithstanding the fact that the blood comes with the strippings, complete emptying of the gland must be persisted in, or a worse trouble in the shape of garget, of which imperfect removal of the milk is a fertile cause will be the result. Milk carefully and gently, and as the stained product comes last, it may be drawn into a separate vessel. It cannot be sold for human consumption, but pigs or calves will not refuse it, nor do badly on it, because slightly discoloured. Blue milk and red milk are said to be due to cryptogams or micro-organisms which have been isolated and named, but feeding may have some influence, for it has been demonstrated that the administration of madder, logwood, and similar agents will cause a red sediment in milk. Watery milk with a blue tinge—the "sky blue" of commerce—may be a symptom of advanced tuberculosis.—Dairymaid.

If your children are subject to attacks of croup, watch for the first symptom, hoarseness. Give Chamberlain's Cough Remedy as soon as the child becomes hoarse and the attack may be warded off. For sale by all dealers.

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John B. Cosing, whose prosperous farm home at Snelgrove, Ont., is shown above, recently discarded his disk-filled cream separator and bought the simple Sharples Dairy Tubular. He prefers a separator with double skimming force and without inside contrivances.

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Maritime Farmer Parchment Offer.

The recent offer of the Maritime Farmer to supply its subscribers with guaranteed pure butter parchment at wholesale prices, has resulted in the receipt by the Farmer of many inquiries and already a number of orders have come in. One reader of the Farmer promptly sent in an order for five reams of parchment and saved $2.00 on the order for himself and his neighbors. Other orders have been coming in for printed parchment and for mixed lots printed and plain. In every case the Farmer's patrons have expressed their appreciation of the plan to sell direct to the customer. The Farmer recognizes the assistance it receives from the dairymen of the Maritime Provinces and is glad of the opportunity of reciprocating. A card to the Maritime Farmer will bring full particulars of the co-operative, parchment buying plan. It means a big saving to users of butter parchment, every sheet of which, when supplied by us, has our guarantee as to quality behind it. We buy direct from the largest parchment mills in Germany and thus save the middleman's profit.

Churning in Winter.

In the winter season, difficulty is sometimes experienced in churning the cream. The addition of water at a temperature of 70 degrees F. to the cream, while it is still sweet, to the extent of twenty-five per cent of its bulk, will cause it to yield its butter in less time and more completely. The water should be added before the cream is sour, and at least twenty hours before the churning is commenced. The next treatment is to develop ment of lactic acid, or ripening of the cream. If a quantity of sweet cream is churned, and an equal quantity of ripened cream, of the same quality as to composition, be also churned, there will be obtained, on the average, from the sweet cream only 77 pounds of butter out of every possible 100 pounds; while there may be obtained from the ripened cream 97 pounds out of every possible 180 pounds.

There are thoudands of pounds of butter lost in the country every year from the churning of two qualities of cream in the same churn at one churning. The only safe plan is to have all the cream for each churning thoroughly mixed from twelve to twenty hours before the operation begins. It should be kept at a temperature of from 60 degrees to 70 degrees, according to the season of the year, to permit it to ripen. The higher temperature is required during the winter season, and for separator cream during the summer season also.

Churning is performed for the purpose of causing the globules of fat to strike each other, and unite by impaction. If two globules strike each other at a suitable temperature, they will stick together; when large numbers of them unite in this way, it is said that the butter has come and the particles may be removed and washed.

The size of the fat globules has ability of the cream. Creams vary in their behavior during churning, and not only do creams of different breeds of cows, but frequently cows of the same breeds show variation.

Speaking generally, the larger the fat globules in the cream, the more easily is the butter obtained.

Recent investigations have been made to ascertain the optimism temperature for churning, and to determine the loss in churning at various temperatures. The optimism temperature is found to be 52 degrees F. for all creams; that is to say, the lower the temperature, the less fat is left in the buttermilk. With sweet cream, as much as 30 percent of the total fat may be lost in the butter milk if too high a temperature is used. With ripened cream as much as 20 percent may be lost.—C. G. Freer in Maine Farmer.

FREE-FARM ACCOUNT BOOK

Know How Much You Make This Year

No one shall pay a cent for ***Bickmore's Farm Account Book.*** It will be sent free to any farmer who will be good enough to tell who and where he is. The cost of a crop never demanded closer attention. Business farming puts money in the bank. This book is arranged to keep all accounts in simple form—more simple, and certainly more practical, than trying to remember them; shows what to charge against crop production; has a laborer's time record and section for personal accounts. ***64 pages; for ink or pencil.*** Not a cheap affair. It is meant for business. Its quality is in keeping with

BE SURE AND WORK THE HORSE

BICKMORE'S GALL CURE

a remedy that ***cures,*** and the horse works all the time. Users keep it in their stables the year round—they believe in it. It is always ready for Harness or Saddle Galls, Chafe, Rope Burns, Cuts, Scratches, Grease Heel, etc. In cows use it for Sore Teats. Don't buy a substitute. For the sake of your horse's health, be sure to ask for ***Bickmore's*** Gall Cure at the store. But write now for Bickmore's Farm Account Book—it is ready for ***you.*** No cost. No obligation. Send your name and address—that's all.

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Send us your name and we will mail you a free copy of Bickmore's Farm Account Book.

WINGATE CHEMICAL CO.
Canadian Distr's, 801 Notre Dame St. W., Montreal, Canada

Expensive Warming of Barnyard.

Don't you know that it won't pay to warm a barnyard with cows running in it? Do you know that Prof. Plunk made an experiment in Ohio which showed that cows out in the barnyard from 8 A. M. to 4 P. M. ate more food, gave less milk, and lost flesh, while those in the stable gained milk; that the saving in food gain in flesh, ate less food and gave more in flesh and more milk made a difference of over eight cents per day for each cow?

Mighty expensive warming a barnyard with cows at eight cents a day each. Better fix up the stable good and warm, and keep those cows in and get that eight cents extra.—J. L. Woodward.

The co-opetative creamery, when properly managed and supported by farmers, business men and dairymen, it worth a great deal to any community. All business is benefited because it makes farmers more prosperous.

When you want a reliable medicine for a cough or cold take Chamberlain's Cough Remedy. It can always be depended upon and is pleasant and safe to take. For sale by all dealers.

Waterloo Boy Cream Separators Are Good Separators

and you need one if you have the milk of even a single cow. You are wasting quantity and quality of product every day you go without one.

This waste is greatest in cold weather and it counts most of course when butter is high. Then with a separator there is always the warm, sweet skim milk and saving of time and labor in addition.

When it comes to a choice of separator Waterloo Boy superiority is now universally recognized. Those who "know" replace the other separator with a Waterloo Boy later, thousands of users are doing that this year. If you already have some other machine the sooner you exchange it for a Waterloo Boy the better. See and try a Waterloo now while you have plenty of time.

SUSSEX MOTOR CO., LTD.
SUSSEX, N. B.

Agents wanted for our full line of Cream Separators, Gasoline Engines, Woodcutters, Grain Grinders, etc.

LIVE STOCK.

Why the Boar Should be Kept to Himself.

Is that boar pig recently purchased, or to be purchased this winter, going to run with the herd or is he to be kept by himself?

Many farmers are quite positive that it costs too much to keep a boar in a lot by himself and that it is too much trouble to watch the sows and breed them once and then remove them to separate and quiet quarters apart from the balance of the herd. It is true that among these are most of those who do not find hog raising profitable, but, on the other hand, many who are fairly successful pork producers allow the boar to run with the rest of the herd. Most of our failures in live-stock production are due to the fact that we think it expensive and too much trouble to study the business, and take care of and feed the animals as they must be, to give profitable returns. On the other hand, a man may keep the boar by himself and take good care of him in a wise and economical way and still fail, but failure is more likely to occur when the boar is allowed to run with the herd.

Some of the advantages of keeping the boar in a lot by himself are as follows:

1. If he is young, he makes better growth and development, and if he is mature, he is apt to keep in better condition.

2. He is likely to learn bad habits and is always where wanted.

3. The date of breeding the sows is known, and consequently a larger per cent are got in pig when desired and the date of farrowing is known and more pigs are saved.

The reasons for allowing the boar to run with the sows are that it is too expensive and too much trouble to keep him in a lot by himself and feed him twice a day, and watch the sows and breed them as they come in season. It is more trouble to feed him by himself and turn him to the sows as required; but, results considered, there is serious doubt if it is more expensive to keep the boar by himself. In fact; the writer is of the opinion that the most expensive method of keeping a boar is to allow him to run with the sows, or with the general herd. But many in the South will disagree with me. Perhaos one reason for this is, that we are not accustomed to giving anything such regular care as that method of keeping a boar requires.

If a lot large enough to furnish green feed for the boar is provided, grain need not be fed mare than once a day, and the trouble of feeding and care will not be large. This is the method whish seems best; but if it is not allowed, what is the next best method?

From the time the boar is five months until he is a year old, it is more important that he be kept separate from the other hogs than at any other period. If he is to be allowed to run with the herd, it should not be until he has been grown to an extent sufficient to insure a fair development. If the boar must run with the herd, let it be after he has been well developed. Then he may be allowed to run with the sows or other hogs six months old or more, with least injury to himself.

If, however, the young boar is to be put in a dry lot, and not given proper feed and care, his development may suffer even more than if allowed to run with the herd, provided the latter are given good grazing or are fed properly.

How is he to be fed? When grazing is possible in winter, he should have green oats, wheat or barley and rape. In summer, some of the legumes, Bermuda or other green crops must be furnished for grazing. When dry feed is used, it must be such as soy beans, peanuts and corn grown on the farm. Only the breeder of pure-bred animals to be sold at fancy prices as breeding stock, can afford to purchase feed for hogs, and even then such a practice reduces the profits. But remember that we do not object to feeding the hogs corn, shorts, rice polish, tankage, and similar purchased feeds because they are not good, but it is simply that they are too expensive. It must not be inferred from this that there is to be any stinting of the hog in his feed. He must have plenty of feed or there is no possible chance of success, and while the minimum of grain is to be fed, this can only be profitable when cheaper grazing crops are supplied.

Wintering Breeding Swine.

No question connected with the management of swine has a more direct bearing on profits than the care and management of breeding animals during the cold months. Breeding sows should be given the same care as any other breeding animals. I have always found that it paid to give brood sows as good care as I give dairy cows. The brood sow should have a dry nest and a sleeping place that is warm and free from drafts and dampness. Whenever the weather is favorable she should be turned out to exercise, for no breeding animal can bring good, healthy, vigorous progeny unless she has an abundance of exercise and pure air,

GIVE THE BOAR A GOOD RUN.

The breeding boar should have a house and yard by himself away from the rest of the herd. He should be given plenty of wholesome, nourishing food to enable him to maintain a good, vigorous condition and not take on too much fat. Home-grown grain feeds supplemented with wheat middlings and a little oil meal, make an excellent ration. Whenever possible cut clover or alfalfa should be added to supply bulk and succulence. If these are not at hand, roots should be fed at least two or three times a week. Once a day would be better.

The breeding sow should be given warm feed during the winter. Her food should be nitrogenous in character, since too much concentrated heat-producing foods are sure to cause trouble, and it will be fortunate indeed if she raises any of her pigs.

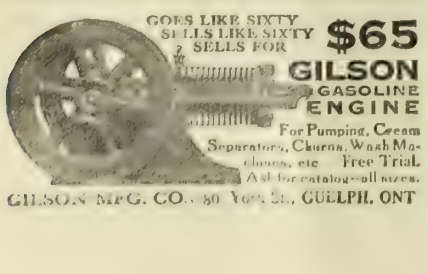
I have found nothing better than cut clover or alfalfa hay cut fine, steamed or soaked in hot water and mixed with wheat middlings, ground oats and corn meal. I feed this mixture in the form of a thick slop twice a day. The cut clover and alfalfa will supply both bulk and succulence and keep the bowels in the good condition.

FLESHY SOWS RAISE THE BEST PIGS

Sows should be in the best possible condition at breeding time and carry an abundance of flesh. The sow that is bred. When she is very thin may bring a good strong litter of pigs, but unless she has a reserve force of stored-up flesh and energy, her pigs will receive poor nourishment and will not make as good gains as the ones from the sows that carried an abundance of flesh at farrowing time.

The flesh carried by the farrowing sow should be the result of a ration of wholesome food, bone and muscle building foods, not put on by corn and other fat-producing foods. Flesh is not fat and the sow that carries considerable flesh as the result of rational feeding will have larger and more thrifty pigs at weaning time than the sow that farrows while extremely thin and consequently not in condition to properly nourish her young.

By wintering and feeding our breeding swine under the right conditions we can avoid trouble in handling the early spring litters. When we lose these we lose the profits for the season, for we cannot replace them.—Farm and Home.



GILSON MFG. CO., 80 York St., GUELPH, ONT

SEED OATS!

If the farmers of the Maritime Provinces, Quebec and Ontario want to make sure of getting the highest possible grade of seed oats for the Spring of 1913 apply to us at once. To prevent a repetition of the disaster that befell so many farmers last year by sowing devitalized grain, we have stored at Point Du Chene and Pictou 50,000 bushels of **large, selected, separated White Seed Oats, true to name and free from noxious weed seeds.** It will be the farmers own fault if they do not procure good seed as the extra yield of these oats pays twice over cost of the seed.

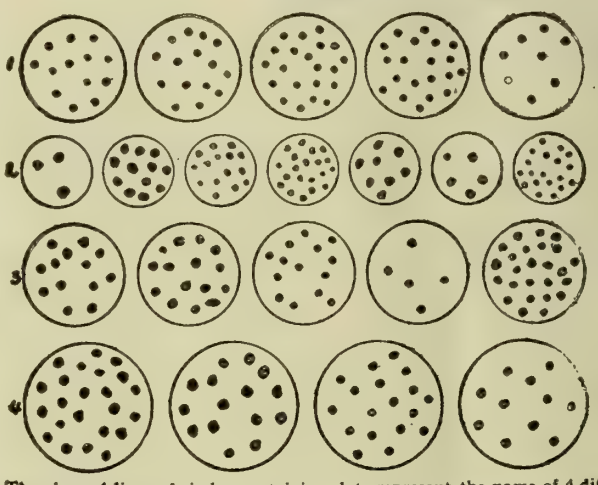
Our firm name is stencilled on every bag. Do not allow the dealers to give you other than Read's oats for seed.

JOSEPH READ & CO., LTD., Summerside, P. E. I.

FREE $300.00 IN PRIZES

IN THE GREAT DOT PUZZLE CONTEST
A Genuine Contest for WISE HEADS!

SOLVE THIS PUZZLE



The above 4 lines of circles containing dots represent the name of 4 different things described after each line. What are they?

HOW TO SOLVE THIS GREAT PUZZLE

Each circle of dots represents 1 letter of the word and the number of dots in each circle determine the letter in its relation to the alphabet. For instance: A is represented by 1 dot because it is the first letter in the alphabet, B is represented by 2 dots because it is the 2nd letter in the alphabet, C is represented by 3 dots because it is the 3rd letter in the alphabet. Now, with these simple instructions and a little patience you can soon have the puzzle solved. To give you a little assistance the 1st letter of the first word is M, because the circle contains 13 dots and M is the 13th letter of the alphabet.

After you have found the solution write your answer neatly on a piece of paper with your name and address and anything else you wish to say about the contest and send it in to us.

Those who send in the Correct or the Nearest Correct Answers; whose answers are the neatest and who live up to the condition of the contest (read rules of contest below), will win the following grand prizes:—

1st	Prize,	$125 00	in cash.
2nd	"	50.00	"
3rd	"	25.00	"
4th	"	15.00	"
5th	"	Gent's Watch.	Value $10.00.
6th	"	Ladies' Ring.	Value $10.00.
7th	"	Fine Clock.	Value $10.00.
8th	"	44-Piece Dinner Set.	Value $10.00.

9th Prize, Mission Upholstered Rocker Value $10.00.
10th Prize, Violin. Value $10.00.
11th Prize, Gillette Safety Razor. Value $5.00.
12th Prize, Waterman Fountain Pen Value $5.00.
13th Prize, Glass Water Set. Value $5.00.
14th Prize, Large French Doll. Value $5 00.
15th Prize, Silverware Set. Value $5.00.

READ THE SIMPLE RULES OF THIS CONTEST

1. Contestants may send in as many answers as they wish, but only one answer can win a prize. (2) Only 1 person in each family will be allowed to compete. (3) No employees of ours or any relation of any employee will be allowed to compete. (4) Children under 12 years of age will not be permitted to compete. (5) Write only on one side of the paper. (6) All letters must be fully prepaid in postage. We will not accept answers upon which we will have to pay postage. (7) The decision of the judges must be accepted as final. The judging will be in the hands of 3 gentlemen of integrity who are absolutely disinterested. (8) This contest is absolutely free. You are not asked to spend one cent of your money or buy anything to enter. As soon as we receive your answer we will immediately tell you if you are right, and how the prizes will be distributed. We guarantee the awarding of the prizes described above according to decision of the judges.

Address all answers to **Contest Department. 220**

NEW LIFE REMEDY COMPANY, TORONTO, ONT.

Keep up the Grain Feed for Lambs and Breeding Ewes.

Do not slacken the grain feed on the lambs or the breeding ewes because the weather is mild and they seem to be gathering a fill from the pastures. Pastures at this season of the year are not generally as good as they appear to be, since the frost and freezing has greatly reduced their feed value, especially pastures that have been kept well eaten down through the summer and early fall. Sheep, however, are persistent grazers, and if given their liberty will go out on the fields when not stormy or covered with snow and gather the dried, frosted grass, even when it is of little or no feed value.

The sheep will come in toward the close of the day, often looking plump and full, when the grass they have gathered is not sufficient to keep them thriving. This is where some inexperienced sheep handlers deceive themselves by the full appearance of the sheep and cut down the grain feed as a matter of economy, thinking the mild weather and the dead pasture sufficient to carry them along. A little grain—shelled corn is really preferable to other feeds—will keep sheep under these conditions moving right along, though to get the best results a little bright, well cured hay should be placed in the racks each evening for the sheep to feed on during the open fall and winter weather.

It never pays to change the grain feed on sheep because of mild weather in the winter. Keep right on with the grain allowance, but slacken up on the hay, then shorten down in the allowance until they clean it all up, or approximately. There is sometimes a little refuse in the hay—old stubble, weeds or coarse stubs of hay—that the sheep have refused. Take all this refuse out and use it for bedding. Never try to force sheep to eat refuse, coarse, unpalatable stuff that they have culled out in eating.

There is one great need in the care of sheep, and that is to keep their feed clean. The providing of feed troughs and hayracks that they cannot get into with their feet is a necessity, as they will very soon soil these feeds and troughs so that the other sheep will not taste them. This This is an easy matter to regulate and should be observed. Sheep are often fed corn shelled or in the ear, and fed out on the ground, and this is generally successful if it is scattered on sod and scattered so it does not get soiled by the sheep ant they walk over it. The flat-bottomed trough is the best style of trough to feed grain in. This should be set up six or eight inches from the ground set ten inches above the trough, running parallel with the trough and dividing it in the center as nearly as can be. This keeps the sheep from jumping over the trough or from getting their feet in it. A trough so fastened should be held solid at each end by a headpiece, board or stake driven in the ground and nailed to the end of the trough. These upright end pieces should have a slot sawed in the upper end for the trough division board to crop into. Where there is nothing to stop the sheep from jumping over the trough there will always be some sheep that will be in the trough.

The sheep feed yard should not be used by other stock and should be kept as dry and free from mud as possible. To have a grain feed lot is a great convenience, as the grain feed can be distributed in the troughs before the sheep are let into the yard thus a more even chance for the sheep to get the feed properly apportioned among them.

How the Champion Load of Short-Feds at the Last International Were Made.

Details of the manner in which M. H. Feddersen of Bryant, Ia., prepared the champion load of short-fed cattle at the 1912 International, together with the financial results of the operation, will be of interest to commercial feeders:

On February 3, 1912, these cattle weighing 950 lbs. each, were purchased at $5.25 per cwt. and as per requirements for entry to the short-fed special contest, were fed no grain prior to Aug. 12. From February 3, up to April 10 the feed consisted of rather coarse timothy hay and the fodder taken from about 2½ acres corn planted very late on land seeded to spring wheat, which was killed out by a rank growth pf weeds. On April 7 the cattle were turned on 60 acres of good blue grass pasture, with a good deal of old grass left from the previous season. Here they remained without any additional roughage until August 12, when they were put on grain feed. The snow storms during April made it necessary to bring the cattle up to feed for a few days.

On August 12, after twelve hours off feed and water, the eighteen steers averaged 1205 lbs, showing a gain of 258 lbs. over purchase weights. During the first 60 days of the feeding period the cattle had access to 40 acres of pasture from which a crop of hay had been taken and the grain consisted of cracked corn, speltz and oil meal. A full feed was reached in about two weeks and practically no steers went "off feed." When the steers showed an inclination to lag a little, molasses feed was added to the ration to whet the appetite. The gradual change from old to new corn commenced September 1.6. During the last thirty days the cattle received 5½ lbs. of oil meal per head per day. Complete figures follow:

	Cost.
18 steers averaging 950 lbs, at $5.25 per cwt	$897.84
2½ acres corn fodder at $10 per acre	50.00
10 tons hay at $10 per ton	100.00
60 acres pasture to Aug. 12, at $4 per acre	240.00
Interest on investment at 6 per cent	73.87
Cost up to Aug. 12	$1,341.71
FEED BILL AUG. 12 TO NOV. 30.	
52 bu speltz at 30c per bu	$15.60
4 tons oil meal at $35.50 per ton	134.00
335 bu cracked corn at 75c per bu	251.63
587 bu new corn at 40c per bu	234.90
1½ tons Champ. Molasses Feed at 26.50	39.75
Pasture Aug. 12 to Oct 10	20.00
1 ton alfalfa hay at $16 per ton	16.00
Corn stover	10.00
Cost to Nov 30	$2,063.59
Swift, 15 steers, 22,860 lbs at $10.70	$2,446.02
Armour, 3 steers, 4,660 ,bs. at $10.75	500.95
	$2,946.97
Commission and charges	131.00
Net proceeds	$2,815.97
Premium	300.00
	$3,115.97
Cost	2,063.59
Net profit	$1,053.38

Breed the Old Sows.

I prefer to breed the old sows and retain them as long as they give satisfaction. As a rule brood sows are sacrificed long before their usefulness as breeders is lost, while untried and oftentimes inferior ones are put in their place. Litters from old sows are more profitable. They are usually larger in number and size and make better growth than pigs from young sows. It is a common thing for pigs from old sows to weigh 50 pounds more than pigs from immature sows at 10 months of age.

If an old sow proves to be a poor breeder of course she is discarded. I never breed my sows until mature. When bred too young the result is usually a stunted sow, susceptible to disease and a small, weak litter of undersized pigs. The old brood sow is more profitable and safer.

Maple Syrup Makers Enter This Contest

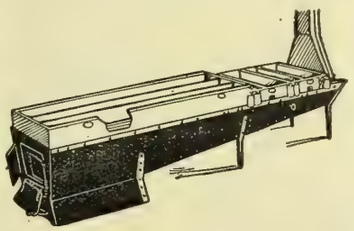
$500 IN GOLD CASH PRIZES

WHY not be a WINNER in this contest? We are giving away $500 in Gold Cash Prizes to users of the Grimm "Champion" Evaporator.

Cut Out This Coupon

Full particulars will be mailed on receipt of above coupon.

The competition will take place during the last two weeks of April and the samples of syrup and sugar received will be placed on exhibit in the show windows of the "Montreal Star." Every purchaser and user of the Grimm "Champion" Evaporator may take part in this contest. ***Now is the time to properly equip yourself*** to make high grade syrup and sugar—high priced and therefore profitable. Do it now before the sap runs. State the number of trees you will tap and we will give you prices on a suitably sized outfit. Address all enquiries:



PRIZE CONTEST

GRIMM MFG. CO.
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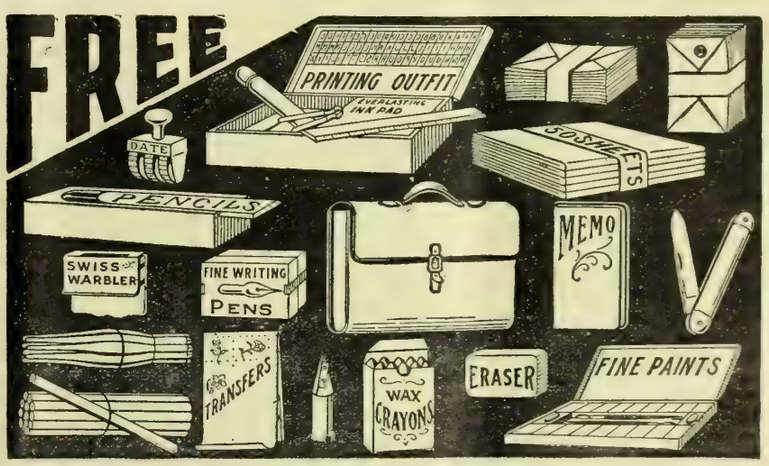
56-58 Wellington St.
MONTREAL

(*Dont Forget Coupon*)



FREE This 150 PIECE Complete Scholar's Outfit FREE

BOYS AND GIRLS, NEVER BEFORE IN CANADA HAS SUCH A GRAND PREMIUM BEEN OFFERED AND SO EASY TO GET.

READ WHAT THIS GRAND SCHOLAR'S OUTFIT CONTAINS.

1 large leather bound school bag, 1 dozen fine quality H. B. pencils, 6 steel tip pen holders, 1 dozen 292 pennibs, 50 sheets of writing paper, 1 dozen envelopes to match, 1 box of 15 water color paints with brushes and pots, 10 beautiful drawing crayons of different colors, 1 fine quality steel blade penknife, 1 large hardwood slide top pencil box, 1 complete printing outfit containing type, ink, tweezers and stamping pad, 1 twelve inch ruler, 1 large memorandum book, 1 compass good for five years, 1 large rubber eraser, 1 steel blade pencil sharpener, and last but not least, 1 Swiss warbler the greatest invention for imitating birds and animals.

Think of it this scholar's complete outfit is **FREE.** We are determined to sell a million packages of Marvel Bluing this year and are sparing no expense to reach this mark.

Marvel Bluing is a great improvement on the old style of bluing and goes twice as far. Everybody buys it because it is so good and a present is given away with every package.

We will give you one of these grand scholar's outfits **IF YOU WILL AGREE TO SELL ONLY 25 PACKAGES OF MARVEL BLUING AT ONLY 10c. PER PACKAGE.** Any boy or girl can sell 25 packages easy. No trouble at all.

We send you the Marvel Bluing free and trust you with it until sold. Simply send us your name and address to-day. Every girl and boy should win one of these grand scholar's outfits. Try. If you can't sell the Marvel Bluing send it back to us.

Address to-day **THE MARVEL BLUING CO., Dept. S.** 101 Toronto, Ont.

EXTRA SPECIAL PRIZE FOR PROMPTNESS

A $2.50 fountain pen has 14k solid gold nib, with Iridium tip, large hard rubber bowl, a guaranteed writer. Every boy and girl has an opportunity to secure one of these fountain pens, just for being prompt in answering this advertisement.

THE HORSE.

Cow Kicking.

A most insidious form of kicking is that known as cow-kicking, in which the horse strikes forward towards its shoulder with a hind foot instead of lashing out rearwards in the ordinary manner. One has to be particularly careful to avoid being hit by a horse that cow-kicks, for one is liable to be struck by the animal when standing near it in a position ordinarily quite safe and out of range of the horse's hind feet. Thus a cow-kicker can easily administer a blow to a person when he is drawing up the girths of the saddle or adjusting the girth-band of the harness, or even when stooping down to lift up a fore-foot. What frequently makes it more dangerous is that the horse fails to give any warning of its intention to cow-kick by laying back its ears and "showing the white," by means of which signs an ordinary kick is uaually heralded. Fortunately cow-kicking is not a frequent habit, and is chiefly confined to mares. Geldings and entires rarely show any such prof pensity, but the last often strike out with a foreleg.—Argus.

Breading-Out or After-Sweating in Horses.

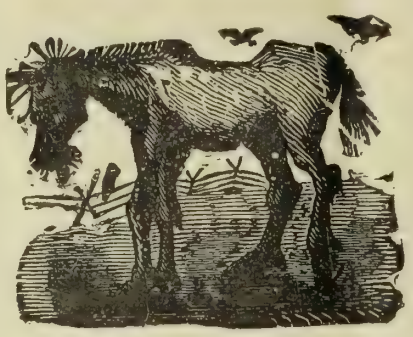
The tendency to break out into a cold sweat after returning to the stable from work is a frequent source of trouble in the stable management of horses, the evil being usually referred to briefly as breaking out. Such after-sweating entails a most weakening effect and otherwise militates against the well-being of the horse, as well as exposes it to the risk of catching a chill, to say nothing of the fact that it renders the animal very uncomfortable for tne time. The need for guarding against this is fully appreciated by all experienced stablemen, and if suitable precautions are adopted, it is quite possible to prevent it in the majority of cases. A typical case of breaking out is as follows: The horse may return to the stable in a very cool state and not sweating in the least. Having been given a quick wisp over with a handful of straw and rugged, it is left dry and apparently perfectly comfortable, but after an hour's time or so, it is seen to be perspiring profusely, the coat being saturated with a clammy sweat, while the rug, too, has become very wet absorbing the perspiration, the moisture often being collected in small beads upon its surface. The horse, further, feels very cold, especially about the ears and the extremities, and possibly it may also have a fit of shivering. Altogether it looks ill at ease. No time should be lost in taking off the wet rug and giving the animal a very vigorous and prolonged rub-down with straw wisps in order to stimulate the surface circulation and at any rate partially to dry the coat. To get the latter completely dry by means of wisping will usually be impossible. Having got the horse fairly warm and comfortable in this way, there should be placed on the animal's back a layer of clean straw, and a dry rug over the straw. That allows a current of air to circulate underneath the rug, which will materially promote the drying of the coat while it will also prevent the moisture from being absorbed by the rug. Finally a drink of water oatmeal gruel will do the horse much good and help to make it more comfortable,while it will also be advantageous to put woolen bandages on the legs for the purpose of warmth.

Have the horse briskly rubbed down on its return to the stable, not in the prefunctory manner so often done, but very thoroughly, and at least a quarter of an hour should be spent over the process. An important precaution to be observed is to place some straw between the horse's back and the rug, as has been described above. This is a most valuable safeguard, which cannot be too strongly recommended. Moreover, apart from helping to obviate after-sweating, the rug will keep much dryer if there is a layer of straw underneath it, should the animal's coat still be wet with sweat or rain, whereas the moisture in it will quickly soak into the rug and so make it very wet if it comes into direct and close contact with the coat. A wet or merely damp rug does not afford much warmth, and alone is very often the cause of a horse breaking out. Even when the expedient of putting some straw under it is adopted the rug will often become more or less damp after a while if the horse is left very wet when it is rugged up. In this case the rug should forthwith be changed into a dry one for which purpose there ought always to be one or two spare rugs available in the stable. One rug per horse is certainly not enough. Rugging up a horse immediately it comes in will frequently induce after-sweating, and that is therefore wrong, although it is often mistakenly held that one cannot get the rug on too quickly. But there need be no hurry about that, even when all rubbing down is omitted. The proper thing to do is to allow the horse to cool down a bit first it being left uncovered for about ten minutes or so, and then only should the rug be put on. There is no danger whatever of the animal catching cold meanwhile, and the risk of its breaking out is minimised in this way. In subjects with a special tendency to after-sweating, it is advisable, in addition to observing the precautions indicated, to keep a careful eye on them for the first hour, and should they commence to break out on any part of the body (usually the sweating first breaks out at the lower part of the flanks, in the thighs, or about the neck), the wet parts should be well rubbed down and dried with wisps of straw. The rug should also be taken off for a couple of minutes, and fresh straw placed underneath it. In this way further and more extensive sweating may in most cases be successfully checked.

Breaking-out is particularly liable to occur during the winter in horses which carry a heavy coat, and the evil in this case proves especially troublesome because once the coat has become saturated with perspiration it takes hours to dry again, while often it remains wet all through the night, and still feels damp the next morning. In such circumstances a horse naturally cannot thrive properly. There is, however, a very simple remedy for this, and that is to have the coat clipped. Where the heavy coat alone is responsible for the after-sweating, clipping will eventually prevent all further trouble in that direction, and a marked improvement in the animal's condition will usually quickly follow. In frequent cases, the trouble is more or less constitutional; that it is apt in particular to affect horses of a delicate or of a so-called washy constitution, and such ought always to be clipped in order to avoid this eveil as far as possible. Horses which are in a weak or soft condition are also specially prone to suffer from after-sweating. Breaking out, in fact, is one of the signs indicating want of fitness in a horse. When due to this cause the trouble will, however, soon cease on the animal attaining greater hardness of condition.—Mark Lane.

Horsemen Attention ! !

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevents the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.



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TESTIMONIALS

DEAR SIR :--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

DEAR SIR :--I have used Dr. J Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

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(Signed) WALTER SLATER, "Cash Livery."

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DEAR SIRS :—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
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POULTRY.

Small vs. Large Flocks.

Editor the Maritime Farmer:—

For years the beginner has been advised to start in the business in a small way. In fact, he has been cautioned to do so that he might increase in knowledge as his plant enlarged. It is not necessary to go over all that again, but more important to take up the methods employed by so many beginners—and not a few others who have been in the business for several years.

It is false economy to have these large families, as has been proved time and again. The most successful poultrymen and poulterers of today are of the same opinion.

The arguments used by advocates of large families—fifty or more in a flock—are:

1st. It saves expense in building.

2nd. It saves labor in feeding and watering.

3rd. It saves time.

Grant that there will be less building required, and that time and labor will be saved, the argument in favor of small flocks—not more than twenty five head in a pen—means:

1st. There will be no crowding and fighting on the roost at night.

2nd. These will be more exercise taken when the fowls are compelled to remain indoors.

3rd. There will be less vices like feather-pulling, egg-eating, bleeding the male bird's comb, etc.

4th. There will be more eggs.

5thf There will be better fertility.

6th. There will be better health.

Are not such reasons worth more than the expense of extra lumber, extra labor, extra time?

If there is anything wrong with the hens—such like an ailment, or drooping, or an accident—it will be more readily noticed in a small flock than in a large one.

In small flocks there is a better chance to see that all the fowls get a proper share of the feed. There are fewer "bullies" who drive away the more timid birds.

Overcrowded flocks are not the active, energetic hens that are so needed to make profitable egg production. Besides, there cannot be the proper fertility. On farms where there are these large, common flocks, two or more males are allowed with the hens at the same time. Even if these males do not quarrel they are always interfering with the other's attention to the female. This not only cripples fertility but is injurious to the hens.

But the greatest view point is that from health. It is a noteworthy fact that the bulk of inquiries that come to the editor, asking for roup, cholera, and other ailment remedies, come from farms upon which it is the custom to have large flocks. At night these birds crowd on the roosts, get close together, and the animal heat makes them "sweat." This condition causes an injury when the next morning the hens fly from their roosts and go out to face a temperature many degrees colder than what they had during the night.

For successful work, we repeat, never allow more than twenty-five fowls in one flock, and the nearer you keep the number to fifteen, the better will be the returns.

First grow bone and muscle, and then put on fat.

Corn forms the meat.

Close-grained poultry are most desirable. ...

Pure food poultry are most desirable.

Pure food improves the flavor of the meat.

It takes about eight weeks to grow a squab broiler.

Dark pin feathers give a dirty appearance to a dressed carcass.

Crooked breast bones spoil the looks of an otherwise attractive dressed fowl.

Unless the animal heat is all out of the carcass before packing to ship, there will be a discoloration of the skin.

For the production of broilers and medium-sized roasters, no varieties of fowls excel, if they equal, our American breeds. The bulk of buyers want a fowl that weighs ten to eleven pounds to the pairs or about five apiece.

The Houdan fowl may well be termed the Queen of the French Farmyard. It not only has an elegant carriage and form, and a gay and enticing plumage, but it also has all the practical qualities that one could wish in a fowl. It is a good layer, easy to fatten, and their flesh is of delicate flavor.

The poultry medicine chest should contain: a box of one-grain quinine pills, a bottle of a reliable liniment, a box of a good family liver pill, bottle of glycerine, and a bottle of spirits of turpentine. There should also be a can of kerosene oil within reach.

Nitrogenous foods are the frame makers. Carbonaceous foods do not build up the frame.

In breeding for fat, it is necessary to give more than can be converted into life and energy, and the surplus is deposited in the form of fat in the gizzard, intestines and under the skin. But if this fat feeding is carried beyond needs, the result is a diseased fowl, consequently very few eggs This diseased condition is caused by the hens eating too much carbohydrates to balance the proteins. Like humans, fowls like and require a variety of food stuffs, for the reason that they can assimilate from the various substances the flesh forming, energy-producing, and the mineral matter necessary to maintain the normal equilibrium of the body.

Poultry farmers are plain people. As a rule they are not college-bred. Therefore much of this scientific talk about balanced rations and other matters we find in books written by "highly educated" professors, finds very little "fertile soil" in the minds of these plain, honest, working farmers. Their knowledge of the feed question is that wheat, oats, barley, and occasionally buckwheat, make eggs; they know that of all grains, corn is the best for fattening; they are also acquainted with the fact that bran, middlings, cornmeal, ground oats and meat scrap makes the best composition for a morning mash, and when they find that the bowels of the fowls gre loose they increase the amount of middlings and reverse the order when they find there is a tendency to costiveness. These plain, hardworking people also know that green food is a necessary article in the poultry bill of fare, and that it must be given while the fowls are in confined quarters and not necessarily while they have free range. They were taught the lesson long ago that grit for grinding, and oyster shells for lime for making egg shells are necessary adjuncts to the diet. Now these folks have come into the possession of all this knowledge without being compelled to wade through a lot of scientific lore which would be very apt to confuse them.

It is a mistake to discard a good breeding fowl as long as it keeps in good, breeding condition. On the farm of the writer are some hens that are stil, profitable breeders at four years of age. But as a rule, a hen is of very little use after she has passed her second laying season.

The man who will look for the cause of his failure, will very often have pointed out to him the proper road to success. He who will not investigate the cause is very apt to encounter the same stumbling block again. Experience is a great teacher.

Gombault's Caustic Balsam

The Worlds Greatest and Surest

Veterinary Remedy

HAS IMITATORS BUT No COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing, invaluable as a CURE for

FOUNDER,
WIND PUFFS,
THRUSH,
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SKIN DISEASES,
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PINK EYE,
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BONY TUMORS,
LAMENESS FROM SPAVIN,
QUARTER CRACKS,
SCRATCHES,
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REMOVES

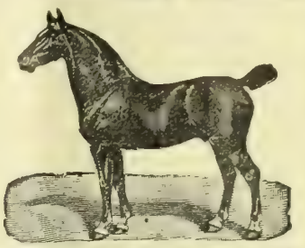
BUNCHES or BLEMISHES,
SPLINTS,
CAPPED HOCK,
STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made Every bottle sold is warranted to give satisfaction Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINANY REMEDY

Always Reliable. Sure In Results.



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Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

Canadians Appreciate Caustic Balsam

I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

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TORONTO, ONT. CLEVELAND, OHIO.

Some years ago Henry Van Dresser, before a Western Farmers' Institute told how to get rid of surplus poultry when prices are very low. He said that all should join hands and have a killing day. Put a large pot on the stove, kill and dress the birds, put them into a pot and boil until tender. Have Mason jars ready and fill with chicken, pouring the juice on top, cover with fat or melted butter, and seal while hot. It will keep through the year and then can be prepared in many different ways for the table. It makes a convenient dish for unexpected company.

After repeated trials with the different breeds, the writer has become convinced that where a person wishes to cater almost exclusively to a meat market, as well as a winter egg trade, he will make no mistake in keeping three varieties: Light Brahmas for large-sized roasting fowls; Plymouth Rocks for medium-sized roasting fowls and spring chickens; and White Wyandottes for small-sized roasting fowls and broilers. Should a summer egg trade also be desired, then the Leghorns could be used, principally on account of their non-broody traits. They will be laying when the American and Asiatic classes are thinking of raising families. In cases where the market does not call for large-sized roasting fowls, it is advisable to cut out the Brahmas and keep only the other two mentioned. If the market is not a good one for broilers, then either the Plymouth Rocks or the Wyandottes would fill the bill, and in that case it would be best to keep only one breed. In mentioning these particular breeds it is not done to convey the idea that they are the only ones fitted for that class, but rather to show about what class of fowl is needed. The Rhode Island Reds, or the Orpingtons, for instance, might suit the fancy better. —M. K. Boyer.

Mrs. A. R. Tabor, of Crider, Mo., had been troubled with sick headache for about five years, when she began taking Chamberlain's Tablets. She has taken two bottles of them and they have cured her. Sick headache is caused by a disordered stomach for which these tablets are especially intended. Try them, get well and stay well. Sold by all dealers.

125-Egg Incubator and Brooder Both For **$13.75**

If ordered together we send both machines for only $13.75 and we pay all freight and duty charges to any R. R. station in Canada. We have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. R. station. Hot water, double walls, dead-air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Especially adapted to Canadian climate. Incubator and Brooder shipped complete with thermometers, lamps, egg tester, use when hatching, showing the high grade year guarantee—30 days trial. Incubators finished in natural redwood, showing the high grade fornia Redwood lumber used—not painted to cover inferior wood. If you will compare machines with others, we feel sure of your order. Don't buy until you do this—you'll save money—it pays to investigate before you buy. Remember our $13.75 is for both Incubator and Brooder and covers freight and duty charges. Send for free catalog today. Send $2.00 deposit and save time. Write us today. Don't delay.

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THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

They began to close again, and I began to nod as the recollection rises fresh upon me. Once more the little room, with its open corner cupboard, and its square-backed chairs, and its angular little staircase leading to the room above, and its three peacock feathers displayed over the mantlepiece— I remember wondering when I first went in, what that peacock would have thought if he had known what his finery was doomed to come to fades from before me, and I nod and sleep. The flute becomes inaudible, the wheels of the coach are heard instead and I am on my journey. The coach jolts, I wake with a start,and the flute has come back again, and the Master at Salem House is sitting with his legs crossed, playing it dolefully, while the old woman of the house looks on delighted. She fades in her turn, and he fades, and all fades, and there is no flute, no Master, no Salem House, no David Copperfield, no anything but heavy sleep.

I dreamed, I thought, t hat once while he was blowing into this dismal flute, the old woman of the house who had gone nearer and nearer to him in her ecstatic admiration, leaned over the back of his chair and gave him an affectionate squeeze around the neck, which stopped his playing for a moment. I was in the middle state between sleeping and waking, either then or immediately afterwards for, as he resumed—it was a real fact that he had stopped playing—I saw and heard the same old woman ask Mrs. Fibbitson if it wasn't delicious (meaning the flute), to which Mrs. Fibbitson replied, "Ay, ay! yes!" and nodded at the fire; to which, I am persuaded, she gave the credit of the whole performance.

When I seemed to have been dozing a long while the Master of Salem House unscrewed his flute into three pieces, put them up as before, and took me away. We found the coach very near at hand, and got upon the roof; but I was so dead sleepy, that when we stopped on the road to take up somebody else, they put me inside where there were no passengers, and where I slept profoundly, until I found the coach going at a footpace up a steep hill among green leaves. Presently, it stopped, and had come to its destination.

A short walk brought us—I mean the Master and me—to Salem House, which was enclosed with a high brick wall, and looked very dull. Over a door in this wall was a board with Salem House upon it; and through a grating in this door we were surveyed, when we rang the bell, by a surly face, which I found, on the door being opened, belonged to a stout man with a bull-neck, a wooden leg, over-hanging temples, and his hair cut close all round his head.

"The new boy," said the Master.

The man with the wooden leg eyed me all over—it didn't take long, for there was not much of me—and locked the gate behind us, and took out the key. We were going up to the house, among some dark heavy trees, when he called after my conductor.

"Hallo !"

We looked back, and he was standing at the door of a little lodge, where he lived, with a pair of boots in his hand.

"Here! The cobbler's been," he said, "since you've been out, Mr. Mell and he says he can't mend them any more. He says there ain't a bit of the original boot left, and he wonders you expect it."

With these words he threw the boots towards Mr. Mell, who went back a few paces to pick them up, and looked at them (very disconsolately, I was afraid) as we went on together. I observed them, for the first time, that the boots he had on were a good deal the worse for wear, and that his stocking was just breaking out in one place, like a bud.

Salem House was a square brick building with wings, of a bare and unfurnished appearance. All about it was so very quiet, that I said to Mr. Mell I supposed the boys were out; but he seemed surprised at my not knowing that it was holiday-time. That all the boys were at their several homes. That Mr. Creakle, the proprietor, was down by the sea-side with Mrs. and Miss Creakle. And that I was sent in holiday-time as a punishment for my misdoing. All of which he explained to me as we went along.

I gazed upon the school-room into which he took me, as the most forlorn and desolate place I had ever seen. I see it now. A long room, with three long rows of desks and six of forms and bristling all round with pegs for hats and slates. Scraps of old copy-books and exercises litter the dirty floor. Some silkworms houses, made of the same materials, are scattered over the desks. Two miserable little white mice, left behind by their owner, are running up and down in a fusty castle made of pasteboard and wire, looking in all the corners with their red eyes for anything to eat. A bird, in a cage very little bigger than himself, makes a mournful rattle now and then in hopping on his perch, two inches high, or dropping from it; but neither sings nor chirps. There is a strange unwholesome smell upon the room, like mildewed corduroys, sweet apples wanting air, and rotten books. There could not well be more ink splashed about it, if it had been roofless from its first construction, and the skies had rained, snowed, hailed, and blown ink through the varying seasons of the year.

Mr. Mell having left me while he took his irreparable boots up-stairs, I went softly to the upper end of the room, observing all this as I crept along. Suddenly I came upon a pasteboard placard, beautifully written, which was lying on the desk, and bore these words: "Take care of him. He bites."

I got upon the desk immediately, apprehensive of at least a great dog underneath. But, though I looked all round with anxious eyes, I could see nothing of him. I was still engaged in peering about, when Mr. Mell came back, and asked me what I did up there ?

"I beg your pardon, sir," says I, "if you please, I'm looking for the dog."

"Dog?" says he. "What dog !"

"Isn't it a dog, sir?"

"Isn't what a dog ?"

"That's to be taken care of, sir ; that bites ?"

"No, Copperfield," says he, gravely; "that's not a dog. That's a boy My instructions are, Copperfield, to put this placard on your back. I am sorry to make such a beginning with you, but I must do it." ...

With that he took me down, and tied the placard, which was neatly constructed for the purpose, on my shoulders like a knapsack; and where ever I went, afterwards, I had the consolation of carrying it.

What I suffered from that placard nobody can imagine. Whethere it was possible for people to see me or not, I always fancied that somebody was reading it. It was no relief to turn round and find nobody; for wherever my back was, there I imagined somebody to be. That cruel man with the wooden leg, aggravating my sufferings. He was in authority, and if he ever saw me leaning against a tree, or a wall, or the house, he roared out from his lodge door in a stupendous voice, "Hallo, you sir ! You Copperfield! Show that badge conspicuous, or I'll report you!" The playground was a bare gravelled yard open to all the back of the house and the offices; and I knew that the servants read it, and the butcher read it, and the baker read it; that every body, in a word, who came backwards and forwards to the house, of a morning when I was ordered to walk there read that I was to be taken care of for a bit. I recollect that I positively began to have a dread of myself, as a kind of wild boy who did bite.

There was an old door in this playground, on which the boys has a custom of carving their names. It was completely covered with such inscriptions. In my dread of the end of the vacation and their coming back, I could not read a boy's bame, without inquiring in what tone and with what emphasis he would read, "Take care of him. He bites." There was one boy—a certain J. Steerforth—who cut his name very deep and very often, who, I conceived, would read it in a rather strong voice, and afterwards pull my hair. There was another boy, one Tommy Traddles, who I dreaded would make game of it, and pretend to be dreadfully frightened of me. There was a third, George Demple, who I fancied would sing it. I have looked, a little shrinking creature, at that door, until the owners of all the names—there were five-and-forty of them in the school then, Mr. Mell said—seemed to send me to Coventry by general acclamation, and to cry out, each in his own way, "Take care of him. He bites !" ...

It was the same with the places at the desks and forms. It was the same with the groves of deserted bedsteads I peeped at, on my way to, and when I was in, my own bed. I remember dreaming night after night, of being with my mother as she used to be, or of going to a party at Mr. Peggotty's, or of travelling outside the stage-coach, or of dining again with my unfortunate friend, the waiter, and in all these circumstances making people scream and stare, by the unhappy disclosure that I had nothing on but my little nightshirt and that placard.

In the monotony of my life, and in my constant apprehension of the re-opening of the school, it was such an insupportable affliction! I had long tasks every day to do with Mr. Mell; but I did them, there being no Mr. and Miss Murdstone here, and got through them without disgrace. Before and after them, I walked about—supervised, as I have mentioned, by the man with the wooden leg. How vividly I call to mind the damp about the house, the green cracked flagstones in the court, an old leaky water-butt, and the discolored trunks of some of the grim trees, which seemed to have dripped more in the rain than other trees, and to have blown less in the sun! At one we dined, Mr. Mell and I, at the upper end of a long bare dining room, full of deal tables, and smelling of fat. Then, we had more tasks until tea, which Mr. Mell drank out of a blue tea-cup, and I out of a tin pot. All day long, and until seven or eight in the evening, Mr. Mell, at his own detached desk in the schoolroom, worked hard with pen, ink, ruler, books, and writing paper, making out the bills (as I found) for last half-year. When he had put up his things for the night, he took out his flute, and blew at it, until I almost thought he would gradually blow his whole being into the large hole at the top, and ooze away at the keys.

I picture my small self in the dimly lighted rooms, sitting with my head

A Windsor Lady's Appeal

To all women' I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Uterine and Ovarian Tumors or growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write teday. Address Mrs. M. Summers, Box H. 309 Windsor, Ont.

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Dates to be Remembered

Annual Meeting of Nova Scotia Fruit Growers' Association, Middleton, N. S., Jan. 28th, 29th, 30th, 1913

P. E. Island Prov. Seed Fair, Summerside, P. E. I., March 4, 5 and 6, 1913.

Annual meeting Canadian Holstein-Friesian Association, Temple Bldg., Room 1, Fourth Floor, Toronto, Feb. 6th, 1913.

upon my hand, listening to the doleful performance of Mr. Mell, and conning to-morrow's lessons. I picture myself with my books shut up, still listening to the doleful performance of Mr. Mell, and listening through it to what used to be at home, and to the blowing of the wind on Yarmouth flats, and feeling very sad and solitary. I picture myself going up to bed, among the unused rooms, and sitting on my bedside crying for a comfortable word from Peggotty. I picture myself coming downstairs in the morning, and looking through a long ghastly gash of a stair-case window at the school-bell hanging on the top of an outhouse with a weathercock above it; and dreading the time when it shall ring J. Steerforth and the rest to work. Such time is only second, in my forboding apprehensions, to the time when the man with the wooden leg shall unlock the rusty gate to give admission to the awful Mr. Creakle. I cannot think I was a very dangerous character in any of these aspects, but in all of them I carried the same warning on my back.

Mr. Mell never said much to me, but he was never harsh to me. I suppose we were company to each other, without talking. I forgot to mention that he would talk to himself sometimes, and grin, and clench his fist, and grind his teeth, and pull his hair in an unaccountable manner. But he had these peculiarities. At first they frightened me, though I soon got used to them.

CHAPTER VI.

I Enlarge My Circle of Acquaintance.

I had led this life about a month, when the man with the wooden leg began to stump about with a mop and a bucket of water, from which I inferred that preparations were making to receive Mr. Creakie and the boys. I was not mistaken; for the mop came into the schoolroom before long, and turned out Mr. Mell and me, who lived where we could, and got on how we could, for some days, during which we were always in the way of two or three young women, who had rarely shown themselves before, and were so continually in the midst of dust that I sneezed almost as much as if Salem House had been a great snuff-box.

One day I was informed by Wr. Mell that Mr. Creakie would be home that evening. In the evening, after tea, I heard that he was come. Before bedtime, I was fetched by the man with the wooden leg to appear before him.

Mr. Creakle's part of the house was a good deal more comfortable than ours, and he had a snug bit of garden that looked pleasant after the dusty playground, which was such a desert in miniature, that I thought no one but a camel, or a dromedary, could have felt at home in it. It seemed to me a bold thing even to take notice that the passage looked comfortable, as I went on my way, trembling to Mr. Creakle's presence; which so abashed me, when I was ushered into it, that I hardly saw Mrs. Creakle, or Miss Creakle (who were both there, in the parlor), or anything but Mr. Creakle, a stout gentleman with a bunch of watch-chain and seals, in an arm-chair, with a tumbler and bottle beside him.

"So!" said Mr. Creakle. "This is the young gentleman whose teeth are to be filed! Turn him round.-'

The wooden-leg man turned me about so as to exhibit the placard; and having afforded time for a full survey of it, turned me about again, with my face to Mr. Creakle, and posted himself at Mr. Creakle's side. Mr. Creaklefs face was fiery, and his eyes were small and deep in his head; he had thick veins in his forehead, a little nose, and a large chin. He was bald on the top of his head; and had some thin wet-looking hair that was just turning grey, brushed across each temple, so that the two sides interlaced on his forehead. But the circumstance about him which impressed me most, was, that he had no voice, but spoke in a whisper. The exertion this cost him, or the consciousness of talking in that feeble way, made his angry face so much more angry, and his thick veins so much thicker, when he spoke, that I am not surprised, on looking back, at this peculiarity striking me as his chief one.

"Now," said Mr. Creakle. "What's the report of this boy ?"

"There-s nothing against him yet," returned the man with the wooden leg. "There has been no opportunity."

I thought Mr. Creakle was disappointed. I thought Mrs. and Miss Creakle (at whom I now glanced for the first time, and who were, both, thin and quiet were not disappointed.

"Come here, sir!" said Mr. Creakle, beckoning to me.

"Come here!" said the man with the wooden leg, repeating the gesture.

"I have the happiness of knowing your father-in-law," whispered Mr. Creakle, taking me by the ear; "and a worthy man he is, and a man of a strong character. He knows me, and I know him. Do you know me? Hey?" said Mr. Creakle, pinching my ear with ferocious playfulness.

"Not yet, sir," I said, flinching with the pain.

"Not yet? Hey?" repeated Mr. Creakle. "But you will soon. Hey?"

"You will soon. Hey?" repeated the man with the wooden leg. I afterwards found that he generally acted, with his strong voice, as Mr. Creakle's interpreter to the boys.

I was very much frightened, and said I hoped so, if he pleased. I felt, all this while, as if my ear were blazing; he pinched it so hard.

"I'll tell you what I am," whispered Mr. Creakle, letting it go at last, with a screw at parting that brought the water into my eyes. "I'm a Tartar."

"A Tartar," said (he man with the wooden leg.

"When I say I'll do a thing, I do it," said Mr. Creakle; "and when I say I will have a thing done, I will have it done."

"—Will have a thing done, I will have it done," repeated the man with the wooden leg.

"I am a determined character," said Mr. Creakle. "That's what I am. I do my duty. That's what I do. My flesh and blood," he looked at Mrs. Creakle as he said this, "when it rises against me, is not my flesh and blood. I discard it. Has that fellow," to the man with the wooden leg, "been here again?"

"No," was the answer.

"No," said Mr. Creakle. "He knows better. He knows me. Let him keep away. I say let him keep away," said Mr. Creakle, striking his hand upon the table, and looking at Mrs. Creakle, "for he knows me. Now you have begun to know me too, my young friend, and you may go. Take him away."

I was very glad to be ordered away for Mrs. and Miss Creakle were both wiping their eyes, and I felt as uncomfortable for them as I did for myself. But I had a petition on my mind which concerned me so [illegible] that I couldn't help saying, though I wondered at my own courage:

(Continued next issue.)

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—use warm water and Baby's Own Soap.

The warm water opens the pores of the skin and the minute particles of pure refined vegetable oils which form the creamy, fragrant lather of Baby's Own Soap are absorbed into the skin, keeping it soft, healthy, and preventing cracks and chaps.

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Challenge Collars are not shiny rubber collars. They have a dull linen finish. In fact, you can't tell them from linen. Keep up appearances—keep down laundry bills.

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3

Why Farm Women are Over-Tired.

So many things tend to make the women of the farm tired, who can enumerate them all? I do not think the farmer is indifferent to his wife's comfort, but quite the contrary. There is no other example of the marital relation, and home life so nearly ideal as that found in the farm home. The farmer and his wife work together every day in the year, they learn to know, trust and rely on each other as such intimate association only affords. That a husband under these conditions wil, deliberately allow his wife to become overworked, is not at all likely, but of course there are exceptions to this rule, and for the unfortunate women so unhappily situated, too much cannot be said in condemnation of the human practice. From the experience gained from living nearly half a century on a farm, with intimate associations with farmers and their wives I do not know of half a dozen instances where the husband has not been good to his wife, but I do know of countless cases where he is noble and manly, unselfishly good and kind to his wife and family, a truely ideal husband in the highest sense of what constitutes real manhood, scorning a mean or contemptible act; that such a man would fail in all true courtesy toward his wife is not possible. The underlying principal governing the life of the farmer's wife rests with herself, after all is said and done, it is not what someone else says or does that makes or breaks our lives, but what each one says and does himself or herself.

We know farm women work hard, for modern conveniences cost money, and in the majority of their homes affluence is out of the question, and so many unexpected expenditures are constantly springing up, it is hard to decide how best to utilize to the greatest advantage what little profits are secured, and if there is any sacrificing to be done, from time immemorial, it has always been the wife and mother who does that. It is these selfless farm mothere, for on the farm true motherhood is oftenest found, who think first of their loved ones to give them for their comfort and happiness, all that it is in their power to give, who wear the tired look, the mark of supernal service.

PARENTS RESPONSIBILITY

A mother once said to me: "We, who are parents are responsible for our children's existence, should place their happiness and good before our own desires, this we rightly owe them as their due." That is the highest and noblest conception of true parenthood, but in so doing no parent should fail to take into account that rightly to perform this duty, it is necessary to maintain a perfect standard of mental, moral and physical perfection themselves. And no human being can do this when exhausted with overwork. That physical conditions largely affect the mind is too well known to be discussed here. There are comparatively few things a normal person cannot do if he really sets himself about it, the chief point is to take for a motto "What others have accomplished, I can do," and live by that resolution. One of the most trying things we as women of the farm have to contend with, it seems to me, is the water question, and it is so difficult to overcome as comparatively few homes are so situated that a natural gravity ystem can be installed, but where this can be had, it is the cheapest and most satisfactory of any. Forcing by hydraulic ram or gasoline engine is possible only occasionally, but a cistern is always available, and no farm home should be without one, and yet I know of very many who heve not even this. With one, or an attic tank,

THIS *handy farm wagon* is built low (which saves time & labor loading and unloading) and will carry the heaviest load—anywhere a horse can travel. And because it never needs repairing, it's the mosteconomical wagon on the market

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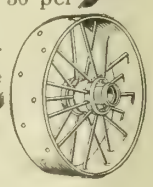
Equip your *old* wagons with T-A Wide-Tire Steel Wheels and they'll be *just as good as new.* And besides they'll carry 25 to 50 per cent heavier loads.



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If you or any of your friends suffer from rheumatism, kidney disorders or excess of uric acid, causing lameness, backache, muscular pains; stiff, painful, swollen joints, pain in the limbs and feet; dimness of sight, itching skin or frequent neuralgic pains, I invite you to send or a generous **Free Trial Treatment** of my well-known, reliable **Chronicure,** with references and full particulars by mail. (This is no C. O. D. cheme.) No matter how many may have failed n your case, let me prove to you, free of cost, hat rheumatism can be conquered. **Chronicure** ucceeds where all else fails. **Chronicure** leanses the blood and removes the cause. Also for a weakened, run-down condition of the system, you will find **Chronicure** a most satisfactory general tonic that makes you feel that life is worth living. Please tell your friends of this liberal offer, and **send today for large free package, to MRS. M. SUMMERS, Box E. 399—Windsor, Ont.**

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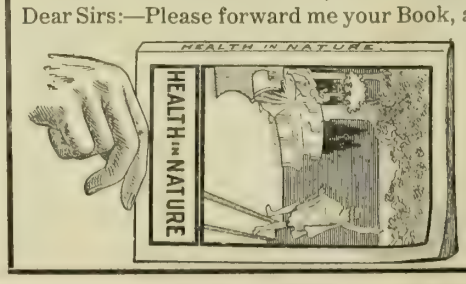

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except during an unusually dry season, the daily supply of water for most purposes would be then directly at hand without the labor of carrying in a pail from the pump or spring, often situated at some little distance from the house. Even without the necessary fixtures to have it in different parts of the house, a kitchen sink and pump is a great saving of labor. Mine is in a large pantry, where is also my work table, and in the bathroom adjoining, another pump leads the water directly in the wash bowl, the tub is opposite with only a drainage pipe, as when taking a bath it is necessary for the cold water to be carried to the tub, while the warm water is heated on the kitchen range. At very little expense a tinner will make an extension to go on the spout of the pump. When cold water is wanted in the tub, this is attached to the pump spout and the water is pumped directly into the tub. We find this arrangement satisfactory, and is best we could do, for our location is such that a well furnishing an inexhaustable supply is impossible. Any farmer can fix a place similar to ours by having the pipes and elbows cut the required length when purchasing them and the cost is very little as compared with the benefits derived from taking a tepid bath at bedtime after a hard day's work in summer. The pores continually exhude waste matter, and assisting nature by frequent bathing, aides the body by the least possible resistence to maintain normal health.

HOME CONVENIENCES

Most farmers possess all kinds of up-to-date machinery, and yet the women in these same homes too often still churn and do the family washing, if not on a board, with a machine turned by hand. A gasoline engine of sufficient horsepower, with all the equipments necessary to do this work can be purchased for less than $180. A binder is used only a few days during the entire year, but washing has to be done half a hundred times and churning, during hot weather three or four times each week, both of which are too hard for any woman to do. Since the men do not cradle and bind the grain as their grandfathers did, neither should the women do their work by old-fashioned methods. Another thing that wears on women and prevents them from properly recuperating during the comparatively idle months of winter is lack of adequate heating facilities. Of course a furnace is a fine thing but out of the question where fruits and vegetables in any quantity are to be successfully stored. Few homes, I find, keep more than two fires, and at that, allow the kitchen range to go out at night. Starting the fire is often done by the housewife, and to do this on a bitter cold morning, and prepare breakfast in a kitchen where everything is cold, causes bodily discomfort that cannot fail but leave its mark on the system. If only one continuous fire is afforded, I should by all means have it in the kitchen where the work is done, and kindle the living room fire after breakfast. In my own home the chimneys are built in the second story only, the pipes entering a radiator in the rooms above before going in the chimney, by this method no heat is lost, and the chambers are always comfortable in the coldest weather. It seems to me that we should make the most of the winter months, for rest and recreation after the strenuous labor of summer.—Magdelene Merritt in N. E. Homestead.

The latest silk petticoats are provided with a safety pocket for carrying money, etc. The pockets are put above the deep ruffle and fasten with patent fasteners.

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Write a short note, a post card will do, stating what your roofing needs are— and valuable information will be sent to you by return mail, telling how you can save time, labor and money in putting on a roof that will give the best of service and will last for years.

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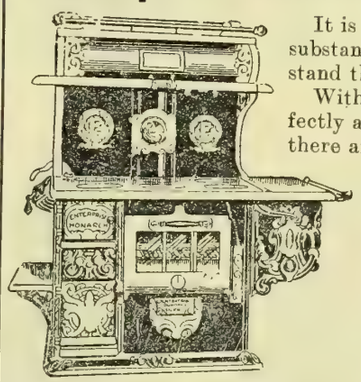

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With small fuel consumption it bakes perfectly at all times. It is easy to operate—there are no complicated dampers.

Will burn wood or coal, with ample provision for continuous hot water.

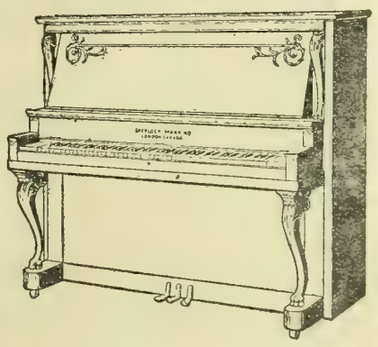
Then the MONARCH is moderate in price, costing no more than many inferior ranges.

A Written Guarantee With Each One Sold.

Send us a post card for our eight page circular, if your stove dealer cannot show you the MONARCH on his floor.

The Enterprise Foundry Co., Sackville, N. B.

The Sherlock-Manning 20th Century Piano
"Canada's Biggest Piano Value"



Louis XV—Style 80

THE final consideration of all careful piano-buyers is summed up in the words: **will it endure?** When you buy a piano make sure of the **inside** features—**features that** assure not only **lasting tonal qualities** but also **the lasting life** of the instrument itself. A piano, to be a permanent investment, **should** have the famous **Otto Higel Double Repeating Action--Poehlmann Wire**—the best imported—**Weickert Felt Hammers,** none better—**Billings Brass Action Flange,** the latest innovation. The

Sherlock-Manning possesses all these and every feature that makes for piano perfection

See the Sherlock-Manning and judge for yourself. Or, write **direct** to us and we'll forward you **inside facts** and **information** telling you exactly how you can **save considerable money,** and yet **own** one of the world's **best** pianos by buying a **Sherlock-Manning 20th Century Piano.** Visit our factory, if possible. Write anyhow.

Sherlock-Manning Piano & Organ Co.
London (No street address necessary) **Canada**

23

FLORICULTURE.

H. S. J., St. John, writes:—How shall I treat my Relargeniums to have them bloom early in the spring?

My own practice which has always proved successful is as follows; Early in June, I cut back severly young plants of previous years' growth and plant them out-side in well drained, rather poor soil, with a sunny exposure. By the middle of August they will have made a strong sappy growth for cutting. I select shoots that have not yet formed buds and three inches or more from the tips. Cut the shoots half way through. This process is called air layering. In a week or ten days the cut surface will have a callous formed on it ready to emit rootlets when the cutting is potted up. If the weather is wet for a few days after the callous formed I have seen roots emitted into the air before the cutting was detached from the plant. This method of air layering is a good one for propagating cuttings from all soft wooded plants grown in the open air. As soon as the cuttings are well callouse-ed, detach from the plant and pot them in 2 or 2½ inch pots, using a sharp sandy soil. Pot them firmly; water well, and never let them dry out; shade from sun and spray daily for a week or so, after that give them all the sun and air you can. By the last of November the small pots will be filled with roots. Repot into 4 inch pots with good drainage, using a rich light soil and giving all that have made a few inches of growth a pinch back to make them stalky. Give sun, air and all the water they need. With a winter temperature of 50 degrees at night, by the middle of winter the soil will be filled with roots and the earlier varieties will be in bud. Do not repot them until after the first rain, later they can be potted into six inch pots. When these are filled with roots they can be safe ly fed with liquid manure.

If at any stage of growth the plants are over-potted, it will increase the amount of foliage at the expense of bloom. In autumn, if you wish to carry your old plants over, do not repot them but cut back all strong and straggling growth and keep them on the dry side but not allowing them to dry out wholly until new growth appears, then increase water and when strong growth is established again repot into pots, one or two sizes larger, and treat as fore. Stock plants can be plunged outside in pots and used for cuttings as above but if root bound they should be repotted before being plunged out.

Those who have been giving pot-bound plants stimulants for some time had better, for a change, top-dress the pots first, removing all the top soil possible withaut disturbing the roots too much, with a compost of rich soil.

Farmers Who Fail To Pass

When a high-school pupil fails to pass his examinations, or drops behind in the routine work of his studies, it is on him that his parents and it belongs in most cases, but, says his teacher place the blame. To him Youth's Companion, not in all, and perhaps in any case not at all. His parents, too, have a responsibility, and it is often they who have "failed to pass," rather than the boy.

The school provides opportunities for learning; the parents must see that the child uses them. Do you point out to your boy the personal and the businese value of an education? Do you help him to select the courses that will be most useful to him? Do you see that he has a definite time for study, and that during that time he is not interrupted? Do

McDonald's Seed Catalogue for 1913

This finely illustrated book tells you about all that is best in seeds. Vegetables and Flowers, Grains and Grasses--they are all here, accurately described and correctly illustrated. It will pay you to know about

McDonald's Tested Seeds

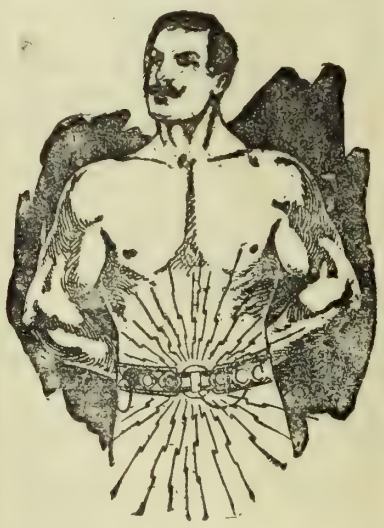
the kind that grow big, bountiful crops, and have earned the confidence of many of the most critical farmers and gardeners in Canada.

It also lists our full line of labor-saving Tools and Implements; also practical Poultry Appliances. If you want to get the maximum of pleasure and profit from farm, garden or poultry, this handsome book will help you. It's full of hints and information that can save money for you.

Write to-day before you forget. A post card will do.

KENNETH McDONALD & SONS, Ltd., Ottawa, Ont.

THIS IS TO YOU!



Young or Old, Whose Strength is wasted, Who Feel Old and Rusty with Pains and Aches, Who, from Any Cause, have lost the buoyant spirits, the courage and confidence which belong to perfect health. To you I offer new life, fresh courage, and freedom from the effects of past neglect.

Show me the persons who would not be better than they are. It matters not how the rocks and shoals of life have dulled the enthusiasm of youth, and left the nerves less vigorous, the eyes less bright, the step less springy, the mind less forceful and the general vitality less powerful than they ought to be at your age, you want to be strong.

Hard work wears, dissipation and worry, disappointment and the other cares of life drain away the vim and snap of perfect health. Electricity applied my way restores them. It makes you feel young; it renews the fire of youth, the spice of life.

Dr. McLaughlin's Electric Belt

has made thousands of homes happy. It is as good for women as for men. Man and wife can use the same Belt. The regulator makes it strong or mild to suit the wearer. It is the only Electric Belt in the world that can be regulated while on the body. You feel the power, but it does not burn and blister, as do the old style bare metal electrode belts. If you are weak or in pain it will cure you. Will you try it ?

Dr. McLaughlin: Joggins' Mines, N. S.
Dear Sir,—I have worn your belt for four weeks, and am well pleased with it. It has done me a great deal of good. My back don't bother me so much, and I have no losses this last fortnight. Wishing you success with your Belt. I remain yours truly, JAMES FOWLER.

Dr. McLaughlin: Paris Sta., Ont.
Dear Sir,—I have been wearing your Belt for 30 days and I feel that it has done me a lot of good. The losses have stopped almost altogether, and my nerves are much stronger than they were. Yours very sincerely, GORDON DUNN.

Dr. McLaughlin: Island Lake, Alta.
Dear Sir,—I purchased one of your Belts some time ago and it has done me a great deal of good. I did not think anything would help me as it has done. I have told nearly every one that I know of your wonderful Belt. and a lot of them have got one and are not disappointed.
Yours truly, MRS. T. WHITE.

MR. JEROME SCANLON, ANCESTER. ONT., writes :—I have been wearing your Belt a month, and I am very much improved in health. I have gained over 7 lbs. in weight. Those pains have never returned since wearing the Belt. I have developed quite a bit in muscle and strength. I do not desire to urinate so often, and I have had only one headache since. My bowels keep regular. Wishing you every success in your grand undertaking.

CALL TO-DAY

FREE Consultation Book, Test

If You Can't Call, Send Coupon for Free Book

Put your name on this coupon and send it in.

Dr. M. K. McLAUGHLIN, 237 Yonge St., Toronto, Can.

Send me your Free Book, closely sealed, and oblige.

NAME.....

Address.....

Office Hours;—9 a.m. to 6 p.m.; Wednesday and Saturday till 9.00 p.m.
SUNDAY, 10 a.m. to 1 p.m. Write Plain.

Order Your Horse Posters From the Maritime Farmer, Sussex, N. B.

you provide a quiet place for him to study in, or must he prepare his lessons in the midst of all the distractions of a family evening? When the has a hard problem to solve, do you work it out for him, or do you give him the judicious help that will enable to work it out himself. Do you make him take daily exercise in the open air? Do you see that he has nine hours of sleep every night, so that he can go to school fresh and alert? Do you insist that he eat a good breakfast? Do you try to prevent him from scattering his mental and physical energies by going to theatres, dances, picture shows, and club meetings, or loafing about the street corners during the week? Do you know your child's teachers, and do you ever go to school to talk over with them his progress, and to find out what his difficulties are?

If you will answer these questions honestly, you will know whether it your child who has "failed to pass," or you.

Home Life

Home should be something more than merely a shelter from the elements, or a place to eat and sleep, or in which to show the worst side of our character.

There is no one on earth so dear as those bound to us by the links of home; yet how many of us keep our sweetest smile, our softest tones, and best behavior for the stranger, showing such a dearth of kind words or deeds to our own, that some day we would give the world to call them back again that we might at least tell them we loved them. I shall never forget the cry of a mother whom an accident had bereft of husband and child.

The husband and wife had parted in anger that morning. There was little time for love-making anyway in their busy lives, but her cry of "Oh John, if I had only given you and Bennie one kind word this morning I could bear it better," told its own story. Now that both were deaf to her cries, the caresses she gave them were too late.

The old maxim, "Never let the sun go down on your anger," should read, "Never let a loved one depart in anger, because ye know not what even the passing moment may bring forth."

A Door that Bangs Against the Wall.—It is quite easy to prevent this. Take an old cotton-reel, put a bit of wadding round it, and cover with a dark material as near the colour of the carpet as possible. Pass a long brass-headed nail through the reel, and drive it into the floor a few inches from the wall.

TRY A BARREL OF
"REGAL"
FLOUR

the next time you buy. Every barrel of this flour is sold with a guarantee of "money back if not satisfactory." Only the very highest grade hard wheat flour made in America could afford to give such a quality guarantee as this. Why not try a barrel?

HORSE
POSTERS

ORDER your horse posters from us. We carry the largest assortment of Pictures to choose from of any office in the Maritime Provinces. Our prices are right and our work is guaranteed to satisfy you.

The Maritime Farmer
SUSSEX, N. B.

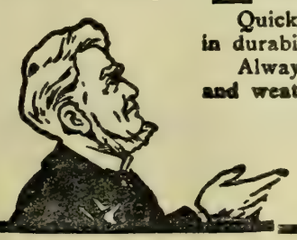
Biting The Finger Nails

It is simply a waste of time to apply ill-smelling and nasty-tasting substances to the finger-nails of children for the purpose of breaking up the habit of biting the nails. By some means or other they rub the disagreeable stuff off and go on with the same process of gnawing.

A physician recommends manicuring. Let the child's nails be examined a dozen times a day if necessary, and see that there are no little points or irregularities to annoy the little one. Everybody knows that a hangnail or a broken bit of nail will create a tendency to scrape the nail or to bite at it. Persistent and habitual biting of the nails is proclaimed a nervous disease, and constitutional treatment is in order in connection with the manicuring. It is a good idea to cultivate in children a good deal of pride in their appearance; this helps the treatment,

That "EASTLAKE" Steel
Shingle of ours

Known as "best for barns" for the past twenty-five years. Now known also as the best roofing for any building, any where.

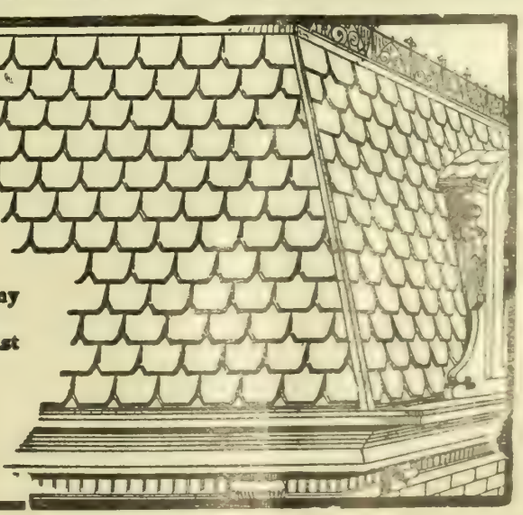


Quickest to lay—economy in labor; longest to stay—economy in durability.

Always proof in all climates against fire, lightning, rust and weather.

Give us the measurement of any roof you wish to cover. We will send complete estimate of cost.

The METALLIC ROOFING CO., Limited
TORONTO and WINNIPEG



Regularity

of the bowels is an absolute necessity for good health. Unless the waste matter from the food which collects there is got rid of at least once a day, it decays and poisons the whole body, causing biliousness, indigestion and sick headaches. Salts and other harsh mineral purgatives irritate the delicate lining of the bowels. Dr. Morse's Indian Root Pills—entirely vegetable—regulate the bowels effectively without weakening, sickening or griping. Use

Dr. Morse's 50
Indian Root Pills

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

Butter Parchment

Write us about our co-operative scheme.

We can save you just half of the money you pay now and remember we sell nothing but Pure Parchment.

The Maritime Pub. Co., Ltd.
Direct Parchment Importers, Sussex, N. B.

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

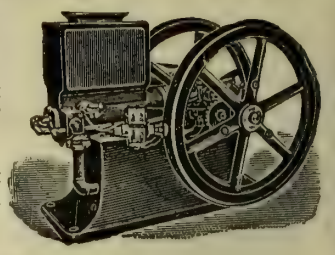
Here is a remedy that will cure your cold. Why waste time and money experimenting when you can get a preparation that has won a world-wide reputation by its cures of this disease and can always be depended upon? It is known everywhere as Chamberlain's Cough Remedy, and is a medicine of real merit. For sale by all dealers.

Death of Baron's Pride.

The greatest Cyldesdale stallion on record, Messrs A & W Montgomery's Baron's Pride (9122)' died in his box at Banks, Kirkcudbright, on Friday evening, 20th inst., after no illness at all. His faithful attendant, David Burns, put him in his box in the corner of his paddock as usual in the evening. A short time thereafter his little girl told him that she thought she heard Baron's Pride groaning. David went at once to see what was wrong, but the old horse was dead. Baron's Pride was bred by Messrs R. & J. Findlay, Springhill, Baillieston, and was foaled on 7 th May, 1890. He had thus reached the same age as Prince of Wales (673) and MacGregor (1487), both of which died in their twenty-third year. He was the most celebrated of all the sons of Sir Everard (5353), and was got when that horse had the Glasgow premium for son in that district, in 1889. His the second time, but on his first seadam was Forest Queen (7233), by Springhill Darnley (2429), a magnificent big son of Darnley (222), which won second prize at the H. and A. S. show at Stirling in 1881, and his grand-dam came from the Shotts and Holytown district. As a yearling and two-year-old Baron's Pride was exhibited by his breeders at the local and county shows with moderate succese. In 1892 he was placed second at Hamilton to the big horse Sterling (9425), afterwards well known in Cumberland, the fault laid against Baron's Pride being that he was rather wide between the stifles! He travelled locally as a three-year-old, and as the event proved, left some notable breeding and prize stock. In the spring of 1894 he was purchased by Mr. Wm. Montgomery, and by that time quite a number of prominent horse owners had their eye on him. He was at once placed by Messrs. A. &W. Montgomery at the head of their stud, was exhibited by them for the first and only time at the H. and A. S. show at Aberdeen in July, 1894, where he was first in his class, and champion stallion, and in the following year began to build up his unprecedented record as a breeding horse. He topped the list of Clydesdale breeding sires without a break until 1911, when he was passed by his own son, Baron of Buchlyvie, and established a unique reputation as sire of a number and sound progeny. He was possibly the soundest Clydesdale stallion ever foaled. Up to the last he cost nothing at all for veterinary attendance. His feet, joints, and legs were to the end of his days like those of a four-year-old—clean, flat, hard, and free from any kind of malformaeion or disease. He had a singularly mild and equable temper, and was never excited. Summer and winter he occupied his paddock and loose box, except on the few occasions when he was hired to districts in Wigtownshire and the Stewartry.

To even name his progeny which took the highest honors would be impossible. Only a few weeks ago we received a New Zealand newspaper with a report of the Otago Agricultural and Pastoral Association's annual horse parade at Dunedin. The champion of that parade, winning both the challenge and the champion cups, was James Patrick's Baron Bold, the Scots-begotten, but Australian-foaled son of Baron's Pride. The correspondent who sends us the paper writes on the photograph, which shows a great horse: "Let them all come; he is out on his own every tme." The reserve champion was James Patrick's three-year-old Baron Sandy, a son of Baron Bold, and the third prize three-year-old was also his son. Baron's Pride undoubtedly revolutionized the ideas of draft horse breeders in New Zealand, and to a large extent he did the same at home. His female progeny are mar-

Get a "Monarch" For 1913. It Pays



STOP hard farm work. This little engine will do it for you. It is made from best materials by experts on each part. Wear is prevented by special big bearings. Breakages almost impossible. Has timer, starting lever, priming cup, fuel sight gauge, iron fuel tank, speed regulator, and other high class features. Made in 1 1-2 to 25 h.p. sizes. Sold so any man may own one.

Write for Catalogue, Prices, Terms and our Red-Circle Folder

Canadian Engines Limited, Dunnville, Ont.

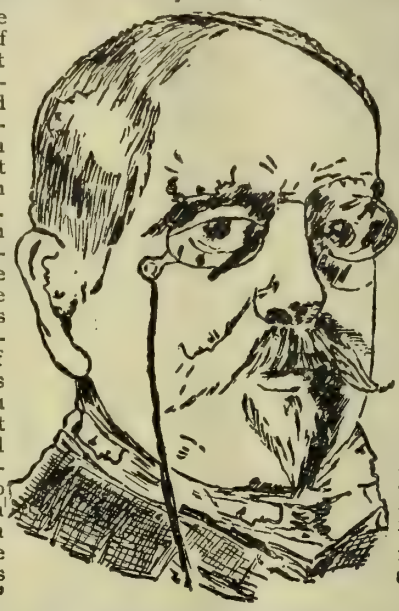
Sole Selling Agents, Eastern Ont., Quebec and Maritime Provinces
The FROST & WOOD CO., Limited
Montreal, Smith's Falls, - St. John, N. B.

FREE!! $200.00 IN CASH

AND 100 VALUABLE PREMIUMS GIVEN AWAY

1st Prize, $50.00 in Cash. 3rd Prize, $35.00 in Cash.
2nd Prize, $40.00 in Cash. 4th Prize, $25.00 in Cash.
5th to 9th Prizes, each $10.00 in Cash.

Herewith will be found the picture of an old man. About his head and shoulders are concealed the faces of his seven daughters. Can you find them? It is not easy, but can be accomplished. Try—You may win a cash prize by doing so. Many have done this as will be shown by the names and addresses published below. If you find the faces mark each one you find with an X cut out the picture and send it to us, together with a slip of paper on which you have written the words "I have found all the faces and marked them."



Write these nine words plainly and neatly, as in case of ties, both writing and neatness will be considered factors in this contest.

This may take up a little of your time, but as there is TWO HUNDRED DOLLARS in cash and One Hundred premiums given away, it is worth your time to take a little trouble over this matter.

Remember, all you have to do is to mark the faces, cut out the picture and write on a separate piece of paper the words, "I have found all the faces and marked them."

We do not ask You to Spend One Cent of Your Money in order to enter this Contest.

Send your answer at once; we will reply by Return Mail telling you whether your answer is correct or not, and we will send you a complete Prize List, together with the names and addresses of persons who have recently received over One Thousand Five Hundred dollars in Cash Prizes from us, and full particulars of a simple condition that must be fulfilled. (This condition does not involve the spending of any of your money.)

Winners of cash prizes in our late competitions will not be allowed to enter this Contest.

This competition will be judged by two well known business men of undoubted integrity, namely, the advertising Managers of the Montreal Daily Herald and Montreal Daily La Presse, whose decisions must be accepted as final.

Below will be found a partial list of the names and addresses of a few persons who have won some of our larger prizes in recent contests. Although these persons are entirely unknown to us, they are our references. An enquiry from any one of them will bring the information that our contests are carried out with the utmost fairness and integrity. Your opportunity to win a good round sum is equally as good as that of anyone else, **as all previous winners of cash prizes are debarred from entering this contest**

Names and Addresses of a few Prize-Winners in recent Contests

Mrs. W. A. C. Orr, 298 Gunnell St., Winnipeg	$50.00	Mr. K. A. Rodger, 4 Manhattan Apts., Church St. Toronto	$35.00
Miss E. Brodeur, 6 Gillespie St., Sherbrooke	50.00	Mrs. J. B. Girouard, 656 Maisonneuve St., Montreal	35.00
Mr. Louis Quintal, Charlemagne, Que	50.00	Mrs A. Fergusos, 39 Stobart Block, Winnipeg	35.00
Mr. Alphonse Drouin, Dept. of Sec of State, Ottawa	50.00	Mr. R. E. Strange, 300 Rockland Rd., St. John, N.B.	35.00
Mr. J. A. St. Pierre, Arthabaska, Que	50.00	Miss Mary Cochrane, 114 Preston St., Ottawa	35.00
Mrs. E. McMillan, 335 Medland St., West Toronto	50.00	Mrs. G. H. Benson, 33 Hargrave St., Winnipeg	35.00
Mr. H. Lloyd, Stanley Barracks, Toronto, Ont	50.00	Mrs W. D. Lttle, Fowassan, Ont	30.00
Mr. F. Champagne, 252 Bolton, Ottawa Ont	50.00	Mr. Thos. Blakey, 88 Huntley St., Toronto	25.00
Miss Daisy Rabey, 182 University Ave., Toronto	40.00	Miss Mary Lamb, 22 Spencer St., St. John's, Nfld	25.00
Mr. Jno. W. London, 486 Rose Ave., Winnipeg Man.	40.00	Miss E. A. Kennedy, 16 Railway St., Hamilton	25.00
Miss I. B. Benjamin, 125 Hughson St., Hamilton	40.00	Mr. Jules Vascancelles, Goulais River, Ont	25.00
Miss H. C. Powell, P.O. Dept, Ottawa, Ont	40.00	Mr. Jno. M. Sullivan, Duckworth St, St.John's, Nfld	25.00
Mrs Andrew Johnson Box 103, Roblin, Man	40.00	Mrs H. H. Burwell, 200 Hughson St., Hamilton	25.00
Mr. Norman Robinson, Milford Haven, Ont	40.00	Mr. W. C. Mason, 2475 Hutchison St., Montreal	25.00
Mr. Thos. Humphries c/o Ayers & Sons, St John's,	40.00	Mrs. H. W Healey, Box 171 Ingersoll, Ont	25.00
Mr. P. A. Perguson, 223 James Ave., Winnipeg	40.00	Mr. M. J. Bousse, 63 St. George St., Toronto, Ont	25.00
Mrs Quinnie R. Stark, 2St. Mary's Place, Winnipeg, Man.	35.00	Mrs. Francis Boynton, 235 Ross St., St. Thomas, Ont	25.00

Send your reply direct to

BOVEL MANUFACTURING COMPANY
BOVEL BUILDING, MONTREAL, CAN.

An advertisement in the Maritime Farmer will sell your surplus stock---Try it !

vellously true to Scottish type, and as a rule exceptionally good breeding mares. Perhaps the greatest of them as show mares have been Chester Princess, Pyrene, Jeanie Deans, Royal Ruby, Harviestoun Baroness, Lady Victoria, Cedric Princess, Blossom of Newhouse, Moira, and Nerissa. Out of 16 mares whirh during the past 20 years have won the Cawdor cup, nine have been his daughters, and it is a notable fact that of all the Cawdor cup winners they have been the best breeding mares so far as their ages enable a judgment to be formed on that point. It is difficult to particularise his sons. The most successful breeding horse among them is undoubtedly Baron of Buchlyvie (11263), but perhaps the greatest show horse has been Everlasting (11331). The records of such horses as Silver Cup, Pride of Blacon, Revelanta, Fyvie Baron, (14681), Baron Fyvie (12451), Benedict, Scottish Crest, Royal Edward, Ruby Pride (12344), Lord Ardwall, Casiabianca, Baron Kitchener, and Premier Baron (15984) would have made the reputation of any sire, but they are not a tithe of the useful breeding horses which from first to last have claimed Baron's Pride as their sire. On both sides of the Atlantic, as well as under the Southern Cross, the sons and daughters and grandsons and granddaughters of Baron's Pside have led the way, and with his passing the way is open for a new king in the Clydesdale world.—Scottish Farmer.

Poultry Plucking Apparatus.

Mr. L. A. Haszard, the well-known poultry enthusiast, has designed a plucking apparatus, which he will have patented. It consists of a piece of wood about fifteen inches long attached at right angles to another piece about the same length. The latter contains notches in which the legs of the fowl can be firmly locked so that plucking can be done with both hands. The lower section of the apparatus revolves so that the fowl can b? turned round during the plucking process.—Ex.

A Great Convention at Halifax.

The annual Convention of the salesmen and managers of Brandram-Henderson, Limited, was held at Halifax just before the end of the old year. It was attended by all the firm's representatives east of the Great Lakes, but not by those from farther west. To have brought far western men to the seaboard, would have meant absence from their homes at Christmas time, and this would have been unfair to their families.

Previous Sales Conventions held by Brandram-Henderson have always taken place at Montreal, but it was thought well to come to Halifax on the occasion referred to and for several reasons. Many of the Quebec and Ontario travellers had never been in the Provinces, and it was felt that they should have a chance to become acquainted with the progress this section of Canada is making at the present time. Again there was the fact that Halifax is the place where Brandram-Henderson started business, and it was felt that a visit to the original office and plant, would be an inspiration for the salesmen starting out for another big year. But there was still another reason. Brandram-Henderson are large manufacturers of varnishes; they have a splendid reputation for the quality of the article they make, and as it is at the Halifax branch that their whole supply is produced, there were impressive educational features involved in having the salesmen inspect the factory.

Two days of the Convention were given to discussions of methods on in creasing Brandram-Henderson sales for 1913. The year 1912 had been the largest in point of turnover in the history of the firm, but if possible 1913 should be still better, and after careful deliberation a policy was framed which embraces some very strong sales features. The Convention in detail and as a whole, was a great success, and at its close the firm gave the visitors a splendid banquet at the Halifax Hotel. At this banquet some very fine speeches were made, and later there was some good music, for on the Brandram-Henderson staff there is great versatility of talent. The visitors all expressed their great delight with the entertainment received and all returneh to their respective territories strongly resolved to sell more Brandram's B. B. Genuine White Lead, B-H "English" Paint and other B-H. products in 1913 than had ever been sold in any one year before.

A concrete milk-house makes milk worth more

PEOPLE are willing to pay more for milk that comes from a clean, sanitary dairy. In nearly every city such dairies charge from 50 per cent. to 100 per cent. more than others—and even then they can't supply the demand for pure, high-grade milk. You will get more value out of your cows if you properly cool and store the milk. Such milk is not only more wholesome—and therefore can be sold for a better price—it is also slower to sour than milk handled by ordinary methods. Ask for the free book,

"What The Farmer Can Do With Concrete"

IT will tell you how to build a concrete milk-house, and also describes scores of other uses for concrete around the home and on the farm. It is not a catalogue. Its 160 handsomely illustrated pages are devoted entirely to the subject—in which every progressive farmer is interested.

YOU do not place yourself under the slightest obligation in asking for the book. We do not even ask that you agree to use cement. Just sign the coupon attached to this advertisement, or send your name and address by letter or post card, and the book will be mailed to you at once. Address,

Please send me your book

Publicity Manager

CANADA CEMENT COMPANY LIMITED

513-561 Herald Building, Montreal

WHEN you buy cement, remember that the farmers of Canada have found that "Canada" cement is best. Look for the label on every bag and barrel.

CANADA CEMENT COMPANY LIMITED PORTLAND CANADA CEMENT MONTREAL

Pride in Your Garden

will be natural, and justified, if you plant Ewing's Reliable Seeds and give them proper care. The bumper crops which, for forty years or more, have been grown from

EWING'S Reliable Seeds

are explained by the care which we take to give our customers only specially selected seeds that are clean, fresh, healthy and true to type—seeds that produce grains, roots, vegetables and flowers of which the growers may well be proud. **Write for our handsome illustrated catalogue,** and if your dealer hasn't Ewing's Seeds order from us direct. 22

Wm. Ewing & Co.
Seedsmen
McGill St., Montreal.

Send your Raw FURS to John Hallam

Sixty Thousand trappers now send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada.

FREE Our "Up to the minute" Fur quotations and the last Edition of HALLAM'S TRAPPERS GUIDE, a book of 96 pages, mailed FREE.

Write to-day to John Hallam, Mail Dept 18 , TORONTO, 111 Front St. E.

Intercolonial Railway Calendar for 1913.

Bringing visions of comfortable and luxurious travel through a territory unrivalled for scenic beauty, the calendar of the Intercolonial Railway just received with the compliments of the Traffic Dept., is warmly appreciated as a happy reminder of past enjoyments and a delightful inspiration for future travel.

The calendar is as usual very handsome and is printed in exquisite taste. On a hand tooled background of maple leaves is an oval centre piece printed in quadre color showing the Ocean Limited speeding through a scene where ocean and land with a setting of fleecy clouds combine to form a very beautiful picture. Over this is the emblematic moose head encirled in a halo of scarlet with the words—"The Fast Line—The peoples Railway" in pale yellow.

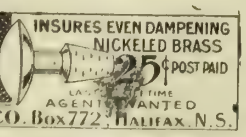
Set in the four corners are reproductions of the four I. C. R. booklets descriptive of Quebec and the Maritime Provinces. The lettering is done in white with gold outline while the tab is chocolate brown with white figures showing prominently, the statuary holidays being marked by squares of shaded white and gold. On each side of the tab in white lettering on a tablet of gold are some cheerful facts concerning the splendid through trains the Ocean Limited and the Maritime Express. The design of the calendar is greatly enhanced by a surprinting of gold on the background of maple leaves. As a reminder of the Intercolonial and its fine train service it is excellent. As something both ornamental and useful for office use it is much to be desired.

Minard's Liniment Co., Limited.

Gentlemen,—I have used MINARD'S LINIMENT from time to time for the past twenty years. It was recommended to me by a prominent physician of Montreal, who called it the "great Nova Scotia Liniment." It does the doctor's work; it is particularly good in cases of Rheumatism and Sprains.

Yours truly,
G. G. DUSTAN,
Chartered Accountant.
Halifax, N. S., Sept. 21, 1905.

HANDY CLOTHES SPRINKLER



INSURES EVEN DAMPENING NICKELED BRASS 25¢ POST PAID
AGENTS WANTED
HOME MFG. CO. Box 772, HALIFAX, N.S.

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's are** sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

Hands Up, Who Knows?

The following story, under the head, "Now, All Together, Where Does a Cow Wear Her Teeth?" published in the Indianapolis Star, contains so much of truth and human interest that we are reproducing it:

The assertion has often been made that a person knows least about the things with which he is most familiar—paradoxical as this may seem. A city man was visiting in the country recently and while watching a farmer milking he remembered that far back in the dim reaches of the past he had studied the anatomy of various domestic animals. The sight of the cows made the city man think. He had a hazy recollection that a cow did or did not have two jaws fall of teeth. Did or did not? Which? That was what he was not sure of. So he asked the farmer.

"Eh! Huh!" grunted the farmer, as he stopped temporarily his task of directing a stream of milk towaed the family cat, which was sitting on his hind legs with wide open mouth, catching the lacteal stream with a skill born of long practice.

"I say," said the city man, "does a cow have teeth in both her upper and lower jaws; if not, which are absent? If only part are absent in one jaw, which are they, the grinders or the cutters?"

Another stream of milk went hissing toward the family cat. Then the milker spat vigorously at a perfectly innocent barn wall. When a second stream was directed at the F. C. only more slowly—painfully slow this time, as though giving the milder time to solve the problem.

"Hell, by jing, I don't know! Funny, too. Been farming thirty years. Father farmed before me. His father farmed before him. Always had a cow or two. But it was left for a city chap, who probably hasn't been on a farm more than three weeks in his life, to ask me a question that I can't answer. Jist like a little kid! Allus asking his mother fool questions."

"Well, let's find out," said the city chap. You have two cows right here. No time like the present. We'll look in Jersey's mouth if she'll permit us." But the Jersey did not take kindly to the idea and the attempt was abandoned.

SWAPPING STORIEO

The next day Snuffy and Jim, who lived down the road "a little better'n a mile," came up to Buck's to see the city chap and swap stories. It was the heyday of the farmers. The three had just finished shucking down in the bottoms and all had had an exceptionally good year. The summer's rush ended when the last load of corn on the ear was in the cribs and they were enjoying the relief from early spring and late retiring. After several pipes had been smoked the city chap spoke up:

"Say, Jim, does a cow have teeth in her upper and lower jaws; if not, which are absent? If only part are absent in one jaw, which are they, the grinders or the cutters?"

Jim's pipe reminded one of a mogul freight engine going up a steep grade. Then he said: "Huh? Now, a sheep I know hasn't got teeth in its upper front jaws, but a cow—well, a cow—well, darn it, I don't know. A horse has got teeth all around. So's a pig. Turkeys haven't any teeth at all. But a cow! I declare I don't know. Lived on a farm all my life, too. But gee, why should I ask a cow to open her mouth so that I can see if she has teeth in her upper and lower jaws; if not, which are absent? If only part are absent in one jaw, which are they, the grinders or the cutters."

WILL GIVE $500 TO SICK READERS OF MARITIME FARMER

Famous Scientist Who Originated the Now Wonderful "Home Treatment" Offers $1.00 Package Free to Sick and Ailing.

In order that every reader of Maritime Farmer who may not have heard of this wonderful "Home Treatment" may have an opportunity to test this celebrated medicine, the now famous scientist, Dr. James W. Kidd, offers to give absolutely free a full size $1.00 package to five hundred readers of this paper, to prove the wonderful claims which have been made for it. In making this offer the scientist said: "I know that there are many people who have been suffering for years with some chronic disease and many of them have spent large sums of money seeking a cure. I know that these people hesitate about investing money in medicine because they have despaired of ever getting well. Thousands have told me that story and many thousands of the same people have told me afterwards that my treatment had cured them after doctors and everything else had failed. I want to prove to a limited number—no matter what the disease, no matter how long they may have suffered no matter how blue and discouraged—that my treatment really and actually does accomplish the wonderful results that have been reported."

People who suffer from Rheumatism, Kidney Trouble, Stomach Trouble, Liver or Bowel Disorders, Catarrh, Bronchitis, Asthma, Chronic Coughs, Weak Lungs, Lumbago, Piles, Urinary Disorders, Female Weaknesses of any kind, the weak, worn out, broken-down and despondent will be delighted at the effect of a few doses. This wonderful treatment creates a fine appetite and helps the digestive organs to carry on their functions as they should. It strengthens the kidneys, too, and drives rheumatism poisons from the blood as if by magic. That is why people who try it become so enthusiastic.

Any reader of Maritime Farmer who will try this extraordinary medicine that has created so much excitement by its cures can obtain absolutely free a full $1.00 treatment by simply filling in the coupon below or writing a letter describing their case in their own words, if they prefer, and mailing it today to James W. Kidd, Toronto, Canada. No money need be sent and no charge of any kind will be made.

As this offer is limited, you should write at once, in order to be sure to receive your free treatment.

Coupon CB-260 For Free Dollar Treatment

Dr. Jas. W. Kidd, Toronto, Canada.

Please send me a Full $1.00 Course of Treatment for my case **free and postage paid**, just as you promise.

Name _____

Post Office _____ Province _____

Street and No. _____

Age _____ How long afflicted? _____

Make a cross (X) before disease you have. Two crosses (XX) before the one from which you suffer most.

....Rheumatism	....Kidney Trouble	....Impure Blood	....Female Weakness
....Lumbago	....Bladder Trouble	....Anemia	....Womb Trouble
....Catarrh	....Weak Lungs	....Pimples	....Ovarian Trouble
....Constipation	....Chronic Cough	....Eczema	....Painful Periods
....Piles	....Malaria	....Neuralgia	....Hot Flashes
....Diarrhoea	....Asthma	....Headache	....Bearing Down Pains
....Torbid Liver	....Hay Fever	....Dizziness	....Leucorrhoea
....Indigestion	....Heart Trouble	....Nervousness	
....Stomach Trouble	....Poor Circulation	....Obesity	

Give any other symptoms on a separate sheet. Correspondence in all languages.

JOHNSON'S ANODYNE LINIMENT

Used 102 Years for Internal and External Ills.

Gives speedy relief from coughs, colds, cramps, diarrhoea, muscular rheumatism, bruises, etc.

25c and 50c everywhere

I. S. JOHNSON & CO. Boston, Mass.

Parsons' Pills Aid Bilious People

BUTTER PARCHMENT PAPER.

Direct Importers and Printers

WRITE FOR SAMPLES AND PRICES

The D. F. Brown Paper Box & Paper Co. Ltd., ST. JOHN, N. B.

EGG BOXES
MILK BOTTLE CAPS
APPLE BARREL
PULP HEADS

SAVING A REPUTATION.

"Snuffy, I guess it's up to you to save a farmer's reputation. Does a cow have teeth in her upper and lower jaws; if not, which are absent? If only part are absent in one jaw which are they, the grinders or the cutters?" And the city man and the two farmers that had failed sat back to listen. Snuffy gripped his false teeth more firmly, swallowed some tobacco juice in his nervousness at holding the balance of power, and then said:

"Why, sure I know. Any real farmer ought to know that. Besides, my boy went to veterinary college and—

"We all know that your boy went to veterinary college," broke in Buck, "but we don't all seem to know whether a cow has teeth in both her upper and lower jaws; if not, which are absent? If only part are absent in one jaw, which are they, the grinders or the cutters?'-

"I'm just going to tell you that a cow—"

"Pop, you come on right home. Hurry! A big dog has went and got in the warm house and is a-eatin' all the lard and mom and me's afraid and—hurry up!" A wild-eyed youngster had rushed inro the room and grabbed Snuffy by the arm and was pulling him to the door before Snuffy knew what was wanted. He turned as he went out the door and yelled back:"I was just going to say that a cow has—"

LOST TO THE WIND.

But the farmer's wife gave the door a slam, and the rest of the sentence was delivered to the wind that howled around the house and the snow that came driving down.

And the verdict was never delivered to the waiting three in the sitting room. Snuffy did not get back that day and the city chap left that night. And the city chap is still wondering whether Snuffy was going to finish with the right answer or the wrong one.

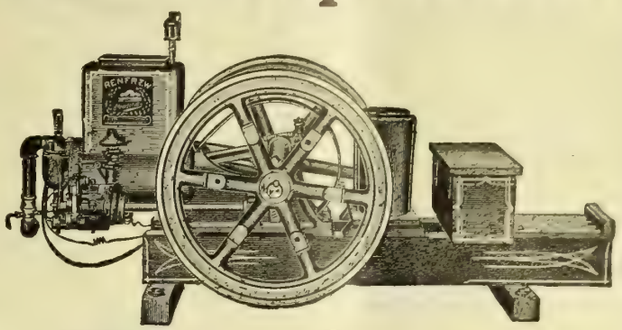
Does a cow have teeth in her upper and lower jaws; if not, which are absent? If only part are absent in one jaw which are they, the grinders or cutters?

The Success Of This Engine Has Amazed Competitors

IN the early part of October 1912, we announced in leading farm papers that we were placing on the market a high type of gasoline engine. We predicted that it would score a rapid success.

The older manufacturers of gasoline engines merely smiled at our announcement. Another make of engine among the great number in the field would never be noticed, so they thought. But as succeeding advertisements appeared and the interest of farmers in the Renfrew Standard engine continued to grow as so much talk was created by the Renfrew Standard exhibits at the big Fall Fairs, as reports from agents in the field kept coming in saying that they were losing many of their prospects who were buying the Renfrew-Standard engine, the long established manufacturers woke up to the fact that an exceedingly formidable opponent was successfully invading the field.

We must confess that the success of the Renfrew Standard engine has exceeded even our most sanguine expectations. But considering the remarkable



Renfrew Standard

perfection to which this gasoline engine has been brought—the many improvements it possesses—it is really no wonder that intelligent Canadian farmers have given it such a royal welcome.

Complete description of the Renfrew Standard gasoline engine is given in a handsomely illustrated booklet. You and every other progressive farmer will want to get posted on the latest and best type of gasoline engine for sale in Canada, so fill in and mail the coupon below.

Renfrew Machinery Co., Limited, Renfrew, Ont.

Without obligating me in any way please mail me booklet describing the Renfrew Standard engine.

Name.....

Address.....

.....

.....

The Renfrew Machinery Co., LIMITED

Head Office & Works, RENFREW, Ont.

— Agencies everywhere in Canada —

Write us about the Gifford 1 1-2 h.p. engine, which we we believe is the handiest, most compact and most efficient *little* engine made.

Users of the Standard Paint Companies Products Will Not be Inconvenienced.

The plant of the Standard Paint Co. of Canada, Limited, at Lachine, Que., where Ru-ber-oid Roofing is manufactured, was badly damaged by fire on Dec. 28th last.

Fortunately most of the Company's equipment and some stock were saved enabling them to continue to supply Ru-ber-oid Roofing, Karoid Roofing, Sovereign Felt and their other products without delay.

Prompt steps have been taken to reconstruct the damaged building and replace the equipment, which was destroyed, so that the users of the Company's products will suffer no inconvenience.

Care of Bushes.

Just a word as to brushes. It is economy to buy good brushes and then take good care of them. The reason for most of us wanting to buy cheap brushes is that after we have used the brush for one job, we usually neglect it until the paint in it hardens and the brush itself is thrown away as useless. After you are through with your painting, if you will wash your brushes out thoroughly in turpentine or even coal oil so as to get all the paint out of them, they will keep in fairly good condition. Better still, however, is to make a little brush keeper which can be done by cutting off the top of a varnish can and running heavy wires directly through it. These heavy wires can be pulled in and out and run through small holes in the handles of the brushes, and in this way hold the brushes in suspension. The can is then filled with turpentine and oil, so that the bristles of all the brushes in the keeper will be covered with the liquid. Old brushes that have become hard and stiff can be easily cleaned and softened by the use of a small amount of the paint and varnish remover.

Paint is so essential on the farm that really it is a good idea to find a special place in the farmer'sworkshop and there to keep the paints, brushes and other paraphernalia. It is not advisable to allow to many odds and ends of paints to collect; they should be mixed together and used for touching up the odds and ends around the farm where appearance is not a prime factor.

Another important place for the use of paints on the farm is the protection and up-keep of the farm implements. Paint will protect the wood if applied every three or four months or at even longer intervals, and keep it from checking and cracking. Paint will keep the iron and steel from rusting, and if the implements are properly housed, instead of being left in the open exposed to the weather, the greatest efficienty and service will be rendered.

OUR Stallion Policies, covering against loss by **Death through Accident or Disease,** are more liberal and afford more protection to owners than any issued by Competing Company. They contain no vexatious clauses, having been drafted to cover **the special conditions** met with in this Country. They cover the horse no matter **where he might be** and not merely **in his own stable,** as certain Companies do. This is very important during the Breeding Season as the horse might die while being on the road. Do not **take any chances** by insuring with others, **insure with us;** The insurance premium represents only a small proportion of the service fees earned. Better risk the **loss of the premium** than the **purchase price** of your beast if it dies without insurance.

Better have and not need than need and not have.

STALLION INSURANCE

All kinds of live stock insurance transacted. *Write for particulars and address of nearest agent.*

THE GENERAL ANIMALS INSURANCE CO. OF CANADA, **Head Office: 71a ST. JAMES STREET, MONTREAL, Que.**

Banner Oat Club Meeting.

A meeting of the Prince County Banner Oat Club was held in the Queen Hotel, Summerside, on Friday, December 20th., at 10.40 a. m., with the President, Rev. J. J. McDonald in the chair.

The Secretary, Mr. Thos. Waugh read the minutes of the last meeting, which were approved.

It was agreed that the time for receiving the advance for $5.00 be extended to January 10th, 1913, and that a membership fee of $2.00 be imposed on anyone joining the Club after that date.

It was agreed that the advertising be left to the President and Secretary but that the total amount expended must not exceed $100.00.

It was agreed that the President and Secretary be empowered to secure suitable stationary.

It was agreed that each member should be required to put his initials on each bag of oats accepted by the club for sale from him.

It was agreed that the President and Secretary be empowered to secure proper stencils.

It was agreed that the Prince County Banner Oat Club should authorize those of its members who were members of the Seed Fair Committee to make such arrangements as they thought best with the Seed Fair committee to give Banner Oats a very prominent place in the prize list.

It was agreed that the Secretary be empowered to purchase at once one thousand three bushel bags, and to make arrangements for a second thousand to be delivered when needed.

It was agreed that each member of the club should have a sample of his oats tested for germination as soon as possible, and that ten or fifteen pounds should be delivered in Charlottetown at the office of Mr. Alexander Campbell, insurance agent, so that the Secretary might forward samples to intending purchasers.

The correspondence was then called for, and a number of inquiries at this early date was regarded as very encouraging.

A meeting of the Seed Fair Committee was held in the Queen Hotel, Summerside, on Friday, December 20th, at 2 p. m. The President, Rev. Dr. Gauthier, presided. It was moved and carried unanimously that Rev. Dr. Gauthier, should be a commiteee to interview the Department of Agriculture regarding the deficit in connection with last year's Seed Fair.

It was moved that the regular number of prizes be offered for Banner Oats, and that the offer of the Prince County Banner Oat Club of $30.00 to increase the prizes for Banner Oats be accepted, and that a note of acknowledgement be made in the prize list.

It was moved and carried, that the prize list, as submitted by Prof. Theodore Ross be accepted, with the exception of prizes for timothy, in which changes were made. It was moved that the Household Science prizes of last year be accepted, and that a regular prize should also be offered lar best beef cut, prepared for the table and best chicken prepared for the table. It was moved and carried that last year's prizes for handicraft be accepted for this year.

It was moved and carried that Professor Ross, Rev. Dr. Gauthier and Rev. J. J. McDonald constitute a committee to further revise the prize list, if neceseary.

It was moved and carried that the Provincial Seed Fair, be held on Tuesday, Wednesday and Thursday, March 4th, 5th, and 6th.

It was moved and carried that all entries should be free up to and on March 1st, and that a fee of 5c each should be charged for all entries made after that date.

This Group of Handsome Tailor-Made Waists

Indicates the Exceptional value-giving Opportunities Offered in our Special Mid-Winter Sale Catalogue

TAILORED WAISTS TO SUIT EVERY WOMAN

21-411—Ladies' Handsome Tailor-made Waist of good quality Pique, neat patch pocket, soft collar and cuffs and box pleat down the front. Sizes 34 to 44. A really smart waist for **$1.39**

21-2101—Ladies' Strictly Man-tailored Waist of fine Linenette, neat patch pocket, embroidered collar and laundered cuffs. Sizes 34 to 44. This is a big value for.. .. .. **.89**

21-2209—Ladies' Tailor-made Waist of fine Striped Vesting, laundered collar, plain soft cuffs, box pleat, three pearl buttons and neat patch pocket. Sizes 34 to 44. A special value for.. .. .. .. **.98**

21-258—Ladies' Pretty Tailor-made Waist of fine Chambray, in neat Black or Navy Stripe effect, neat patch pocket, soft collar and cuffs and box pleat down the front. Sizes 34 to 44. Special value for.. .. .. **.95**

21-2000—Ladies' Man-tailored Blouse of fine Linenette, neat patch pocket, soft collar and cuffs and box pleat down the front. Sizes 34 to 44. Another big value.. .. .. **.89**

21-2440—Ladies' Handsome Tailor-made Waist of fine Linenette, with front beautifully embroidered in floral design, scalloped edge finished with three large pearl buttons, soft collar and cuffs. Sizes 34 to 44. Only.. .. .. **$1.25**

WE PREPAY CHARGES.

Goodwins Limited
MAIL ORDER DEPT.
MONTREAL, CANADA.

The Best Built Roller

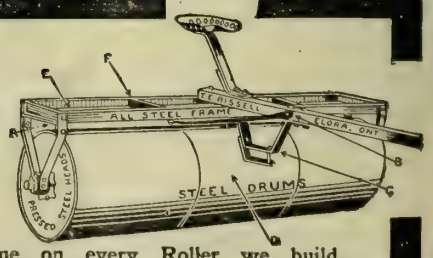
is the "Bissell," with Drums of heavy steel plate, hard in temper, riveted up close, having pressed steel heads.

With AXLES of 2 inch solid steel revolving on cold Rolled Roller Bearings.

With the MALLEABLE CAGE in one piece, holding the Roller Bearings in line on the axle.

With DRAW BRACKET under the Pole, making the Draught down low.

With the FRAME all of steel and the improved steel plate bottom.



You may be told that other Rollers are like the Bissell--but there is only one original Bissell Roller and to save our customers disappointment, we put our name on every Roller we build. Look for the name "Bissell" and write our Dept. M for catalogue.

Several styles and a variety of widths to choose from, 6 ft. up to 12 ft. Grass Seeder Attachment also furnished if required. 73

T. E. BISSELL CO., LTD., ELORA, ONT.

Try an Ad in The Maritime Farmer.

SUFFERED FROM

Catarrh of the Stomach For Thirty Years.

Catarrh of the Stomach is generally caused from some interference with the action of the liver, and is a malady that affects the whole body.

Some symptoms are burning pain in the stomach, constant vomiting, abnormal thirst, incessant reaching, etc. On the first signs of any of these symptoms Milburn's Laxa-Liver Pills should be taken. They are a specific for all disorders arising from wrong action of the liver.

Mr. Michael Miller, Ellerslie, Alta., writes:—"I take pleasure in writing you concerning the great value I have received by using Milburn's Laxa-Liver Pills, for catarrh of the stomach, with which I have been a sufferer for thirty years. I used four vials and they completely cured me."

Price, 25 cents a vial, 5 vials for $1.00, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Potash.

Potash in Canadian agriculture is chiefly used in the forms of Muriate of Potash ana Sulphur of Potash. The former is the most generally used but Sulphate of Potash should invariably be used on potatoes, sugar beets and tobacco as the chlorine content in the Muriate of Potash is liable to have a detrimental effect on the quality of these crops.

It should be remembered that artificial fertilizers are not used up by the first crop. This does not apply to Nitrate of Soda or Sulphate of Ammonia, which are generally taken up wholly by the crop tp which they are applied. An application of Potash would be only half used up by the first crop and the two succeeding crops will benefit from the remainder. From this illustration it can be seen that a farmer ought not to charge the fall cost of his fertilizers to the first crop except in the case of the nitrogenous materials mentioned.

Each fertilizer material has its own functions to perform; no one ingredient can replace another.

Potash adds to the quality and promotes the maturity of crops in addition to increasing the quantity. It is necessary for the production and transfer of strach in plants, for the stiffening of straw; it gives color and flavor to fruit and adds to the size of roots and tubers. Potash should be the dominent ingredient of a fertilizer for potatoes.

Free, educative bulletins and advice on the Economic Purchase and Use of Artificial Fertilizers may be obtained by applying to German Potash Syndicate, 1505 I. O. F. Temple Bldg., Toronto.

FERRY'S SEEDS

The sower has no second chance. A good beginning is the only safe rule; put your faith in the best seeds you can buy. Ferry's have had the highest reputation for over 50 years. For sale everywhere.

1913 Catalogue free on request.

D. M. FERRY & CO., Windsor, Ont.

If You Have Live Stock For Sale Advertise it in the Maritime Farmer.

The P. E. I. Poultry Show.

Now, as the fifth annual poultry show has passed, and the people in general have been discussing poultry and poultry shows, and while it fresh in our memories, we should ask ourselves—are we making progress in this great industry?

Five years ago when this poultry association started we had with us a number of farmers, but today I am sorry to say, I find only one farmer who is a member competing in the open class. And had it not been for the wise provision of the government in giving them a utility class they would be entirely pushed out, as the fancy poultry is not suitable for this purpose.

Hens today are bred for special purpose, and the means employed in each case are entirely different. If you are after an egg yield trap nests should be employed, and with close observance we find the profitable hen. To stimulate this yield we have the egg contests which are being held in all parts of the world. This is only one side of the utility class. We have the fowl bred for table qualities which are as different as the dairy cow is from the beef cow. In one case, no matter how well fed, the food goes to produce milk, and in the other case to produce beef. This same rule applies to fowls.

Next in importance we have the standard bred or fancy fowls, which might be divided into a great many classes. But I will divide it into two solid and parti-colored. The latter require two separate matings, one for cockerel, and the other to produce pullets of required standard color, and they also require to be line bred or inbred to make a success of fancy fowls. So you see that the means adopted for each are entirely different and with a different aim in view.

My reason for writing this is that the farmer may not be deceived by mixing up these different classes to the ruin of his stock, as so many of late are doing. Buying purely fancy stock thinking to improve their laying and table qualities, whereas the contrary has been the result. I know of several who have ruined their stock in this way.—L. A. Haszard, Charlottetown.

The Calf and the Cow.

It is well known that if the calf sucks the mother continually she dries off very rapidly. Why? Because the surplus milk is not taken as fast as manufactured, and Nature shrinks the milk flow to the demand of the calf and to prevent injury to the mother. We all know that, if the cow is expected to produce milk to her full capacity she must be milked clean and at regular intervals. That is something the calf does not do. We further know that a poor milker will dry off the cow just as a calf does. Leaving milk in the udder is a sure way to dry the cow off. All these are old and well-settled principles, yet men will not conform to them, and so they destroy profit and injure cows. The efficiency of a cow is due to things: (1) Her born capacity, for which we try to provide by wise and proper breeding, particularly in giving her a sire that will impart that capacity to her; (2) intelligent management of the cow during her milking period. Both are supremely essential. You cannot make a good cow out of one that has no born capacity for milk-giving, no matter how well you manage. You can spoil a cow of the highest born capacity, especially a heifer in her first milking period, by careless and ignorant management. And so we see how much is involved in the simple act of letting a calf suck its mother and not taking away all the milk she produces.—Hoard's Dairyman.

MAPLE EVAPORATORS

TO THE LIVE FARMER OUR PERFECT MAPLE EVAPORATORS AND A SUGAR BUSH CAN BE MADE TO PRODUCE A REVENUE WHEN IT IS MOST NEEDED.

With our Maple Evaporator, sap is easily and economically converted into the finest quality maple syrup.

The body of the perfect evaporator is made of heavy sheet steel thoroughly riveted and braced with steel angle and fitted with cast iron door and faame.

The working of the evaporator is very simple—put the sap in at one end and it comes out syrvp at the other.

Send for illustrated catalogue.

Steel Trough & Machine Co., Ltd., 9 James St., Tweed, On

WHEREVER the old wheelbarrow cleaning system is used you find a mussy stable.

It's too much to expect that a man will brush and sweep the passage ways every time he cleans the stable. He hasn't the time for one thing—and it's discouraging work for another.

But nowadays we think more about clean stables.

We know that dirty stables breed disease.

It's up to you, Mr. Farmer, to make your stable easy to clean — then it will always be clean.

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One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initisl or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Scotch collie bitch, 3 years old, grand worker on cattle LESLIE WALKER, Lower Millstream, N. B.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Four Ayrshire bulls, five to eleven months old from good producing stock. JOHN F. FROST, Hampton, N. B.

FOR SALE—Two yearling pure bred Guernsey Bulls from good size stock. T. D. BLAIKIE, Great Village, N. S.

10,000 COON AND SKUNK WANTED—Do not sell until you have my offer. Nine trapping secrets for stamps. E. W. DOUGLAS, Stanley, N. B.

WANTED—Live foxes of all colours; Mink Otter. Marten, Lynz, Bears, Deer and Moose. Write giving description and prices to J. D. FRIER, Sussex, N. B.

FOR SALE—One Holstein bull, twenty-one months. Four Ayrshire bulls from nine to fifteen months. JOHN A. HUGHES, Petiticodiac, N B.

CHOICE WHITE ORPINGTON COCKERELS $3.00 to $5.00 each. (Philo Strain direct) May hatched. Capt. C. W. GILLIATT, Freemason's Home, Windsor, N. S.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R J. Pictou Co., N. S.

JERSEY BULL FOR SALE. Four years old, sire Ferror (Imp.) No. 391, dam Brampton Regan, No. 439. Apply to J. J. CLARK, Sect. Tatamagouche, N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

GUERNSEYS FOR SALE—1 yearling bull, and 4 between the ages of 4 and 10 months, all very fine animals. WILLIAM COX & SON, Canard, N. S.

WANTED—I would like to buy some early Ohio, Bliss Triumph, and Garnet Chili potatoes, must be good samples. Spring delivery. Write to C. FRED FAWCETT, Upper Sackville, N. B.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co,, Queen Street. Montreal.

Will the person who forwarded a one dollar note in payment of subscription without signature, in an envelope postmarked Shediac, N. B., during the week ending April 26th; also person who sent in postal notes numbers 281857 and 281858, amounting to 80c. postmarked Tatamagouche, kindly notify The MARITIME FARMER Office, Sussex, N. B

BELTING FOR SALE—500,000 feet, all kinds and sizes. New and second hand. Also 500,000 iron pipe. All sizes, good as new for water, steam-heating, greenhouses. construction, fencing posts. etc. Also enormous stock of wire fencing, gates, pulleys. cable, rails, new roofing, saws, vises, forges, all at 25 p.c. to 75 p.c. less than regular value. Catalogue on request. IMPERIAL WASTE & METAL CO., 5 Queen St., Montreal.

BANKRUPT BELTING BARGAINS—Positively 85 p.c. to 70 p.c. saved, New and Second hand all kinds and sizes for every purpose. Also enormous stocks of Iron Piping, Pulleys, Shafting, Hangers, new and relaying Rails, Saws, Chains and Cables, Roofing, etc. Write us for prices and tell us what you need. Catalog on request. The IMPERIAL WASTE & METAL CO., 3 Queen Street, Montreal.

FOR SALE—Pure bred and grade Shorthorns of good milking qualities along with good beef type. Males and females all ages. Also extra well bred grade Clydesdale mare six years old bred to foal in June after an extra good pure Clydesdale stallion. Also her seven months old filly sired by same horse which she is in foal after at present. This filly is extra large and perfectly sound. LAURIE M. ANDERSON, Sackville, N. B.

SPRINGVALE FARM AYRSHIRES

Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd. A few bull calves and yearling heifers for sale.

FRED S. BLACK, Amherst, N. S.

Self-Boiled Lime Sulphur no Good for San Jose Scale.

In regard to the use of self-boiled lime-sulphur solution to combat the San Jose scale, Dr. W. E. Hinds, of the Alabama Experiment Station says:

"We cannot depend upon the heat of the lime to produce a combination that will be effective as a winter wash against San Jose Scale. I fear that the writers recommending this, confuse the preparation of self-boiled lime-sulphur for summer use for brown-rot with the fire-boiled wash for the scale. An ineffective wash means waste of the materials, labor and perhaps the ruin of the orchard also.

"There is of course, latitude for some variation in the proportion of lime and sulphur, ranging between 15 pounds and 20 pounds of each. Considering the danger of getting a poor grade of lime, and the cheapness of that material, I believe it advisable to use slightly more lime than sulphur. I would advise 18 or 20 pounds of lime and 15 pounds of sulphur to make 50 gallons of wash. It is necessary to boil this for at least 30 minutes, and better, for 45 or more, to get the most effective wash."

Writing also of a recent recommendation of "One pint of carbon disulfide on 100 bushels of corn," as a protection against the weevil, Dr. Hinds says, "this would be entirely ineffective, and would be simply so much thrown away." In a press bulletin sent by Dr. Hinds, it is stated that in tight enclosures, eight pounds of carbon disulphide for 1,000 cubic feet of space would be thoroughly effective." If the enclosure is not very tight, it will be necessary to use more, perhaps 20 pounds per 1,000 cubic feet of space.

It must be remembered that the carbon disulfide diffuses itself through-out the entire space of the bin or room in which it is placed, and the size of this enclosure, rather than the amount of grain to be treated, is the thing to be considered.

Murray Corner,
Jan. 13th, 1913.

The Maritime Farmer,
Sussex, N. B.

I received the lamp burner premium with your paper and used it. It is O. K. and I am well pleased with it and the Farmer. Yours truly,

Mrs. James Chapman.

HOMESTEAD FARM

Holstein--Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

LOGAN BROS.
R. R. I.
Amherst, N. S.

Long distance 'Phone

FOR SALE

Two Jersey bulls, one twenty-three months old, and one eleven months, both from heavy milking dams.

Robt. Robinson, Meadowview Farm,
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Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

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Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

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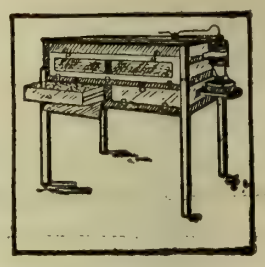
FOR PEERLESS WAY POULTRYMEN



Into the pockets of the users of The Peerless Way last year went five million dollars made from the poultry these people raised. Yet chickens are scarce in Canada and eggs are the scarcest of all food commodities. That is positively the fact.

To-day there are not enough Canadian CHICKENS or EGGS to go around. Thousands of chickens and hundreds of thousands of dozens of eggs are being shipped into Canada from the United States and other countries to help meet the demand.

Yet there is a shortage! Eggs are commanding a tremendous price—chickens are worth dollars.

Now is the time to take advantage of this situation and make money out of it yourself. You can raise and sell 600 chickens this next year, and you will find a quick and sure market for every one of them. You can get the top notch price for all the hundreds of dozens of eggs that your poultry lay.

Let us tell you how!

Poultry raising is the best business for any farmer, any farmer's wife or farmer's child. The poultry crop is the one crop that never fails. It pays better for the time and money invested; the profit is surest; it isn't overcrowded and never will be.

Our book "When Poultry Pays," will show you. Let us send it to you. It is interesting; it is instructive, and it contains the proof.

You need this book. It will be mailed free. A post card will bring it.

200

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Head Offices:
33 PEMBROKE ST. PEMBROKE ONT. CAN.

WE WON AT AMHERST

The much sought for Percie Johnson Cup, the finest Solid Silver Cup ever offered for the Best Display of Poultry in the Following Classes:

Black Minorcas, White Orpingtons, White Wyandottes, R. I. Reds, Barred Plymouth Rocks and White Leghorns.

Stock for sale from these Prize birds in Singles, Pairs, Trios and Pens. Write for Large Poultry Supply Catalogue.

For sale a limited number of pure bred Scotch Collie pups from registered stock

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Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand. Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

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Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery—no agents. Send list of your wants for prices, etc.

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My Harness Business in the town of Shubenacadie doing a good business. Also my Farm consisting of six acres in good cultivation, only 200 yards from depot and school. Good house and barn, wood house; all in good repair. For further particulars apply to

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Shubenacadie, N. S.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.S.

1870 1912

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Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

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W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

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F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

Stewart Bros., Alliston, P. E. I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B.
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.

Shropshires

C. A. Archibald, Truro, N. S.

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Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

Springbrook Ayrshires !

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
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MICHAEL K. BOYER,
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We are offering for sale to make room a number of pure bred Hereford bulls from 5 months to 4 years old. Write for prices and description.

L. A. Whitman
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EVERYHING you want in the line of Poultry Feed Remedies or Supplies. Send for catalogue.

Maritime Poultry Supply Co.,
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CORNING TURNIP SEED
FOR SALE

About 1000 lbs. of the famous Gr. Top "Corning" Turnip Seed, crop 1912, grown from selected roots. Price 50c., postpaid 55c.

S. P. GOUDEY, Yarmouth, N. S.

$100 Reward
FOR FOUR COLTS

STRAYED or STOLEN from pasture at Londonderry, Iron Mines, N. S.

One three-year old horse colt, sorrel, light mane and tail. One two-year old steel grey horse colt, with white strip on face, and one white hind foot.

One brown yearling horse colt, star on face, one white hind foot. one white fore foot. One red yearling mare colt with large white face, and white hind stocking.

Anyone giving information leading to the finding of these colts or the parties who took them will receive $25 per head.

Arthur Blaikie, Great Village,
COL. CO., N. S.

KINNEAR POULTRY COMPANY Ltd.,
SUSSEX, N. B.

As we are installing a 3000 egg Candee Sectional Incubator this season we will be prepared to hatch a limited number of eggs for Customers. Cost of hatching on application.

We will in consequence, have 4-360 egg and 5-250 egg Incubators, Model & Prairie State makes, guaranteed in first class condition, for sale at half catalogue prices.

Barred Plymouth Rocks

Again we maintained our prominence as breeders of B. P. Rocks at Maritime Fair by winning Silver Cup for the best display of this variety. In heavy competition won 1st and 6th on hens; 1st, 5th and 6th on pullets; 2nd, 5th and 6th on cockerels; 1st and 2nd Mating pens (pullet); 1st breeding pen, and special for best female. High class stock for sale.

CRAIG BROS., Amherst, N. S.

Rose Bank Farm
Jerseys & Yorkshires
FOR SALE

One Jersey bull two years old by Pogis 40th of Hood Farm and bull calves by Foxhall's St. John O'Dreamwold, also pigs one to six months old, both sexes.

Josselyn & Young, St. John, N.B.

Columbian Wyandottes
Winners at Amherst

See Maritime Farmer Xmas issue. Prize winners for sale. Also a few Rhode Island Reds (both combs). New "Peerless" Incubator cheap.

Orchard Hill Farm, Brown's Flats, N.B.

LAWNDALE STOCK FARM

We have a special lot of 3 young bulls for sale at a bargain—Two roans dropped December 1911. One, all red, dropped February 1912. Splendidly bred and excellent specimens. Also other pure bred Shorthorns.

Write for particulars.

J. M. LOVITT, M. D., Proprietor,
P. O. Box 353 Yarmouth, N. S.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

C. C. H. EATON,
Canard, N. S.

ELMWOOD STOCK FARM.
Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

Pure Bred Barred Plymouth Rock Pullets

I can offer about 20 birds for immediate sale at 75c each.

ALLANDALE FARM, Hampton, N. B.

We Duplicate All Infertile Eggs

White and Columbiam Wyandottes, Single Comb White Leghorns, and Light Brahmas. We use trap nests. In business over 30 years. Brahma eggs, $3 for 15; $5.00 for 30. The other varieties $2 for 15, $5 for 50, $10 for 100. Address,

MICHAEL K. BOYER, Box 27,
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We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

FOR SALE--Pure Bred Shropshires

20 to 30 Shropshires.
6 Cheviots.
5 Leinsters.
A few Southdowns, Oxfords and Lincolns.

These sheep are from one to two years old, extra choice, being picked from noted flocks by Mr. R. H. Harding of Mapleview farm, Thorndale, Ont. Write or wire,

F. DeL. CLEMENTS, 9 & 11 Rodney St., St. John, N.B.

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We have now for sale two exceptionally good high grade young cows, one 5 years old, is a show cow and 50 lb. producer, due to calve January 20th sired by Sir Rooker Posch Artis, Sire of 1911 Champion at Amherst and 1912 1st money Holstein cow, also several others forward in calf.

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Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

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We have the type that gives best profit. Write your wants to

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Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

In Chester White Swine I am booking orders for young pigs.

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Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

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offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

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We have a number of choice cockerels and pullets of Barred Plymouth Rock. White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Apply to

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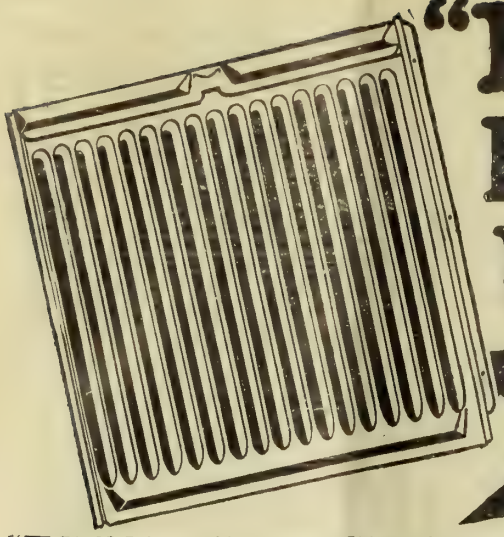
We have for sale at right prices four Ayrshire bulls from twelve to fifteen mos. old. They are sired by the champion bull of 1911; a son of the renowned Scotch champion "Spicy Sam."

Prescott Blanchard, Truro, N. S.



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G. H. Pedlar

"I AM making one metal shingle to-day which is used all over the world. I have just started making for sale a new and bigger shingle. This was invented by my son, the late George H. Pedlar, Jr., to cover the big roof surface of the modern barn."

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"You, and I, and my son, realized how lumber is getting scarcer, high in price, and wood shingle much poorer in quality as the years go on. Lumber is used in barns to-day that would not be looked at twenty years ago. Labor asks much higher wages."

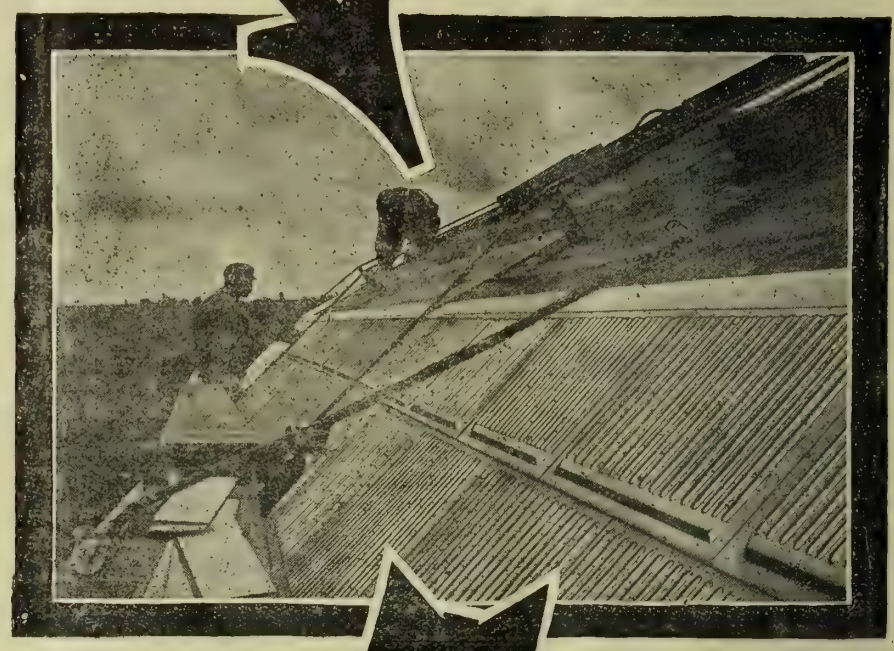
"To-day, my 'George' Shingle on the roof, and sheets of my galvanized, corrugated iron on the walls, instead of boards, makes you a better barn at less cost than an all-wood barn properly painted. It saves in the labor needed."

"I am ready to help you build a better barn than you planned, and yet save you money. Use my 'George' Shingle and my corrugated iron, and you save so much in lumber bills, repairs and paint, and labor of construction, that it pays to use my fireproof material. You get a better barn at an astoundingly moderate figure."

"I have just written you a book about this. It shows how one of these new barns is built. My galvanized, corrugated iron is used on the walls and my 'George' Shingle on the roof."

"Won't you send to me for this book, friends? I will be glad to send it anywhere. It probably will help you. It shows the most economical way to build a barn now-a-days. Write a post card for it."

G. H. Pedlar



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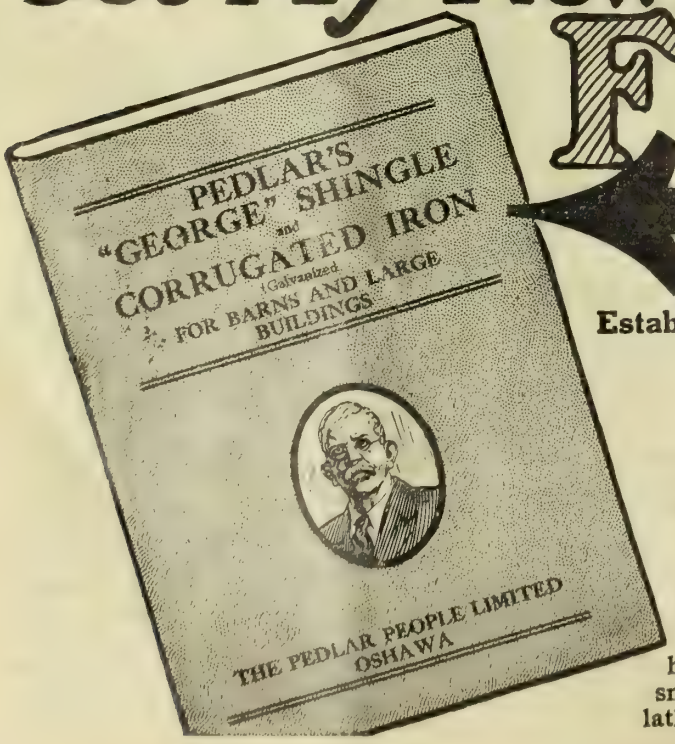
"My new, big shingle is made for big barn roofs. The average barn is getting bigger every year. By using a large metal shingle on a big barn roof, the owner saves so much in labor of applying, when compared with wood, that the metal shingle becomes immediately the more economical article."

"At one stroke, I made it possible for any farmer to get a fireproof, lightning-proof and timeproof roof, which would last 100 years, with a big saving in wages, repairs, paint and upkeep."

Get My New Book FREE



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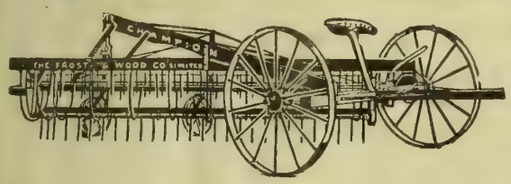
Vol. 18. SUSSEX, N. B., FEBRUARY 11, 1913 No. 9

Make Haying Light Work With Frost & Wood Helpers

HANDLE your timothy, clover and alfalfa with a Side Delivery Rake and a Hayloader. Cut a field in the morning; you can then rake it in the afternoon and draw it in before night if necessary. Being able to do that with this Equipment has saved many a farmer many dollars, when a rain storm would have soaked his crop and minimized its value. Think of the work these two implements save! They will solve your help problem this summer. Once you use them you'll never go back to the old way.



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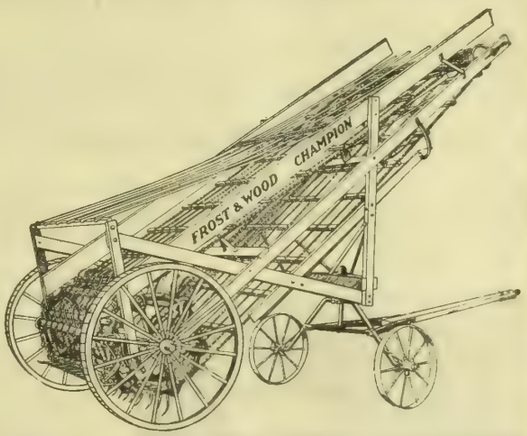
saves the labor of dumping and leaves windrows in best possible condition for loading with the Hayloader. It automatically turns the ground side of each swath upwards, so the crop can be cured evenly and thoroughly. Well-cured hay of an even color always brings highest market prices--that's the kind a "Champion" Rake and Hayloader will make for you. It just acts like a tedder. Its teeth have an easy, regular motion--so no danger of threshing the ripe heads of clover or timothy. Rear end of rake is carried on two castor wheels--these insure perfect work on uneven land or farms with deep furrows. Materials used in this Rake are the best we can obtain--construction is simplicity itself--so there is nothing to get out of order--it is strong, rigid, well-built and capable of handling any kind of crop. Ask for our "Haymaking" Booklet.



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is simple—which means it won't get out of order just when you want it badly. Has the very best material in it—which means it will last and do good service for many a year. The "Champion" has the power and the height to make big loads easily. You can regulate the volume of hay put up by the speed at which the horses walk. It will put it up just as fast as it can be handled on the load. These teeth have exactly the right curves for picking up *all* the hay. The "Champion" does clean work. Side Rails are high and Carrier is covered by a windbreak, which prevents the hay being blown from Carrier in windy weather. Investigate this Loader! It will do your work as you want it done

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"It's what makes your dough *rise*, Rose."
"Yes"—she encouraged.
Added Bud very sagely:
"Makes it *rise* in the mixer and *expand*
"in the oven. It's the *elastic* part of
"flour—*absorbs* all the water and milk
"—and things."
Rose grew interested.
"FIVE ROSES, said Bud, is exceedingly *rich*
"in gluten. I s'pose because it's *all* made
"from *Manitoba* wheat. Takes up a lot
"*more* water — makes those *fat* loaves —
"lasts *longer* too."
"Saves *money*, doesn't it?" asked Rose.
Bud in a big voice:
"The fat loaf makes the fat pocketbook."
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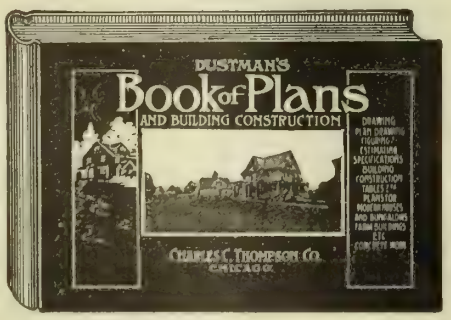

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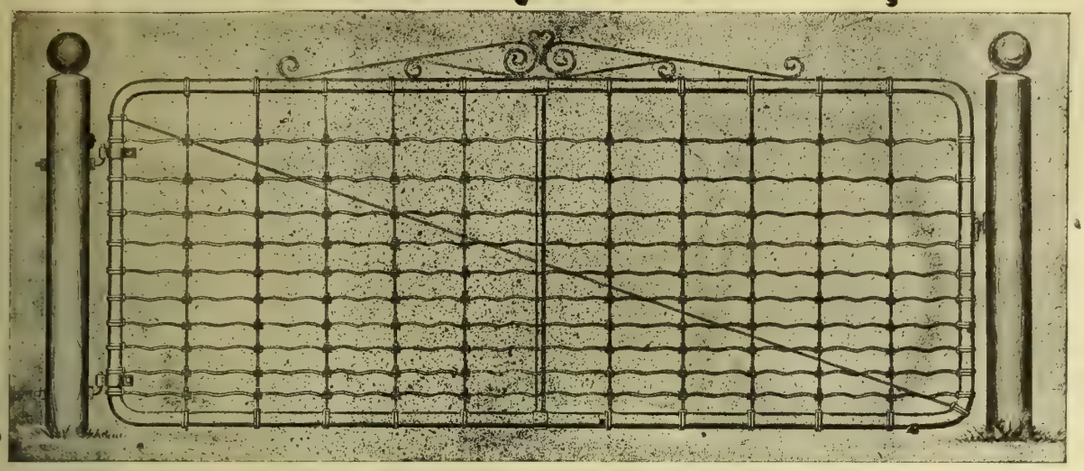

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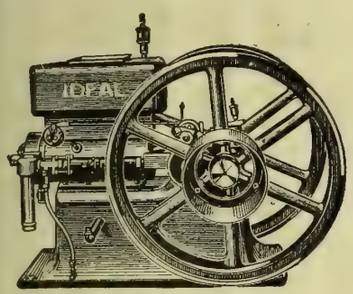

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are summed up briefly under the following captions:

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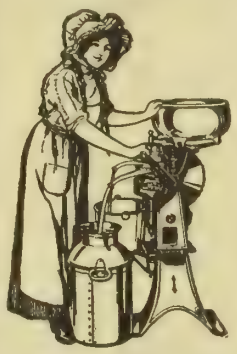

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Silage Would Increase Your Dairy Profits

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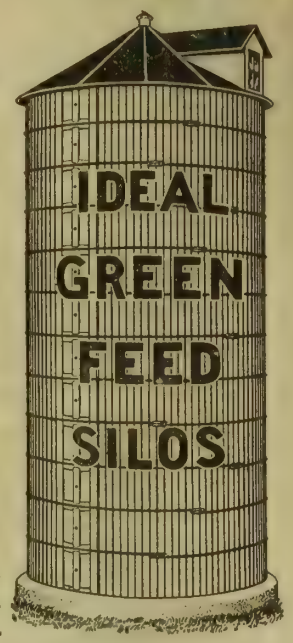
All successful dairy men now-a-days consider a good silo a very necessary part of their dairy equipment and there is no question but that feeding silage greatly increases the milk flow.

If you haven't a silo perhaps you have made up your mind that this is the last year you are going to get along without one.

If so, don't put off ordering it until late next summer and perhaps find yourself in the same fix next year.



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They also realize that when their Animals chew MOLASSINE MEAL, when mixed with other Feeds, on account of its being sweet, they always thoroughly masticate all of their Feeds. These two arguments alone are sufficient to have the most skeptical give this Feed a trial. Very few have not tried it. You may be one of the few. If so, buy it TO-DAY as all dealers handle it.

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THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 18. SUSSEX, NEW BRUNSWICK, FEBRUARY 11, 1913. Number 9.

Nova Scotia Farmers' Association in Annual Session.

THE Seventeenth annual meeting of the Nova Scotia Farmers' Association was held in Lyceum Hall, Sydney, N. S., on Tuesday and Wednesday, January 21st and 22nd, 1913.

R. M. Jackson, president of the Association, occupied the chair and the hall was filled with enthusiastic farmers from all sections of the Province.

PRESIDENT'S ADDRESS.

To the Officers and Members of the Nova Scotia Farmers' Association:

Gentlemen,—It is with a great deal of pleasure that I extend to you a very hearty welcome to this, the seventeenth annual convention of the Nova Scotia Farmers' Association meeting for the first time in the busy City of Sydney, at the eastern end of our fair Dominion, and it may well be called the Gateway of Canada.

Coming together again after a year of labor and effort we naturally look over the seasons as they come and go and note the results, and first of all we would express our gratitude to our Gracious God, for we have had a year of peace and prosperity; we have not been visited by either war, pestilence or famine.

The year 1911 was one of the best crop growing years that we have had for many years, while the year that has just passed, though not up to the year previous, yet when all crops are summed up, will about strike an average.

The weather conditions were somewhat peculiar, parts of the province were blessed with plenty of rain during the growing season, while in other parts, particularly the Eastern Counties, the rainfall was very light, consequently some crops were very short, especially the hay crop. The grain and root crops, where the farmers had been educated to properly cultivate the soil and to conserve the moisture from preceding rains, was up to or above the average. The hay crop of the Eastern Counties is reported to be about 10,000 tons short. It seems to me that too many farmers depend on their hay crop for their winter feed instead of growing more roots and corn to add succulence to their winter feed, and to help out in times of shortage such as is being experienced this year. I am pleased to note that a larger acerage is being devoted to the growing of roots and corn every year. The root crop has been a good one, some places reporting a yield of 1200 bus. to 1400 bus. to the acre. To get a large yield like this means that you must have good seed and give them proper cultivation.

The Fruit Crop, which is one of our leading crops, while not up to that of 1911, which was the banner year, was above the average, but owing to weather conditions was not as clean or of as good quality as the year previous.

Peices of farm products have ruled high during the year, but have we been prepared to take advantage of the high prices. Dairy products reached the highest mark for many years, and have every indication of going higher this year. Are we prepared for it? If we were to go through some of our best farming districts today you will find some of our farmers, if you can call them that, who have good sized herds of cattle, and who are today buying dairy products instead of having a surplus to sell, every cow in the herd being dry, and will be till next summer. Now this is a sad state of affairs and one that needs to be remedied.

One of the greatest needs of the farmers of Nova Scotia to day is education. Education in every day problems of farm life, such as the breeding and feeding of the different kinds of live stock, the care and application of manure and the different kinds of fertilizers, rotation of crops, underdrainage, conservation of the soil, orcharding and everything that pertains to orchard work, and the many things that go to make the difference between success and failure on our farms.

Agricultural education has been carried on in about the same way as previous years, and it is with great satisfaction that we see the increased interest that is being taken in the Agricultural College at Truro. The attendance at both courses has been increasing every year, last year the buildings being taxed to their capacity, and this year we are pleased to see a large addition being added, and we should not be satisfied until this is filled to overflowing. Those of us who never had an opportunity of attending any of the courses cannot know how much we have lost. We have been farming with a fair measure of success, but how much greater might have been our reward had we an Angricultural Education to help us.

During the past year three illustration or demonstration farms have been established in the Province, this, you will all agree, is a step in the right direction, but we should not be satisfied with three; we should have one in every polling district in the Province. There are a lot of farmers that are not able to attend the Agricultural College to learn improved methods. True, the Institute speaker helps them some; but farmers, as a rule, are a suspicious people, and say it is all right to tell us what is being done on Government Farms, and by those who have farms that are by nature good, and plenty of capital to work them with. But on a demonstration farm, operated by one of their neighbors, under directions given by experts, they can see improved methods worked out under the same conditions that they work under, and done without Government aid, and say if my neighbor can do it, why can't I?

With all these advantages for agricultural improvement, are we helping those who need help the most? To my mind, this can only be done by having men who are qualified to do so travel throughout the country districts and visit every farm, and by practical advice help our poorer farmers to increase the production of their farms.

The Provincial Exhibition, though not as successful financially as we would like to see it, was very encouraging. The live stock exhibited was as good as could be found anywhere, but the display of fruit and vegetables was far short of what we would like to see. Why is this? Are we ourselves not to blame? Are we doing our best to make the display of exhibits as large and attractive as we might? I say we are not. Outside of the few who exhibit every year there are many who could make the exhibition more attractive, and not only do credit to ourselves but to our fair Province as well.

The several County and United Counties Exhibitions held throughout the Province are doing good work and we should do our best to encourage them as they get in touch with many that do not attend the larger shows. They should glso act as feeder, of the larger Exhibitions.

A very successful Horse Show was held at Amherst last Spring, and the Winter Fair that has just closed has been without exception the best yet.

In conclusion, let me remind you, that if we as farmers would reach the goal for which we are striving, we musthave the active assistance of every member, and each meeting of this Association should mark a long step in that direction.

We have prepared, we think, a good program, and we have gentlemen with us who are well qualified to handle home we should be in a better position to fight our farm battles, and their subjects, and when we return be able to report more progress during the coming year.

I would ask everyone present to assist me in conducting the meetings of this convention, and ask every delegate to be in his place at the time appointed for the opening of each session.—R. M. Jackson, President.

Several members voiced their appreciation of the sentiments expressed in the presidential address.

DIRECTOR'S REPORT.

Gentlemen—

Last year your directors presented their annual report at the extreme West of the province, they now have travelled to the extreme east of the province to present their seventeenth one, and are pleased to meet with you in the flourishing city of Sydney. Though the distance of travel may prevent some being present who would be with us provided we were meeting nearer the centre of the province, we expect a large attendance and are glad to visit these parts and your presence shows the interest you take in the affairs relating to the welfare of the Association and agriculture. We trust you will benefit by the addresses and discussions and store up information which will be of value to you during the rest of the year.

The province of Nova Scotia is not a large one but still it is one of great prosperity and its possibilities are immense. It is agriculture that adds to the wealth of a country and we are proud of our calling, one that cannot be excelled. There is always something to learn, something new, later information available as to how to produce more and at less cost which is valuable and which should be sought out by everyone. This Association has done a great deal towards spreading the gospel of more intelligent and successful farming and in various ways has aided the social and home life of the rural communities.

As in the past meetings have been held during the year in various places through the instrumentality of County Farmers' Associations and other agencies and we gather together from various sections at this annual convention to discuss and learn what is being done in the different localities, but we should not altogether make that the only object. We feel that at this convention we should lay more stress on the first clause of the objects of the association as found in the by-laws, viz. "to confer together with a view to united action in connection with our profession." There are questions that our opinions are sought for in the administration of the Government, there are matters that we should express our minds upon so the administration will know our views in regard to what we would like them to do. On the program there are two subjects specially specified, the Duty on Traction Ditchers and the Telephone Franchise. There are, no doubt, other questions just as important and some will be brought up of more or less importance, and matters of this kind we consider should be made a feature of this our annual convention and hope to see it tend more and more that way.

Progress in Agriculture continues and we are glad to report that the Agricultural College, Exhibitions, Winter Fair and Horse Show made good advancement. The grant to Agriculture of $500,000 which the Dominion Parliament made and of which this province received it's share in proportion to its population has enabled us to add to the College buildings which through the success of and the increase and satisfactory attended a share of this appropriation to ance were so much needed. The Agricultural Societies have also receivthe amount of $3,000.

Though the Province is small various conditions as to rainfall and temperature have been experienced the east has lacked rain, the central portions have had too much and the western a happy medium, except for a short time the summer was below the average temperature. Taking the whole Province crops were fairly satisfactory.

Immigration increased somewhat and there is plenty of room for others who wish to come. Men who have had experience at farming and with a fair amount of capital are those we should encourage to settle in this fair province; they will find conditions favorable for a contented and prosperous life. These are the people the Department of Immigration should endeavor to secure, and they are doing it to some extent.

We are to be honored this year with the presence of the newly appointed Live Stock Commissioner, Mr. John Bright, one of the foremost horsemen of the Dominion. We congratulate him upon his recent appointment and heartily welcome him to this part of the Dominion. We shall also be glad to have with us Hon. E. H. Armstrong, Commissioner of Public Works. He will hear our opinions and suggestions on various matters and will be able to convey them at first hand to the Government and Legislature, and we shall expect to hear something from him.

A satisafctory balance sheet is placed before you and a good programme. We thank the Department of Agriculture for the speakers provided and we trust you will return home edified and satisfied with your visit down East.

FINANCIAL STATEMENT.

CR.

Balance January 1st	$ 138.04
Government Grant	1000.00
Membership Fees	8.50
Delegates Fees	70.00
	$1216.54

DR.

Annual Meeting	$624.69
Annual Report	93.13
Directors' Expenses	47.40
Secretary's Salary	150.00
Stationery and Printing	8.00
Postage, Telegrams, etc	9.15
Balance December 31st	284.17
	$1216.54

AUDITORS' REPORT.

We, the undersigned Auditors of the Nova Scotia Farmers' Association, have examined the books and accounts of the Serretary-Treasurer, Chas. R. B. Bryan, and find them correct and neatly kept.

LIONEL STEVENSON,
J. P. LANDRY,
Auditors.

Truro, N. S., January 1st, 1913.

THE EXHIBITION COMMISSIONERS' REPORT.

which was read by R. S. Starr, one of the Commissioners, was highly gratifying to the Association. It showed that the Halifax Exhibition is making substantial progress, but the fact yet remains that the Exhibition is not so well patronized by the citizens of Halifax as it might be.

C. P. Blanchard, Truro, thought that the geographical position oi the city of Halifax was not favorable for a large attendance from the extremities of the province. He thought the object for which the exhibition was organized would be better served by having district exhibitions organized and held consecutively in various sections of the Province. Considerable discussion took place on the exhibition question. The concensus of opinion being that Halifax was the place for the Provincial exhibition and that it would be a retrograde step to do anything detrimental to the Halifax fair.

Mr. Wm. O'Brien expressed the thought that the officials of the railroads should exercise more care in the handling of live stock trains enroute to and from the exhibitions. Much damage was done to valuable live stock each year through the careless shunting and jerky starting and stopping of trains.

THE HOME ORCHARD AND THE FRUIT GARDEN.

was the subject of an interesting lecture on Tuesday afternoon by Prof. W. S. Blair, of the Experimental Station, Kentville, a synopsis of which will appear in a future issue of the Farmer.

THE REPORT OF THE SUPERINTENDENT OF AGRICULTURAL ASSOCIATIONS.

showed a flourishing condition all along the line. It showed the existence of 205 Agricultural Societies,—five more than last year,—with a total contribution of $13,253.00. Mr. Fuller emphasized the necessity of exercising stock bulls and went on to tell how some Agricultural Societies were accomplishing results by building bull paddocks for which work they received a special grant from the department.

The representatives from the various county associations reported progressive work during the year just closed.

The reporting delegates were:—Annapolis, L. W. Elliott; Antigonish, Rev., Fr. Thompson; Cumberland, C. H. Black; Digby, W. A. Beacon; Inverness, D. F. McLean; Kings, W. H. Woodworth; Lunenburg, E. H. Nichols; Pictou, H. Kennedy; Richmond, Rev. R. McDonald; West Hants, Wm. O'Brien; Yarmouth, S. P. Goudey. Yarmouth county leads in membership with a total of 605. The necessity for the introduction of more traction ditchers and cheaper tile for drainage purposes was advocated by several of the county organizations.

FARM DRAINAGE

was discussed by Prol. B. D. Landels, of the N. S. A. C. Prof. Landels address will be published in a future issue of the Farmer.

ON TUESDAY EVENING

Mayor Gunn in behalf of the citizens of Sydney and Warden Levatt in behalf of the County of Cape Breton and Jacob H. Andrews in behalf of the Cape Breton County Farmers' Association extended hearty welcomes to the visiting delegates which was fittingly replied to by H. W. Corning, M. P. P., Vice-President of the Association.

Hon. E. H. Armstrong, Commissioner of Public Works for Nova Scotia was present and added his words of encouragement as to the progress that is being made in the various industries throughout the Province, a fact which tended towards remunerative prices and increased demand for the products of the farm.

Prof. M. Cumming gave a resume of the histary and growth of the N. S.A. C. and of the good record of the students who have gone back to their farms or on to other professions. He also referred to the crops growing competitions in the various counties and particularly to the interest that men of wealth was exhibiting in the welfare of the young farmers of their native province. He spoke particularly of the Cumberland County contest in turnip growing referred to in our last issue and threw out the hint that offers such as was made last season to Cumberland and Colchester counties would be appreciated from other sources.

THE CONDITION OF THE LIVE STOCK INDUSTRY.

was discussed by John Bright, Live Stock Commissioner for Canada. He put forth a plea for more co-operation among farmers in the matter of stock breeding. The supply of good breeding females was not equal to the demand and consequently it was a mistake to allow such females to go to the block. He strongly advocated the elimination of scrub sires and the more general use of pure-bred sires.

THE TELEPHONE FRANCHISE.

A statement in referenre to the prohibitive rates which the Telephone Company is charging in Nova Scotia was read by C. R. B. Bryan and on motion it was referred to a committee consisting of C. R. B. Bryan, C. P. Blanchard, and S. C. Spurr.

THE ELECTION OF OFFICERS

resulted as follows:—

President—H. W. Corning, M. P. P. Chegoggin.

1st Vice-President—Wm. O'Brien, Windsor Forks.

2nd Vice-President—A. S. McMillan, Antigonish.

Directors—F. W. Grant, Barss Corner; Wm. Murray, Union Centre; Samuel Freeman, Amherst; E. C. Schaffner, Paradise; C. A. Munn, North Sydney.

Auditors—Profs. L. Stevenson and J. P. Landry, Truro.

Exhibition Commissianers—F. W. Foster, Kingston; and H. S. Kennedy, Alma.

GOVERNMENT GRANT TO AGRICULTURAL SOCIETIES.

The methods of allotting the government grant to agricultural societies came up for discussion. It seems that some societies include service fees and bonuses with their regular membership fees when making up their returns. Other societies draw a grant on straight membership fees and do not include service fees. The result has been that all societies do not share proportionately in the government grant. Mr. Fuller was anxious to have the wording of the Act read so that each and every society would interpret it alike and governing themselves accordingly get their fair share of the grant.

After considerable discussion it was resolved to leave the matter with Mr. Fuller for readjustment.

THE CARE AND MANAGEMENT OF SHEEP IN NOVA SCOTIA.

was the subject of an interesting talk by Jas. A. Telfer on Wednesday afternoon. As a practical sheep raiser he discussed the various phases of the industry and gave many valu-

able suggestions on the care and management of the flock.

"STALLION ENROLMENT"

Prof. M. Cumming, and Live Stock Commissioner Bright spoke on the question of Stallion Enrolment. All stallion owners in the Province of Nova Scotia must enroll their stallions at the Truro Agricultural College where they will be classified in three divisions:—Pure breds, Grades and Cross breds or Mongrels. It is now proposed to introduce a stallion inspection act. This matter was unanimously approved by the farmers assembled at Sydney. For the first year or two inspection will be optional but eventually it will become compulsory. Stallion certificates of six kinds will be issued from the N. S. A. C.—Pure Bred Inspected, Pure Bred not Inspected, Grade Inspected, Grade not Inspected, Cross Bred Inspected, and Cross Bred not Inspected.

Commissioner Bright was very emphatic in his denounciation of the practice of allowing scrub sires to run at large and we would not be surprised if owners of such animals wake up some day in the near future and find that a law will be in force that will compel them to keep their scrubs where they belong. The time is near at hand, if we can judge aright, when owners of pure-bred females will not be pestered by stray, breachy scrub sires.

CREAM GATHERING CREAMERIES

W. A. McKay, Dairy Inspector, Truro, addressed the farmers on the dairy business in general and cream gathering creameries in particular. He outlined the methods employed by various styles of creamery managements and the advantages of the creamery over the home manufacture of butter. He also showed oow the creamery may become the centre around which farmers may rally in various lines of co-operative buying and selling. He instanced the work that is being accomplished at Yarmouth, Scotsburn and other dairy points throughout the province. The day of the cream gathering creameries in all dairy sections is fast approaching and in order to be ready for the efficient management of these creameries the Nova Scotia Agricultural College will ere long organize a special dairy school course where young men may qualify themselves for creamery managerships.

ON WEDNESDAY EVENING

S. J. Moore, of the Seed Division, delivered an instructive address on Field Crop Competitions and Seed Selection. He gave a resume of the Seed Control Act and gave definitions of what constitutes good seed. He showed the importance to farmers of growing their own seeds and following a system of selection such as is outlined by the Canadian Seed Growers' Association.

Mr. Moore's address was followed by solos rendered by Miss Greta Richardson, Mr. Musgrove and Miss Reid, of Sydney, which delighted the audience.

Prof. W. S. Blair followed with an address on The Home Vegetable Garden, extracts from which will be published in a future issue of the Farmer.

Prof. L. Stevenson, of the N. S. A. C., gave an interesting talk on Live Stock which was illustrated by lantern slides and keenly followed by the audience. He concluded his address by warning stock breeders against the terrible scourge of bovine tuberculosis

Following are the Resolutions passed at the meeting:—

RESOLUTIONS.

Whereas, the N. S. Provincial grant for the encouragement of Agriculture is to be supplemented by a substantial amount from the Federal Treasury, the same to be extended over a period of ten years and

Whereas, we approve of the present policy re. Provincial and County Exhibitions and

Whereas, there appears to be a need which would be supplied by grouping counties for the purpose of holding district exhibitions.

Therefore resolved, that the N. S. Farmers' Association respectfully urge that the Government of N. S. appropriate the sum of ten thousand dollars for the purpose of establishing five district exhibitions—one at Sydney for Island of C. B.—one at Bridgewater for Lunenburg, Queens and southern portion of Annapolis County,—one at Yarmouth for Shelbourne, Yarmouth and Digby Counties—one in central N. S. and one at Pictou for Pictou, Antigonish and Guysboro counties.

And further resolved, that the society holding a district exhibition be required to equalize transportation expenses of exhibits within the district, beyond a radius of fifteen miles.

Moved by Howard W. Corning.
Seconded by R. J. Messenger.

* * * *

Whereas, the Province of Nova Scotia is to receive a substantial grant from the Federal Treasury for Agricultural Educational purposes and

Whereas, the accomodations at Truro are reported to be inadequate for holding only one short course for the province,

Therefore resolved, that this Nova Scotia Farmers' Association recommends that the Department of Agriculture take steps to provide for holding short courses in five districts in the province viz:—one at Sydney, for the Island of Cape Breton; one at Bridgewater, for Lunenburg, Queens and the southern portion of Annapolis Co.; one at Yarmouth, for Shelbourne, Yarmouth and Digby Counties; one in the Annapolis Valley and one in eastern Nova Scotia.

Moved by Rev. Gordon T. Lewis,
Seconded by S. A. Cook.

* * * *

Whereas, the funds at present available for County Farmers' Associations are inadequate for carrying on institute work successfully and

Whereas, extensive districts are demanding the benefits of Agricultural meetings in their sections and

Whereas, substantial aid is to be given to the province of Nova Scotia from the Federal Treasury for Agricultural Educational purposes.

Therefore resolved, that the sum of one hundred and fifty dollars be given to each County Association in the Province to be expended under the direction of F. L. Fuller, Superintendent of Agricultural Associations and two men to be elected by ballot at the Annual meeting, for each County Association.

Moved by S. P. Gouday,
Seconded by R. Messenger.

* * * *

Whereas, there is need of much more pure bred stock for breeding purposes of all kinds in Nova Scotia and

Whereas, the individual buyer is greatly hampered in buying such stock because of the cost of transportation.

Therefore resolved, that we petition the Department of Agriculture of the Government of Nova Scotia to pay 50 per cent. of the cost of transportation of all such stock imported into the province by residents of the province.

Moved by Hugh Dickson and
Seconded by E. J. Johnson.

* * * *

Wheseas, sheep raising in Nova Scotia has been declining and whereas it is most important that the industry should be revived and

Whereas, one of the most serious causes of decline in the industry is the line fence and

Whereas, the present law in regard to line fences merely specifies that such fences "be at least four feet and a half high, except stone walls and picket, board and wire fences which shall be at least four feet high" (Chap. 93 Section 2 revised statutes 1900 Section 3 and 4) and states nothing in regard to such fences being of such construction as to turn sheep.

Therefore resolved, that the Nova Scotia Farmers' Association assembled at Sydney, Jan. 22, 1913 urge the Government to amend this statute so as to make a legal line fence, when so required by either of the parties concerned, to be one that will turn sheep.

Moved by H. C. McNeil
Seconded by C. Denton.

* * * *

Whereas, under present Legislation the Maritime Telegraph and Telephone Co., Ltd., has a monoply of the telephone service in Nova Scotia and

Whereas, we believe that the said Company is largely composed of stock for which no equivalent has been given and

Whereas, the services of the said Company as enacted is an imposition upon the farming population, making it possible for said campany to earn an enormous per centage annually on its original capitalization.

Therefore resolved, that we the Nova Scotia Farmers' Association assembled in Annual session at Sydney, January 22, 1913, would respectfully petition that your Honorable body would investigate the working and financial standing of the said Company and instruct your Public Utilities Commissioner to demand such rates as shall bear equitably upon the farming population of this Province.

Committee—Chas. R. B. Bryan, C. P. Blanchard, S. Spurr.

* * * *

Whereas, the purchase of a traction ditching outfit seems a heavy expense for a county or company even without duty and with the aid of the present Government bonus of $500 to the purchase of the first outfit in each county.

Therefore resolved, that in addition to the present bonus of $500.00 the government give aid to the extent of five cents per rod of ditch dug by such outfit.

R. J. Messenger
C. R. B. Bryan

* * * *

Whereas, the Government of Nova Scotia has passed an act called the Stallion Enrollment Act, which requires compulsary enrollment and,

Whereas, we believe the said act could be made more effective if the stallions were inspected,

Therefore resolved, that we ask the Government to amend the said act so as to make provision for optional inspection.

Wm. Murray,
Wm. O'Brien.

* * * *

Whereas, it is a lamentable fact that the sheep industry has suffered to an alarming extent because of the depredations of dogs,

Therefore resolved, that this meeting of farmers put themselves on record as being in favor of a statute placing a eax on dogs, such tax to form a fund which shall be used by municipalities to reimburse any losses from this cause.

Moved by C. P. Blanchard.
Seconded by C. H. Denton.

(Continued on page 318)

Members of the 1913 Nova Scotia Farmers Association Convened in Sydney on Jan. 21st and 22nd.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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FEBRUARY 11, 1913

DATES OF ISSUE.

February 25
March 11-25

PROPER AIM IN BREEDING

Breeders seem to be satisfied with producing animals of individual merit; they seem to reach their goal with an individual that answers to the requirements of the score card. But to secure individual merit in breeding is a comparatively unimportant matter as compared with the chief aim, which should be in the mind of every breeder. It is not enough to produce animals with striking individual merit, to breed occasionally an animal that answers to the requirements of the score card. The thing mostly desired is the capacity uniformly to beget animals of high individual merit. The capacity for meritorious production is worth infinitely more than individual merit.

The breeders of dairy cattle have begun to recognize this fact and have developed certain families of uniformly high capacity for milk production. Members of these families command the highest price in the market. It would be absurd to award the highest premium to a dairy cow on the sole ground that she conformed to the requirements of the score card, without any regard to her capacity for milk production. The highest awards should go to the greatest uniform producers without regard to their conformity to score card standards.

It is freely admitted that a high rate of production is usually found in animals that most nearly conform to the requirements of the score card, but this is not always the case. Sometimes the animal that is marked lowest when judged by the score card is entitled to first place when judged by the quality and amount of production. The score card is valuable merely as a means to an end. Producers should put it where it logically belongs, in a secondary place, and award high honors to the capacity for production, which the score card does not always indicate. It is time to begin to award honors to what attains to the supreme end of breeding rather than to what is merely indicatory of it.

What has been said with reference to dairy cattle applies with equal force to the breeding of horses, beef cattle, sheep and hogs. The capacity to produce get of uniformly high individual merit should always receive the highest awards. A good animal of high individual merit is valuable, but if in addition to its high individual merit it has the capacity uniformly to produce animals of equal or greater merit its value becomes multiplied manyfold.

Stock shows will never accomplish the end for which they are designed until the highest honors they bestow are awarded to the sire and dam showing the best of 1, 2, and 3 years of age. Such a principle as this adopted as a basis of awards would lead all exhibitors to try to achieve the supreme end of all breeding by producing families of merit instead if individuals of merit. What the world needs is not so much better individuals as animals with the capacity to produce better individuals. Let awards be so made as to lead to the accomplishment of the supreme end of all breeding, to the satisfying of the great need of the world.

THE SCRUB BULL NUISANCE

One of the most important decisions of breeders of registered cattle, given in the court of justice, was the finding of the jury in the case of Vode vs. Vogan in the Court at L'Original, on Dec. 12th. An action was taken by G. D. Mode of Vankleek Hill, Ont., against his neighbor Vogan, who allowed his grade bull to trespass on Mode's property on May 7th last. When there the bull served the Ayrshire cow Eileen, noted for her large production of milk and fat, she having given in two years 24,581.4 lbs. milk and 1,158.42 lbs. of butter fat. Her best yearjs record was 13,825.7 lbs. of milk and 635.48 lbs. butter fat. Her average test was 4.59 per cent. fat. Eileen holds the second highest Canadian Ayrshire record for milk and first place for butter fat.

Shortly before Eileen was served by this bull her owner was offered the handsome sum of $1,000 for her, which offer he refused. Mr. Mode had been offered big money for her progeny as well, largely on the strength of her record, but as he was desirous of building up a herd noted for production he refused to sell Eileen or her progeny.

The bull entered on Mode's property through Vogan's fence which was in a bad state of repair. After the cow was bred Vogan did not appear to consider the cow damaged to any extent and would not make a settlement. Mr. Mode then entered an action to recover damages to the extent of $500.

Two days were taken up with trial which took place at L'Original before Judge Johnston. A large number of witnesses were called for either side. R. R. Ness of Howick, and W. F. Stephen of Huntingdon, were Mode's most important witnesses on the value of cow and progeny. Mr. Maxwell, counsel for the defence, put up a strong fight, and in doing so belittled the Ayrshire breeds and their records. He endeavored to prove that the calf from Eileen, mated with a grade bull, but of as great value as one from a registered Ayrshire sire. He further tried to show that the values shown by Ness and Stephen were fictitious. Mr. Hall, for the plaintiff, brought out some good points and was ably assisted by R. S. Pringle, K. C., of Ottawa, who acted as counsel. Pringle in his summing up the case before the jury made some strong points and showed by records and statements of the press, that the Ayrshire breed held a high position in the dairy world. He made a strong case and considered the principle involved was most important to breeders of registered stock. Also that records added much to the value of a registered cow.

The jury after being out an hour brought in a verdict of damages to the plaintiff of $50. This with the costs will amount to over $400. As far as we can learn this is the first case of this nature that has come before Canadian courts.

KEEPING THE BOYS HOME

A. B. Wilmot, of the Immigration Department, gives an interesting illustration of how the ready made farm scheme in New Brunswick may be utilized to induce young men to stay at home rather than leave the Province. A Gloucester County farmer had four sons, who had about made up their minds to go away. They were induced to take four farms adjoining each other, and the initial payment was made in accordance with the Act, and these young men will remain in the province. They have ten years in which to pay for the farms. Quite a number of farms have been taken up since the Act went into operation, and there are many inquiries from abroad concerning the terms under which these farms may be secured.

GOOD ROADS

The benefit of Good Highways to the citizens of any community is very well shown in the following extract from the address of Mr. J. A. MacPherson, Chairman of the Board of Highway Commissioners of Saskatchewan, given at the Convention of the Canadian Highway Association in Winnipeg.

"A farm adjoining a good road will sell for a higher price and is worth more than one on a poor road. There is a great advantage in having a farm within reasonable distance of a railway station. So much so is this the case that the matter of the distance from the railway has a very macerial effect on the price of land. Anything grown on a farm has little value unless it can be transported to a market, and many homesteaders look to the improvement of means of communication to give a value to their homes which they have not now. Anything that will facilitate the ready access to market from the farms cannot help but add to their value, and good roads are as essential a part of the machinery for doing successful business in the country as suitable houses, stables and other improvements which farmers recognize as being absolutely necessary."

"So much money is wasted in transportation over bad roads that it is cheaper to improve the roads than to leave them as they are, and money invested in roads will give a return of the greatest dividends."

"In many sections at certain times of the year the condition of the roads prohibits people from getting about and people lose their interest in current events, become dissatisfied and are not in a position to carry on their business with the enthusiasm which is so necessary to make a success of it. Bad roads reacting this way so as to affect all the departments of life and improving the roads indirectly raises the standard of living all along the line."

GET SEED SUPPLY EARLY

Last year hundreds of thousands of dollars were lost to the farmers of the Maritime Provinces through the ignorance, in part, and the avarice of the dealers through selling grain which was entirely unfit for seed purposes. Some of the farmers themselves were to blame by looking for cheap goods. Low vitality seed is expensive at any price. Profiting by the severe experiences of the past season we trust that not one of our readers will again be caught napping. If supplies of seed sufficient for this season's sowing and planting are not available from the home grown grain, take the precaution to get your supply early and from reliable sources, and go forward with a determination from henceforth to grow and select your own seed each year.

EDITORIAL NOTES

Says Sir Thomas Lipton: "Fall in love with your business. Keep away from drink, from theaters, from society, from everything that may distract you until you have made a firm footing, and—be nice to everyone without distinction. Don't take a partner and never accept a loan. Keep a straight name and be on good terms with your work-people. No business can succeed if the employees don't like it to. And advertise all the time. You can't have too much advertisement."

Woodrow Wilson says: "It is a happy circumstances that the pure air of the countryside is beginning to blow through our affairs, that by many means of quick and easy transpartation the farm is being made neighbor to the city, and that the calm thought of the unheeded fields, the thought of men in little hamlets and remote homesteads, is becoming part of the thought of the nation as it never was before. We shall be a happy people only when we are a united people, when class is not set against class, when no man seeks any privilege except the privilege of common service."

Nova Scotia Fruit Growers Celebrate Their Golden Jubilee

The fiftieth annual convention of the Nova Scotia Fruit Growers' Association convened in Assembly Hall, Middleton, N. S., on January 28th, 29th and 30th, 1913.

The hall was filled to the doors with enthusiastic fruit growers, men who realize that the Association has been able to accomplish for their industry during the half century of its existence.

PRESIDENT'S ADDRESS.

S. C. Parker, President of the Association occupied the chair and after the opening prayer read the following address.

Members of the Fruit Growers' Association, Ladies and Gentlemen:

It is customary for the President of this Association, at the opening session to make some remarks, termed by courtesy—The President's Address. For twenty-five years I have been somewhat intimately acquainted with the work of this Association; for more than twenty of these serving as your Secretary. During these years I have been in attendance at every annual meeting, and, poss at all other important meetings of the Association. I would, therefore, ask your indulgent hearing for a few moments, to some reminiscences of past history.

It seems to me that the Association can, with justice, congratulate itself on the progress of this organization and the great fruit industry which it represents. For the half century of its existence this Association has been in the front, organizing and developing the fruit interests of the Province, and to-day the record of the Fruit Growers' Association is the record of fruit growing in Nova Scotia. Twenty years ago the apple industry was in its infancy. We were exporting 50,000 to 100,000 barrels annually. The orchard was a side line of the general farmer. Clean cultivation and cover crops were a myth; spraying was practically unknown. Opportunity for education in fruit farming were entirely lacking. To-day we are facing a crop of two million barrels annually, and five millions in the near future. Indeed, Mr. W. H. Chase, perhaps the best commercial authority in the Province, predicts a crop of five million barrels in five years. Our growers, educated in best methods, equipped with up-to-date machinery, united and determined—realizing that with us it is apples or nothing, are pushing Annapolis Valley apples into all the markets of the world.

This Association is largely responsible for the remarkable advance in facilities for agricultural education. Nearly twenty years ago the Association founded a Horticultural School at Wolfville. This school, which was carried on with much success for twelve years, was organized and managed directly by this Association. The Association then entered on a campaign for further advancement, and after years of discouragement and apathy, succeeded in inducing the Provincial Government to found the Agricultural College located at Truro. This institution, under the vigorous direction of Professor Cumming, has become a mighty factor in the upbuilding of the basic industry of agriculture. During the past year the devoting of the Federal Government Grant to further enlarging and equipping the College, places it in the front rank of institutions of its kind. With the Agricultural College fairly launched, the Association took up the matter of practical work. For five years the campaign was waged with unceasing vigor. Success again crowned the effort and the Experimental Station at Kentville is also the direct result of the work of this Association. The vigor with which development work on the new Station is being pressed by the director, Professor Blair, presage great things for further advance in fruit growing. To those of us who served through this long and hard campaign, the name and figure of R. S. Eaton stands prominent. It is but scant justice to name Mr. Eaton as the always foremost leader in the struggle for advanced agricultural education.

The co-operative movement which is revolutionizing the commercial end of the fruit business is another child of the Association. During the past twenty years co-operation has been taught and promoted by the Association, as individuals and as an organization. In 1897, under the auspices of the Association, a co-operative company was incorporated with a capital of $50,000.00. As specified in the charter the objects of the company were: (1) to erect warehouses, (2) to provide transportation, (3) to regulate shipments; (4) to appoint agents in Great Britain and other markets for the sale of Nova Scotia apples. The men who were behind that movement, some of whom are here today, had the keen business foresight to see the necessity and provide an organization, practically the same as being worked out today by the United Fruit Companies.. Lack of co-operation prevented any sustained attempt at organization under the provisions of the Charter and nothing was accomplished. The people needed fifteen years more wandering in the wilderness and further chastenings by various plagues, to feel more keenly the importance of getting together and doing business. The organizers of the first local Co-operative Society were working members of the Association. The Act of incorporation under which all the local companies are working was prepared and passed through the Legislature by your own Executive. The officers and Executive of the Central Company are, many of them, old and tried members of this body. The Association to-day extends a hearty welcome to the representatives of the Co-operative Companies, and would assure them that we rejoice at the measure of success that is following them. We need you and you need us; let us stand together one and all, for advance work.

The officers of the Association have been strong men. My first recollection of its meetings, was with J. W. Bigelow in the chair. For twelve years Mr. Bigelow was a live wire President. He gave freely of his time, money, and trained business ability, in founding on a broad, substantial basis the future of the Association and the fruit industry of the Province. The commercial fruit business of Nova Scotia owes much to J. W. Bigelow. I would record here, also, the name of R. W. Starr, who gave me my first lessons in Associational work; and whose life and efforts for the past fifty years have been largely devoted to unselfish work in advancing and upbuilding the fruit interests of this Province. There were many others, some of whom are here to-day, and many not now enrolled with us, whose names are on "The Great Scroll up Yonder," but whose memory is fragrant.

So much for the past,—what of the future? We are at a crisis in the history of the Association—at the parting of the ways. It has been said we will be growing five million barrels in 1918. What will we do with them? Fruit growing has become fashionable. An enormous increase in apple production is coming, the world over. Ontario and New York are cleaning up their old orchards and planting new trees by the thousands.

Officers of the Nova Scotia Fruit Grower's Association for 1913.

Reading from Left to Right—S. H. Trenholm, Asst.-Secretary; A. E. McMahon, Director; M. K. Ellis, Secretary; Prof. M. Cumming, Prof. W. S. Blair, S. C. Parker, President; F. W. Bishop, Vice-president; A. C. Starr, S. B. Chute, F. H. Johnson, Directors.

British Columbia and the Pacific States are spending millions of dollars in developing and advertising great fruit ranches. New Brunswick and the New England States are preparing for a great increase in production. The export to British and foreign countries from all ports is about two and one-half million barrels annually. We can supply all that and then must seek new worlds to conquer. The fittest will survive! The Annapolis Valley is destined to supply the export apples of the world. We have cheap land, cheap labor, cheap transportation.

British Columbia is selling land at from one hundred to five hundred dollars per acre, no better than can be bought here at from ten to fifty dollars. Labor costs them fifty per cent. higher than our prices. Transportation to British markets costs them one dollar per box; it costs us one dollar per barrel. Nova Scotia apples this season have sold in every province of Canada, in Great Britain and Germany, in South Africa and the islands of the sea. Local markets, formerly undeveloped, under the working of the United Fruit Company are taking tens of thousands of barrels. To take advantage of our opportunities we must make a great advance in quality, we must grow better apples, the day of the No. 3 has passed. There is no royal road to success in fruit growing. I am painfully aware that the very honorable position of President of this Association affords no immunity from apple scab. Good apples mean eternal vigilance and intelligent work. The slogan for the coming years should be better apples rather than more apples. If we cannot grow clean apples we will be forced out of the market by our competitors. Intelligent spraying will give clean fruit. If anyone here is inclined to challenge this statement, let him look up and down the Annapolis Valley and he will find orchards, here and there in every section with clean apples, in a wilderness of scab. That intelligent thinning will improve the quality, both in size and appearance is abundantly proven; and men are here today with facts and figures that are incontrovertible. Intelligent handling is another requisite to better apples; there is too much careless handling in the orchard and in the warehouse. Fruit that costs the consumer from three to five cents per pound demands a kind of kid glove system of handling that is not yet developed in this country.

Intelligent marketing of the product is an essential to success. Fifteen thousand growers cannot, individually, handle their product with the same success that a Corporation can. Under co-operation the smallest grower is placed on the same terms, commercially, as the largest. We have the United Fruit Company, a machine, that with intelligent working will revolutionize the problem of greater markets.

You will allow me a personal word in closing. I would take this opportunity of thanking this Association for the confidence reposed in me during my long official connection with the organization. I have enjoyed the work, and done what I could for the upbuilding of the fruit industry. I wish also, and I think now I can speak for the Association as well, to thank the officials and staff of the Departments of Agriculture, both Federal and Provincial for their constant assistance and advice in all times of need. In this general statement, it is no invidious distinction to name Principal Cumming, Secretary for Agriculture for Nova Scotia, who is always ready for anything that promises advancement to the fruit interest.

The Fruit Growers' Association is a splendid body of men, whom it is an honor and a privilege to serve; and with whom I hope in a private capacity still to continue in the promotion of our common business.

DIRECTORS' REPORT ON YEAR'S WORK

1912 has undoubtedly been a live year in the annals of the Nova Scotia Fruit Growers' Association. The great crop of 1911 seemed to give everything connected with fruit growing an optimistic feeling, and this feeling has been well exemplified this past season in the forward movement of the "Brown Tail Moth," the "Black Spot" and the Co-operative Company's campaigns.

Strange indeed, if among such stirring times, our Association did not soon feel life moving in its ancient veins and realize that if it wished to stay in the van of progress, it was time to arouse itself.

An effort has been made during the year to enroll a large number of members with some measure of success, there being 108 annual subscribers. This number is still ridiculously small in comparison to the number in our province engaged in fruit grow-

ing. A live Association should have at least 500 members to make an aggressive working body.

A quarterly meeting was held on April 12th, at Kentville to receive the report of our delegates to the Fruit Conference at Ottawa, and to listen to an address on Co-operative Fruit Companies by John N. Chute, of Berwick. A full account of this meeting is found in our last annual report.

In May, Inspector Saunders reported the finding of live San Jose Scale on imported nursery stock, and at the request of Principal Cumming, a special meeting of our association was called on June 2nd to discuss the situation. The recommendations made at that meeting were immediately put in force by the provincial government and a thorough examination made as far as possible, of all imported nursery stock. This examination revealed a state of affairs, the seriousness of which can hardly be over-estimated. Live Scale was found in almost all parts of the Valley, on nursery stock from Ontario, of the past three years importations.

The inspectors, armed with the necessary authority destroyed over 600 young trees during the summer and have made as careful an examination as possible, but it is too much to expect, knowing the minuteness of the pest, and the wide area over which it has spread , that all danger has passed.

We believe that it is the intention of the Provincial Government to push its campaign against the Scale with even greater energy during the coming season, and we can only hope and pray that their efforts will be crowned with success, for it is our opinion, in the light of the experiences of other fruit districts, that if this pest ever becomes established in Nova Scotia, one of the greatest blows possible will be dealt our horticultural interests.

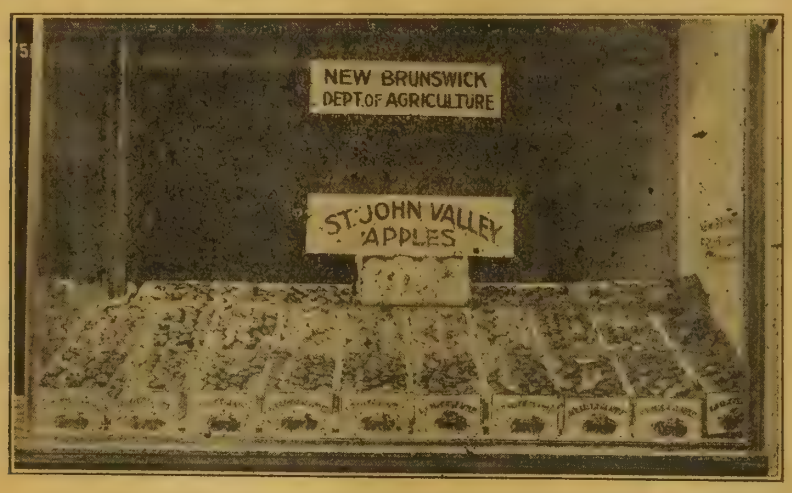
The fruit sections of Nova Scotia produced a bumper crop of plums and pears this past season, but prices were very low. Strawberries were only half a crop but apples, while not up to the record breaking point of 1911 still exceeded any other previous year. With much rain all through the growing season and general neglect of the spray pump we had conditions most favorable for fungus growth, and as a consequence great loss was caused to the whole community by the rvages of black spot.

That our industry cannot grow in proportion to our great natural advantages is evident in the light of last season's experiences unless our orchards are conducted on better business principles, and spraying for fungus control carried on every season as an assurance against black spot. Literally hundreds of thousands of dollars have been lost this past year on account of this neglect, and while the lesson is a costly one, it will not be a bit too severe if by it we learn that spraying must be accepted as a part of orchard practice that cannot be neglected. With this lesson of 1912 in mind your directors have secured at considerable expense Prof. J. P. Stewart, of the Penn. State Experimental Station to address the Association on the latest discoveries of science on how to control fungus diseases. Prof. Stewart's reputation speaks for itself, and armed with the knowledge he can give us, we should be able to combat our enemies in this line better in the future.

In August our association was honored by a visit from the minister of Agriculture, the Hon. Martin Burrill. He was taken with Mrs. Burrill for a twenty-five mile ride through some of our best fruit districts, and in the evening he addressed our members in the Court House at Kentville. At that meeting a petition was read asking the Minister to lease for spraying and other experimental purposes four full grown orchards each 5 acres in extent in different parts of the Valley to be conducted in connection with the Experimental Station at Kentville, on which there was no orchard now available. The Minister promised to give this request his consideration, and at a later date the Secretary received a letter from the member for Kings, Mr. Foster, stating that the Department of Agriculture had agreed to lease three orchards, one situated in each of the three counties of Hants, Kings and Annapolis for the purpose asked for by the Association.

During August one orchard meeting was held under the auspices of our Association at the farm of Isaac Chipman, near Kentville. This meeting was very largely attended and after observing the beneficial results of careful spraying, the members listened to impromptu addresses in the open air by Principal Cumming, Prof. Blair, Prof. Shaw and Mr. W. H. Woodworth.

A general meeting of fruit growers was called in October by the Secretary for Agriculture, on behalf of the Government to learn the wishes of the fruit growers in regard to regulations dealing with the importation of nursery stock. This meeting was very largely attended by representatives of all the fruit growers and fruit companies in the Valley as well as by several members of the Government. The opinion of the meeting as expressed in a resolution was immediately put in force by orders in council, and required that all nursery stock from districts known to be infested with San Jose Scale, imported into Nova Scotia shall have attached to it a certificate stating that the nursery had been examined by a government inspector between May 15th and September 15th of the previous



The New Brunswick Department of Agriculture Apple Exhibit in Montreal.

This is only one of the methods whereby the Department is popularizing New Brunswick grown fruit.

Shop by Mail at Scroggie's

We prepay transportation charges on all orders of $5 and over in Quebec, Maritime Provinces and Ontario except north and west of Sudbury and Sault Ste. Marie.

A-Z-1—Fine Lawn Waist, Women's Waists, attractive, semi-tailored, style very popular just now; made of finest quality sheer white lawn; front has dainty embroidery and fastens with pretty round pearl buttons, front and back; has rows of tucking, linen collar and cuffs. Sizes 32 to 44. Our Low Price **98c**

A-Z-17

WOMEN'S RAINCOATS

Special—A handsome new style coat, and one of the best values we have seen this season, made of good quality Paramatta cloth. Colors: Fawn and tan. Close-fitting collar. Loose - fitting back. Sizes: 32 to 42. Our Low Price

$4.98

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Exceptional Value in Men's Suits at $9.95

Suits that are very dressy, and will give excellent wear and satisfaction. They are made from fine English Tweeds in the fashionable brown and grey mixture, showing faint thread shapes, cut in the latest single-breasted sack style, with nicely shaped shoulders and lapels, tailored and finished in the very best possible manner; sizes, 34 to 42. Special value—

$9.95

A-Z-3. — Women's Skirts — Made of good quality Panama cloth. Colors or navy, attractive style. Waist band 23 to 29. Length, 36 to 43. Price.. **$2.98**

A-Z-4.—Near Silk Petticoat—Splendid new style, made of fine quality near silk, shirred flounce, edged with pleating, colors, black, navy, brown and green. Our low price.. **$1.25**

A-Z-8
A BAG SPECIAL

A special purchase of 500 only of real leather hand bags in seal grain effect, having a nine-inch frame, silver plated, nicely leather lined, small inside purse and flexible handle, wonderful value **$1.00**
Only 500 in lot. Order early.

A-Z-9 **Easter Footwear at Exceptionally Low Prices when Quality is Considered.**

Ladies' Boots, made on the newest American lasts; style and fit perfect; in tan, calf, gun metal, patent colt, with plain toe and cravenette top, button and lace; styles Cuban heels; sizes 2½ to 7. Special .

$2.98

A-Z-6 —Scroggie's Famous Glove Values the Wonder. Ladies' washable chamoisette Gloves, 2 dome, in white and natural shades; sizes 5½ to 7½, for, per pair **25c**

A-Z-7— Scroggie's Famous Gloves for Easter, greatest value in Canada. Ladies' fine quality Kid Gloves, beautiful soft skins, with two handsome domes, and neatly stitched backs; good value for 79c. Special Easter Offer at **59c**
All sizes; colors, tan, brown, white, black, etc.

Our New Spring Style Book will be ready for mailing soon. Copies will be sent free on request. Write for one. It's the greatest ever published.

W. H. Scroggie Limited ORDER TO-DAY. Montreal

Watch Them Grow

—the vegetables and flowers and field crops that spring from Ewing's Reliable Seeds!

They are lusty and vigorous, true to name and strong in the qualities that make each particular variety popular.

The new 1913 Catalogue of

EWING'S RELIABLE SEEDS

offers a selection that cannot be beaten—the good old favorites, and all the new and improved varieties that have made good.

Write for this Catalogue—it will certainly help you to choose the right seeds for bumper crops next year.

Then, if your dealer cannot supply you with the Ewing's Seeds you want, order from us direct.

WM. EWING & CO.,
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McGILL ST., MONTREAL.
28

SPRAYERS

for large or small orchards, market gardens, potato farms, grain, mustard, tobacco, home and garden work, poultry plants, whitewashing, cleaning, cold water painting, etc. From *Bucket, Knapsack* and *Barrel Sprayers*, to *Traction* and 50, 100, 150 and 250 gallon *Power Sprayers*—complete or in part to build up Sprayers already in use. Combinations

$4 to $400
(Now made in Canada)

They have outside pumps, no corrosion. Unit sprayers, so you can build bigger when necessary. Ask your dealer to show them and write for new booklet, "*Spraying Vines, Trees* and *Bushes*." We also make full line potato machines, garden tools, etc.

IRON AGE

The Bateman-Wilkinson Co Limited
434 Symington Ave., Toronto, Ontario

Do you know that more real danger lurks in a common cold than in any other of the minor ailments? The safe way is to take Chamberlain's Cough Remedy, a thoroughly reliable preparation, and rid yourself of the cold as quickly as possible. This remedy is for sale by all dealers.

year, and found apparently free from scale, and as a further precaution, all such nursery stock was required to enter the province through either Truro or Middleton where it will undergo further examination and fumigation.

No one can doubt but what our industry, in spite of many drawbacks is making rapid progress, and in this, one of the greatest factors is the work of the co-operative companies. Their growth has been truly phenomenal. The first company starting some five years ago with twelve members has now increased to thirty-five companies with over 1500 members, and an organization that already dominates the marketing end of our business to the advantage both of consumer and producer.

Only one other farmers' organization in Canada, the Grain Growers' Grain Co., of Winnipeg, can compare with our Fruit Companies in its rapid growth from small beginning, and as the Grain Growers' Company would never have been formed had it not been for the lessons taught and principles established by the early Grain Growers' Association so we can properly claim the co-operation fruit business as a child of this Association and see expressed in them the natural result of the work and educative influence of those noble men who founded and worked for the Nova Scotia Fruit Growers' Association during the fifty years of its existence.

Recognizing that our Association can both help and be helped by these more practical fruit companies your directors have invited each co-operative company to send three delegates to represent them at this meeting. From this source we hope to gain new strength that we may be able to grapple with the new responsibilities each year brings for us.

There has been brought forcibly to our attention during the past year the importance of securing a large grant from the Provincial Government, if our Association is to make the progress it should to keep abreast of the times. Quebec, with a tenth of our horticultural interests allows its Fruit Growers Association a grant of $500.00 and prints the Annual Report. This matter will be taken up later in the meeting in the form of a resolution which I hope will merit your support.—Manning K. Ells, for the Directors.

After the reading of the Presidential address and Directors' Reports Messrs. R. S. Eaton, R. J. Messenger and Capt. C. O. Allen were appointed a committee on addresses and resolutions.

THE SAN JOSE SCALE SITUATION IN NOVA SCOTIA.

was then ably presented by Dr. Robert Matherson, of the N. S. A. C., who gave a full history of the life cycle of the Scale, its injury to trees, its introduction into the United States and subsequently into Canaha and on to Nova Scotia. The method whereby infection is spread from one district to another is usually on nursery stock. Although nursery stock coming into Nova Scotia is supposed to be fumigated the operation had been carelessly attended to in some instances and consequently some live scale had been introduced from infested Ontario areas during the past few years. The pest, was first discovered in Nova Scotia by Mr. Saunders, of the Department for Agriculture.

He also outlined the plan of campaign inagurated by Dr. Hewett and Prof. Cumming re discovering the extent of the scale infestation in Nova Scotia. A list of nursery stock imported into the province during the past three years had been procured and the plantings had been inspected and where living scale were in evi-

(Continued on page 306)

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Bowker's Fertilizers

They enrich the earth and those who till it. Fertility plays such an important part in profitable farming that no farmer ought to take chances with his fertilizer. A reliable company and a high grade brand mean full value for the money, a full ration for the crop, and a full return at harvest time.

Bowker's Fertilizers are soluble, active, sure. They are backed by forty years of experience, the best materials, the best facilities and prompt service. Suitable for every crop and adapted to every pocketbook.

We want Agents in unoccupied territory. Write today for prices and terms; this may mean a good business for you if you act at once.

Write anyway for our illustrated catalogue and calendar before you buy your spring fertilizer. We want you to know what we can do.

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Original and largest manufacturers of special fertilizers.

Eddy's Matches

MADE ON HONOUR,
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AT ATTRACTIVE PRICES
AND FULL COUNT.

ALWAYS EVERYWHERE IN
CANADA, ASK FOR EDDY'S.

MADE IN THE BRITISH EMPIRE. MADE IN CANADA. MADE IN HULL

MAPLE EVAPORATORS

TO THE LIVE FARMER OUR PERFECT MAPLE EVAPORATORS AND A SUGAR BUSH CAN BE MADE TO PRODUCE A REVENUE WHEN IT IS MOST NEEDED.

With our Maple Evaporator, sap is easily and economically converted into the finest quality maple syrup.

The body of the perfect evaporator is made of heavy sheet steel thoroughly riveted and braced with steel angle and fitted with cast iron door and faame.

The working of the evaporator is very simple—put the sap in at one end and it comes out syrvp at the other.

Send for illustrated catalogue.

Steel Trough & Machine Co., Ltd., 9 James St., Tweed, Ont.

It Pays to Advertise in the Maritime Farmer.

DAIRYING.

Co-Operation Between Factoryman and Patron.

Agriculture and its products, such as dairy produce, is the most important division of Canadian Commerce, and organization is the unit of commercial success. Therefore, we must have organization in development of our agricultural commerce. Organization has developed so rapidly and naturally in other trades, or industries, that they are now in highly organized condition, but agriculture has remained unorganized until very recently because its capital is divided among and controlled by a large number of capitalists. In other industries the capital is owned and controlled by few capitalists.

Another reason is because the farmer lives and works outside the commercial cities and this has given rise to the middleman who can cater to the wants of the consumer to better advantage than the farmers, they being isolated from one another as well as from the consumer. Without organization, the farmers do not know one another well enough to intelligently direct their production. Thus the middleman, by knowing the wants of his customers and where the article is produced, can go directly and procure it, the farmer being glad to sell, or he can take his various products grade and classify them and ship them to a ready market. Therefore, the middleman is a benefactor and is here as a necessary evil but his proper place is that of an agent rather than that of a director or master. He has helped to organize agriculture to a certain extent by working to secure the results of organization for his own benefit and to his own advantage, but this presently leads to the control of the production and the farmer gradually loses his independence and becomes a mere tool in the hands of the middleman.

Why cannot the farmers have their own organizations and thereby secure the advantages of organization for the farmer and shortly become master of the situation by drawing the farmers closer together under a common bond of community interest also placing him on a financial basis with his city brother. Lastly but not least, by having their own middlemen, directly controlled by and responsible to the farmer.

Many forms of organization have been tried, such as joint stock farming, which has failed to produce the desired effects, and the combine which has met without success. Out of the many forms which have been tried there is but one which has passed through the successive stages of experiment and proved its adaptibility to many countries, such as Germany, Denmark, France, England and Canada, and this form is direct co-operation between farmers.

To explain the co-operative idea, I will quote from C. R. Fay's "Co-operation at Home and Abroad," in which he defines co-operative society as "an association for the purpose of joint trading originated among the weak and conducted always in an unselfish spirit on such terms that all who are prepared to assume the duties of members may share in its rewards, in proportion to the degree in which they make use of their association." Is this form not feasable in working out our farm organization? It has proven satisfactory in many places, why have we not proceeded with it? Is it because, as some might say, we are pig headed, disloyal or distrustful? No, I think not. It has been for other reasons.

There have been so many resources and openings that we have not been driven to co-operation but that the day is near when we shall be obliged to co-operate to a greater extent. Another, and the greatest reason, I believe, is the lack of education. Why should we not direct our attention to this cause and remedy it as quickly as possible.

In discussing this sunject of co-operation between factorymen and patrons, I shall take up in brief the factory which I am representing, namely the Cumberland Co-operative Creamery Co., Ltd., which is purely co-operative, owned and operated by the patrons and can be used to their best interests as they see fit. In this case there is no factorymen or middleman except the maker, who is hired by the patrons and is at their disposal.

Considering the fact that most of our factories are not purely co-operative, I shall discuss some points in which factorymen and patrons can help one another.

There can be little doubt that there is a lack of understanding between the factory man and the patron which could be largely overcome to the advantage of both parties through better co-operation. The patron takes little interest in the maker except to see that he does not give him a few pounds less on his milk in the morning. While, on the other hand, the maker looks on the farmer as a man who brings so much milk or cream and who ought to bring him a little more of better quality. How are we going to get this large supply of better quality? By more co-operation between the two, especially on the part of the maker or factory man as he has to educate the farmer.

The butter-maker must be a man among men; he must have training, knowledge and experience before he can manage a creamery or factory. The maker's efficiency is gauged by his ability to make good butter, his tact in handling cream haulers and patrons, as well as his ability to transact ordinary business affairs.

The maker has the better opportunity because he comes in personal contact with practically every man and those he does not meet, he sends reports to, and he can make suggestions intelligently because he should have the knowledge and in this way he can help to educate the farmer. There are few farmers who would not try to do better if they had the knowledge, so it is up to the factoryman to spread the good news as far as possible and get more business to pay for it.

There are different ways in which knowledge can be spread from the factory to the farmer and the factory man should be only too glad to do it. It can be done by sending out pamphlets of literature along dairy lines, such as care of cream, cow feeding, etc., also by dairy meetings where talks are given on certain subjects and also by demonstration. If a farmer fails to improve his quality when it gets out of order, go to his place and try to find out the cause of the bad flavor or whatever it is, point it out to him in a reasonable way and, if it is carelessness and he refuses to remedy it, you will have to drop him. He will soon see his mistake.

Let me suggest that you take a little more interest in the returns of every man who is shipping to you; show some interest in them for that is a wonderful help to the farmer. A good maker can work wonders by speaking encouragingly to the farmer. Let him compare his results with some of his neighbors in a respectable, unprejudiced way. It is not so much the man who is sending in the large amount that you want to keep

International Stock Food

79

DON'T let your horses run down during the winter and get so soft that they will lose flesh badly when you start your spring plowing. If horses are not worked regularly during the winter, they need the splendid tonic effects of INTERNATIONAL STOCK FOOD, to tone up the digestive organs, enable them to get all the good out of their feed, prevent the blood from becoming overheated, and thus ward off disease.

LANGHAM, SASK., Jan. 26th. 1912.

"I have fed INTERNATIONAL STOCK FOOD for many years. I always have a 25 pound pail standing in my barn. I bought a pair of three year old colts and they were so worked down that my neighbors said I had been beat. When I bought the colts, they weighed 2400 lbs. I ploughed 25 acres and they weighed 2650—then I harvested 163 acres and threshed and hauled one carload to town, 6 miles, I weighed them again and they weighed 2850, and I said "They shall weigh 3000 before spring". Now, the Neighbors want to buy them but there's no chance". J. G. REMPEL.

For sale by dealers everywhere. Our $3,000.00 Stock Book—sent free when we receive your name and address. INTERNATIONAL STOCK FOOD CO. LIMITED, TORONTO.

The DIABOLO
Cream Separator

The factory in Sweden which produces the DIABOLO makes the best separators in the world today, and the Diabolo is at the top of the class for quality. We guarantee it in every respect unexcelled by any other make of machine.

Cleanest Skimming **Lightest Running**
Easiest to Clean **Finest Material and Workmanship**

Patent Self-Balancing Upright Blade Device in Bowl arrangement is superior to all others.

Notwithstanding the high grade of this machine, the enormous output enables it to be placed on the market at prices away below those of any other high grade machine.

Price No. 1, 300 lbs. - **$35.00**
Price No. 2, 550 lbs. - **55.00**

Do not make the mistake of placing your order until investigating the merits of the DIABOLO.

Agents wanted in every locality

The BAILEY-UNDERWOOD CO. Ltd., New Glasgow, N.S.

Ask a Hundred Creamery Men

what salt they use. Ninety-nine out of the hundred will tell you "WINDSOR DAIRY SALT". They have tried it out, under every possible condition, and they know that

WINDSOR DAIRY SALT

gives the best results, every time.

It dissolves evenly, works in quickly, and blends perfectly with the butter, giving a delicious, appetizing flavor.

The prize butter-makers of Canada—without exception—use Windsor Dairy Salt.

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HIGH CLASS

JEWELRY

18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....**68 cents**

18k Rolled Pendants, worth $3.00, our price..... ....**99 cents**

Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....**$1.36**

Boys Watch..... .....**69 cents** nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
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45 YEARS OLD AND THE LAST YEAR THE BEST OF THE 45

The same enterprise, earnestness, ability and devotion to students' interests which have given this college its present standing, will be continued and every effort made to be worthy of the generous patronage enjoyed.

Next term will begin Thursday, January 2nd. Send for Catalogue.

THE ST. JOHN BUSINESS COLLEGE

S. KERR Principal.

at, it is the small producer who could produce a lot more, although a few words to the big fellow will not come amiss. If you can gain the good will of the farmer and get interested in him, you will be doubly paid in the long run.

Do some testing for him, get him interested in cow testing associations, records, use of the scales in the dairy stable as well as in the factory. This is not all for the sake of the farmer but it is also for your own sake and I believe you will not be doing any more than your duty.

Are there not times when the factory man could handle feed, seed or fertilizer at a small margin to the advantage of both? They can also act in some cases as collectors of farm produce, such as potatoes, and put them on the wholesale market.

Learned professors, Ministers of State, economists, parsons and men of business, all who have had an opportunity of judging by their own eyes join in the chorus of laudation.

Foreign governments are steadily encouraging institutions of co-operative enterprize.—R. L. Rutherford, B. S. A., River Hebert, N. S. at the recent Dairymens' Convention, Truro, N. S.

Short Courses in Fruit Growing

N. B. Provincial Department of Agriculture has arranged to hold a series of short courses in fruit growing, each of two days duration, as follows:—February 3rd and 4th, at Keswick Ridge; February 6th and 7th, at Fredericton; February 10th and 11th, at Burton; February 13th and 14th, at Gagetown; February 24th and 25th at Central Hampstead; February 27th and 28th, at Brown's Flats and March 4th and 5th at Moncton. Short courses may also be held at one or two other places, if demanded. The following programme will be closely adhered to:

FIRST DAY.

9. a. m.—The Outlook for Fruit Growing, A. G. Turney.

9.30 a. m.—Address on Box Packing of Apples, R. P. Gorham.

16 a. m. to 12 a. m.—Practical Work in Box Packing.

2 p. m. to 5 p. m.—Practical Work in Box Packing.

8 p. m.—The Fruit Marks Act, S. L. Peters.

8.45 p. m.—Insect and Fungus Pests of the Orchard and How to Control Them, R. P. Gorham.

9.15 p. m.—The Selection of Nursery Stock and Planting of Orchards, A. G. Turney.

SECOND DAY.

9 a. m.—Demonstration of Barrel Packing of Apples, S. L. Peters.

15 a. m. to 12 a. m.—Practical Work in Box and Barrel Packing.

2 p. m. to 5 p. m.—Practical Work in Pruning in Orchard (weather permitting) or Box Packing.

8 p. m. to 10 p. m.—Question Drawer and Discussion of Subjects as Desired by the Class.

Alterations in this programme will be made to permit the discussion and treatment of other phases of fruit growing should the class so desire.

These courses will be in charge of Mr. A. G. Turney, Horticulturist, assisted by Mr. R. P. Gorham, Assistant Horticulturist, and Mr. S. L. Peters, Dominion Fruit Inspector. Every effort will be made to render these courses as practical as possible and a large portion of the time will be devoted to pratical work in box and barrel packing and pruning. It is to be hoped that the fruit growers in the districts where these courses are to be held will show their appreciation of this interest in their behalf by attending in good numbers and co-operating with the instructors in maving the movement successful.

8500 Revolutions Per Minute

THAT is the wonderful speed at which an I H C separator bowl turns. The rim of a six-inch bowl, running at separating speed, is traveling at the rate of nearly two and a half miles a minute, faster than the swiftest express train that ever ran. Such speed as this means strain on shafts, bearings, gears, frame, in every part of a separator, such strain as can only be rendered harmless by the nicest adjustment of strength, flexibility, and quality of material and workmanship. The business of a cream separator is to skim the butter-fat from whole milk, but to do this it must be made mechanically right, or it soon ceases to be useful as a separator. The machine that meets these conditions and sells at the right price is an

I H C Cream Separator Bluebell or Dairymaid

I H C separators have that carefulness of adjustment and balancing of moving parts which make for durability and easy running.

There are points in the construction of I H C separators, such as the heavy phosphor bronze bushings, trouble-proof neck bearing, cut-away wings, dirt and milk-proof spiral gears, etc., which make I H C separators, beyond any doubt, the best of all to buy. There are four convenient sizes of each style. Ask the I H C local agent for demonstration. Get catalogues and full information from him or write the nearest branch house.

CANADIAN BRANCH HOUSES

International Harvester Company of America
(Incorporated)

At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton

Waterloo Boy Cream Separators Are Good Separators

and you need one if you have the milk of even a single cow. You are wasting quantity and quality of product every day you go without one.

This waste is greatest in cold weather and it counts most of course when butter is high. Then with a separator there is always the warm, sweet skim milk and saving of time and labor in addition.

When it comes to a choice of separator Waterloo Boy superiority is now universally recognized. Those who "know" replace the other separator with a Waterloo Boy later, thousands of users are doing that this year. If you already have some other machine the sooner you exchange it for a Waterloo Boy the better. See and try a Waterloo now while you have plenty of time.

SUSSEX MOTOR CO., LTD.
SUSSEX, N. B.

Agents wanted for our full line of Cream Separators, Gasoline Engines, Woodcutters, Grain Grinders, etc.

Nova Scotia Fruit Growers Celebrate Their Golden Jubilee.

(Continued from page 303)

dence the trees were destroyed—no fewer than 723 trees have already been destroyed.

Dr. Matherson also gave the full list of nursery firms from which destroyed trees had been imported and the number of destroyed trees which came from the respective nurseries during the seasons of 1910, 1911 and 1912.

The resolution passed last summer by the Nova Scotia fruit growers in special session at Kentville and finally made a Provincial Act by order in Council, enacting that all nursery stock imported into Nova Scotia must be brought into the province through the entry ports of Truro and Middleton where trees must be thoroughly fumigated and which prohibited the importation of stock, from nurseries not showing a certificate of a clean bill of health, signed by a Dominion nursery inspector between the dates of May 15th and September 15th preceding, was a thorn in the flesh of the Upper Canada nurserymen, who are leaving no stone unturned to secure some leniency so that they may ship fruit trees to Nova Scotia this year. The Nova Scotia Fruit Growers do not want any more Scale than they have at present and backed up the Department for Agriculture and the Act by unanimously passing a strong resolution asking that the Act be enforced to the letter.

Dr. Matheson concluded his address by asking the fruit growers to do their duty in assisting the department to locate infested trees and combat the pest by carefully spraying trees with lime-sulphur at the right season.

SOME IMPORTANT POINTS IN BOX PACKING.

Prof. W. Saxby Blair of the Dominion Experimental Station, Kentville, gave a talk on "Important Points in Box Packing." The dimensions of box and box material were enumerated and reasons given why certain thicknesses and sizes were adopted.

Fruit for box packing must be of uniform growth and color and must be strictly graded. Fruit should be sorted according to size before it was passed on to the box packer. Wrapped fruit gives a neater appearing pack and will keep better as they are not so subject to change of temperature and they can be packed tighter without injury.

The only way to master box packing is to go at it and master the art by practice. Packing is a man's job—a job for a man who could command good wages and work as rapidly as carefulness will warrant.

The style of pack must be governed by size of apples. The diagonal pack had some advantages over the square pack but the chief essential was to get a tight pack. The number of apples contained in a box should be marked on the box.

THE QUESTION OF MARKETING APPLES IN BOXES.

was discussed by R. S. Eaton, president of the Hillcrest Orchards. In his opening remarks Mr. Eaton said that he felt proud that Prof. Blair, a Nova Scotian had come back to advance fruit growing interests in Nova Scotia. It was particularly gratifying to him, as it must be to all fruit growers, that so many of Nova Scotia's educational institutions were being manned by Nova Scotians, who had so ably qualified themselves for their respective positions.

He congratulated Prof. Blair on the showing of fruit, he had at the meeting, packed on the Experimental Station, Kentville.

Mr. Eaton said that providing the orchardist was properly equipped, and his consignees require boxed fruit it was to the fruit grower's advantage to pack his choice and fancy No. 1's in boxes. Box packing requires careful supervision and very soon it becomes a mechanical operation. Much time could be gained by having boxes prepared before the rush season came on. He exemplified the proper method for creasing lining paper for boxes so that it would not be torn on the edges when the top and bottom of box were sprung into position. He also explained how printed labels should be put on to give a neat appearance.

ON TUESDAY EVENING.

Mayor Goucher of the Orchard Town, Middleton, in behalf of the citizens extended a hearty welcome to the fruit growers. Dr. Sponagle, represented the Middleton Board of Trade. Mr. Shaw, of Berwick, made a fitting reply in behalf of the fruit growers.

ORCHARD FERTILIZERS

Prof. J. P. Stewart, Penn. State College, addressed the meeting on the subject of Orchard Fertilizers.

Before tackling his subject Prof. Stewart scored the multiplicity of middlemen as one of the chief causes why growers do not get higher prices for their fruit. Improper distribution and congested markets was another cause. The middleman could easily be eliminated through the adoption of co-operative selling systems and to avoid congested markets it was necessary that only the very best fruit be shipped. In reply to the question, what will we do with our 2's and 3's? Prof. Stewart replied "Don't grow them" and went on to show how by proper systems of cultivation, fertilization, pruning, thinning and spraying it was possible to grow a high percentage of No. 1's and reduce the growth of No. 2's and 3's to a minimum. His address will appear in a future issue. It was based throughout on the dollars and cents that accrue to the fruit grower as a profit on his investment. Every orchardist must ask his trees certain questions and on their reply must hinge the kind of treatment received by them for better results.

THE FINANCIAL STATEMENT

was the first number on the program, Wednesday morning. It showed receipts including last year's balance ($306.16) of $800.11. Expenditures—$546.80 leaving a cash balance on hand, Jan. 14th, 1913 of $253.31 which was vouched for as correct by J. Elliott Smith and W. M. Black, auditors for the Association.

THE ELECTION OF OFFICERS

resulted as follows:—

President—S. C. Parker, re-elected.
Vice-President—F. W. Bishop.
Secretary—M. K. Ells, re-elected.
Assistant Secretary—S. H. Trenholm, re-elected.
Treasurer—Geo. W. Moore, re-elected.
Auditors—W. M. Black and J. Elliott Smith, re-elected.
Directors—F. H. Johnson, A. C. Starr, S. B. Chute and A. E. McMahone.
Co-Vice Presidents—re-elected.
Publishing Committee—The President, Secretary and A. C. Starr.

THE FUTURE OF OUR HORTICULTURAL EXHIBITIONS.

was the theme of talks by R. J. Messenger and Prof. M. Cumming, which evoked considerable pro and con discussion. Mr. Messenger outlined the past history of Nova Scotia's horti-

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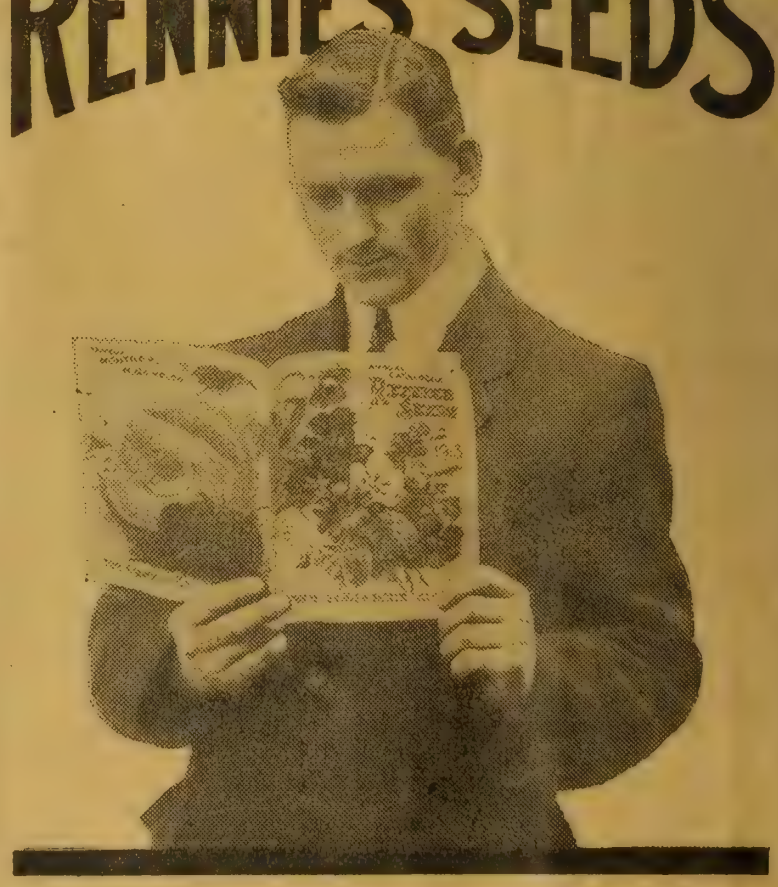

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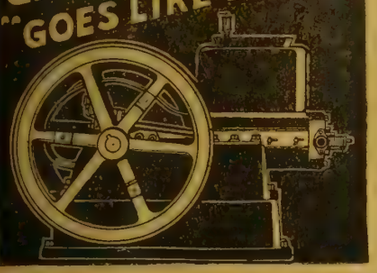

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IS without real serious meaning to many thousand farmers because they think it is too hard work or it is not convenient to work a horse. So many farmers fail to understand what truly wonderful possibilities there are in modern hand tools

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cultural exhibitions which showed that they had fallen into a rut where they were unable to accomplish the result for which they had been originated. He prophesied that the education of the people at home and abroad re Nova Scotia's fruit growing possibilities demands a better exhibition. Nova Scotia's products must be more prominently advertised and until this is done Nova Scotia will not come into her own. Nova Scotia was the peer of all Canadian provinces in point of climatic conditions for fruit-growing and in natural resources, so much so that with due warning her people could be self-sustaining without looking to any other source for their sustenance, yet the province was very little known on account of lack of systematic advertising.

Nova Scotia's fruit required better and more extensive advertising both at home and abroad. The annual fruit show held in the Valley was not accomplishing results—it was only a case of one fruit grower showing his fruit to another fruit grower. While this function produced a friendly rivalry among the growers it did not further the cause of bringing the fruit to the attention of the outside world to any extent. In order to accomplish the latter result, Mr. Messenger recommended that the fruit exhibition be held in Halifax, the principle shipping port and capital of the province. The best way to advertise abroad was to put fruit on the market in the best possible condition. Ordinary products will not do when other countries are putting on exhibitions that are talked of the world over.

Nova Scotia must put on commercial exhibits—car lots of fruit; plate exhibits are a thing of the past. By making these two changes viz. making it of an attractive size and placing where outsiders can see it, some good would surely result.

It was also a mistake to put on a fruit show while fruit growers were busy in their orchards as then it was next to impossible to get exhibitors or spectators.

The exhibits of fruit and vegetables could be selected at picking and harvesting time and the exhibition put on at Halifax in November and allowed to remain then for two or three weevs. The staff of the Halifax Exhibition could look after the Fruit bition. The fruit exhibition should be eliminated from the early fall show at Halifax and the money devoted thereto at present should be utilized in swelling the prize list of the Provincial Fruit Fair, which should be held every third year or oftener if desired. A man should also be appointed to visit various sections of the province and solicit exhibits and cash donations and in other ways assist in placing the fair on a broader basis.

PROF. M. CUMMING

followed Mr. Messenger. He did not wish to be associated with any funcfunctory manner. Fruit-growing was tion that was carried on in a perone of the province's most valuable assets, and fruit growers should ask themselves the question: Are we progressing through the use of present fruit exhibition methods? If not, a change should be made. He concurred with Mr. Messenger in his ideas of a large commercial fruit exhibition at Halifax. He also suggested the idea of taking a portion of the exhibit and displaying it in Sydney and other large consuming centres.

F. S. Cox, editor of the Middleton Outlook, strongly advocated the continuance of the Valley Show. He also thought the government should run a fruit exhibit train from Halifax to Vancouver stopping at the principal towns enroute, on the same plan as farming special trains are conducted.

(Continued on page 314)

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OSHAWA, ONT.

THE HORSE.

How About the Horse?

Will the horse maintain his place, or will he become extinct under the excitement and craze that has taken hold of all classes of people able to own a horse or automobile? A few years ago it seemed that there was room for both automobile and horse, but latterly the automobile has to a very large extent captured the labor and service formerly performed by the horse.

The man who has grown up with the horse and learned to appreciate the serviceable qualities of this animal; the man who is really in sympathy with this feature of God's creation, is very slow to concede his displacement in all that pertains to power and the utility of implement operation. The horse to the horse man, to the horse fancier, is the most convenient thing on the farm or about the place. He is always ready for a trip anywhere, any time, any kind of weather, over any kind of road, day or night, and when you understand the ability of the horse in power and endurance you need scarcely doubt your safe arrival at the end of the road on the trip planned or undertaken.

There are all kinds of horses, however, good horses and bad horses, There is only one kind worth owning and keeping—the good, well-bred, serviceable horse, for saddle, harness or work purposes. This implies three types of horse generally, though the former two qualifications may be found in the same horse—the riding horse and the buggy or carriage horse. The draft horses, or some of his crosses, comprise the horse fitted for all kinds of power labor on the farm or to the heavy load on the road.

To the horseman, to the lover of animal life, what can take the place of the well-mated, stylish, finely-equipped driving team, full of animation and spirit, almost akin to human existence? There is an unconscious animation creeps into the soul of man when he pulls the reins over such a team that no inanimate object or device can ever suggest or convey. The fine driving team, the single driver, the real saddle horse and the steady farm team of all work will be more popular and more sought after within the closing of the next decade than they are today. The horse will live on in the estimation of man and the coming generations will know him, as in the past, the beast of labor, the friend of humanity.

Grey Horses.

Grey horses are of many different shades, from the highest silver to the darkest iron-grey. There are few perfectly white horses met with, and the majority of white horses are those that have become so. Light greys begin to grow white by the time they are five years old, especially if they have not much dark colouring about their joints, and herein lies a danger that the intending purchaser of the gey horse will do well to take into consideration. They are very subject to a special disease, known as melanosis or "black cancer." Melanosis is, with rare exceptions in the grey roan and light chestnut, confined to grey horses, and becomes developed as they whiten with age, the pigmentary matter that used to colour the hair being deposited in tne tumours, and these melanotic tumors, though generally developed under the surface of the tail, and around the anus or vagina, or the perineum, are found in all parts of the body, including the vital organs, especially the heart, liver, and spleen, and are quite incurable.

Without being moved by considerations relating to difficulties in cleaning the grey animal, or keeping him clean, we should strongly advise the horse buyer, other things being equal, to eschew the light grey on account of his liability to disease, for in spite of the old saying that "a good horse cannot be of a bad colour," there are objections to greys.—Pateley Bridge.

The Horses Legs.

A striking change is noticeable in the attitude taken in regard to the hairy leg of the cart horse. It was considered at one time a sign of "faddism" to object to the appendage, and those who pointed out that the hair was a nuisance in the field, and caused great inconvenience and loss of time, were met with the bald statement that "plenty of hair" denoted "plenty of bone," and that the merit more than compensated for the defect. The fact that the hairy leg frequently led to those faults in management which brought about grease and other troubles in the extremities was either ignored or considered to be covered in the foregoing statement. Breeders for exhibition went in, as they do still, for an abundance of "feather," and the greater the amount the better was the exhibitor pleased. We are far from denying absolutely that there is a connection between the feather and the bone, but the method of judging, which has come to regard the hair as the sign of bone, is a bad one when we know that the hair itself is felt to be a drawback. It has led to the artificial encouragement of the feather, to the making much of a feature that may be accepted as a necessary evil, if it be associated with and inseparable from other good points, but which in itself is far from desirable, and it is satisfactory that this view is becoming recognized. Shire horse breeders are finding that there are other breeds of horses in the world, good draught horses, that are preferred because they have clean legs, and that the fact that practical farmers dislike unnecessary trouble with their teams is having its effect on the relative demand for the Shire and the Percheron and Belgian draught horses. Our live stock shows have done much for all British breeds of stock in the past, and may do much in the future; but the trend of public opinion must be taken into account, and any rules or "fads" which result in the depreciation for practical purposes of our animals must be kept in check.—Mark Lane Express.

Carrots for Horses.

Carrots are by far the most suitable roots for horses, and where the land is suitable they certainly pay to grow for winter feeding, when there is nothing green or succulent available. There is not much to choose between the common red and the white Belgian so far as feeding properties are concerned, but the latter is by far the heaviest cropper, and in the eastern counties, Belgian carrots are largely grown for stock feed. With reference to their feeding properties, they rank next to parsnips in albuminoids and to sugar-beet in carbohydrates, and are in all respects superior to turnips, swedes and mangels, and better for horses than any of them. Carrots must not, of course, be made the staple diet of working horses, or be given in excestive quantities, and especially to horses whose work is hard, and performed at a rapid pace, because "hard condition" cannot be maintained on them. They will not replace grain. For sick or idle horses, or those at slow work, carrots may be used more freely. They possess alterative and slightly

Horsemen Attention!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Their use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

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Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

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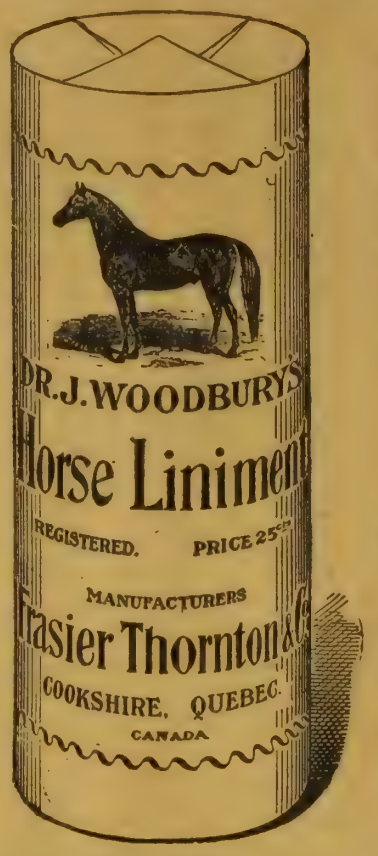

Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

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Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

You Can't Cut Out A BOG SPAVIN, PUFF or THOROUGHPIN, but

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will clean them off permanently, and you work the horse same time. Does not blister or remove the hair. $2.00 per bottle, delivered. Book 4 E free.

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diuretic properties, and are much better and safer than the heavy dose of saltpetre and sulphur that the cater is so fond of giving to his charges when, constantly on dry food, they get a bit "hunchy"! or than the tablespoonful of nitre which he puts into the into the weekly mash under the impression that it is "good for the water." The horse-owner will generally find it more to his advantage to allow carrots than to permit or encourage drugging. Carrots are excellent for horses suffering from chronic cough and broken wind, as well as from eruptive disease of the skin associated with indigestion. A few pieces of carrot will often start a sick horse eating; while, sliced or pulped, and mixed with the grain and chaff, they will often tempt the appetite of the poor or "picksome" feeder. In more ways than one carrots will help the poor hay of the season —rendering the chaff more palatable, and less likely to affect the wind injuriously.

Shoeing the Colt.

The crisis in a colt's foot, says an authority on the subject, is the first visit to the shoer. All the circumstances are usually unfavorable. The youngster has seldom been handled, perhaps never, if a filly, and, after much shouting and rough usage, is brought to the shop, already alarmed before the smith blows up the fire or attempts to lift a foot.

Only the phlegmatic get through this ordeal without a painful recollection and a dread of the forge, which in some instances never passes away. No subsequent kindness and gentleness can ever overcome the fear of a colt that has been hit over the head with a rasp for the offence of not knowing what was wanted of him.

The first shoe should be plain, stamped once, and not thick, and no portion of hoof should be taken away that is not removed in order to seat the shoe. The colt should be accustomed to a shoe which does not extend one fraction beyond the crust, but slightly within it, and he will be less likely to brush or interfere. The first set should not be for business, but for education, and then the wear will tell the shoer how best to shoe him for real work.

On no account should frog or sole be cut away. The health of the foot cannot be maintained in full functional activity if, by the rim of iron we call a shoe, we lift all otherparts of the plantar surface out of action. If the colt is merely shod for breaking in, then, when his lesson has been learned, he should have the shoes removed, if he is turned out again.—New York Farmer.

Horse Topics.

The hollow-sounding or rumbling noise which is made at times by geldings when trotting is familiar enough, but it is surprising how many horsemen are unable to account for it correctly. As often as not it is attributed to internal rumblings in the intestines, but that is utterly wide of the mark. The real explanation is that the sound is caused by the movement of air which is confined, or, so to speak, bottled up in the sheath, and which is alternately compressed and expelled by the violent motion when the horse trots. Possibly those unaware of the real cause may sometimes have wondered why mares never make this noise which is so common in geldings, but the reason for that is in face of this explanation clear enough. Entries rarely emit the sound, the reason being that their sheath is generally of much smaller size than in geldings, so affording less opportunity and room for air to get bottled up therein. The larger and more pendulous sheath is a result of castration. This rumbling noise therefore portends nothing, excepting that sometimes when unusually persistent, it indicates that there is an undue accumulation of sebaceous material at the orifice of the sheath, which it would be well to remove. Such accumulations may occasionally give rise to a certain degree of discomfort. Tne noise itself can usually be prevented by inserting a wad of medicated cotton wool in the orifice when the horse is taken out, removing it again on the animal's return to the stable.

Horse Chat

Many a good colt has been ruined by high living and close confinement.

The all-round general purpose horse is too likely to turn out like most Jack-of-all-trades.

If the colt be given liberal feeding it should be afforded plenty of exercise. The two must go together.

Always remember that the best time to start a colt in the way it should go, both in feeding and training, is when it is very young.

About as much waste matter is expelled from the body of the horse by the pores of the skin as by the bowels, and it is just as necessary to to keep them open as it is to keep the bowels open and in good condition. This means the use of the comb and brush.

A good tool for grooming the horse is a stiff broom with the handle cut off to a convenient length. This affords a good brush that can be brought to bear on the horse's coat and removes, not only a great deal of dust, but makes the coat bright and invigorates the skin.

The driver who whips and kicks and jerks his horse does not get the best results from the grain and hay he feeds them, nor can the horse give its best efforts if it is in constant dread of a blow or a jerk. So be kind to him, build up his confidence in you and try to put flesh on his bones and endurance in his muscles. Always give the horse the benefit of the doubt.

FREE-FARM ACCOUNT BOOK

Bickmore's Farm Account Book will be sent free to any farmer who will tell us who and where he is. This book is arranged to keep all accounts in simple form—more simple and certainly more practical than trying to remember them; shows what to charge against crop production; has a laborers' time record; and section for personal accounts. **64 pages, for ink or pencil.** Not a cheap affair. Its quality is in keeping with **BICKMORE'S** Gall Cure, a soothing, healing salve, the old-time reliable horse remedy. Horses are now too valuable and too high priced to take chances of losing their services. **Bickmore's** Gall Cure heals and cures **Harness and Saddle Galls; Rope Burn, Cuts, Scratches, Grease Heel,** etc. You don't have to lay the horse off. **Bickmore's cures while the horse works.** Great thing for sore teats in cows. The work-horse trade mark on every box. None genuine without it. Be sure to ask for **Bickmore's** Gall Cure when you go to buy and do not take a substitute. Farm Account Book is ready. Send today.

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Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

This is the season of the year when mothers feel very much concerned over the frequent colds contracted by their children and have abundant reason for it as every cold weakens the lungs, lowers the vitality and paves the way for the more serious diseases that so often follow. Chamberlain's Cough Remedy is famous for its cures, and is pleasant and safe to take. For sale by all dealers.

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The Maritime Farmer

SUSSEX, N. B.

In-Foal Mares INSURANCE

OF ALL the losses owners are liable to, none can be **less prevented or modified** in any manner whatsoever **than loss by foaling.** Notwithstanding the best care and attention, although a mare **may have foaled** many times successfully, she is always a cause of worry and anxiety to the owner through the fear of **losing by death** the often very **high cash value of the Beast,** not to mention service fee, care and expenses incurred for no avail. **Why risk such loss** when a payment of a few dollars in premiums would **cover you** should it happen. Reduce the amount **of the RISK** by insuring, only risking thereby the **loss of the Premium** if the mare foals allright. We issue 30 days, 6 months and 12 months policies with or without cover on foal.

Write for address of nearest agent. All kinds of live stock insurance transacted.

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POULTRY.

P. E. I. Poultry Association Prizes Awarded.

Following is a complete list of the Cups and Special Prizes offered by the citizens and merchants of Charlottetown to the Prince Edward Island Poultry Association and winners:

1. Silver cup, donated by Auld Bros., for best 20 birds, one variety, any one pure breed. Won by William Cudmore.

2. Silver Cup, donated by Hon. Joha Richards, for best breeding pen any one pure breed—Won by Henry Lapthorne.

3. Silver Cup, donated by Benjamin Crabbe, for best Wyandotte cock, hen, cockerel and pullet.—Won by George Lightizer.

4. Silver Cup, donated by Prowse Bros., .or the best breeding pen of Wyandottes.—Won by George Lightizer.

5. Sllver Cup, donated by employes of Auld Bros., for the best breeding pen of Minorcas.—Won by William Cudmore.

6. Silver Cup, donated by P. C. Brown, .or the best cock and hen, one variety, any standard breed—Won by Lorne Pigot.

7. Silver Cup, donated by J. A. Farquharson, for the best Rhode Island Red cockerel and pullet—Won by L. A. Haszard.

8. Silver Cup, donated by W. N. Tanton, for the best 5 males and 5 females of any one variety, owned by exhibitor 3 months before show to be won 3 times in succession— Won by William Cudmore.

1. $2.50 donated by President Lightizer, for the best cockerel and pullet in all solid colored specimens—J. L. Curran.

2. $2.50 donated by President Lightizer, for the best cockerel and pullet in all parti colored specimens—J. J. McKinnon.

3. $2.00 donated by Davis & Fraser, for the best cock, hen, cockerel and pullet any variety of Orpingtons—Henry Gurney.

4. $3.00 donated by F. J. Holman & Co., for the best cock, hen, cockerel and pullet one variety Wyandotts—Geo. Lightizer.

5. $2.00 donated by The Island Cold Storage, for the best Rhode Island Red cock, hen, cockerel and pullet—Arthur Nelson.

6. $1.00 donated by P. L. Smallwood for the best Barred Rock cockerel and pullet—J. J. McKinnon.

7. $1.00 donated by W. Cudmore, for highest scoring cockerel any standard breed—John Whitlock.

8. $1.00 donated by W. Cudmore, .or highest scoring Black Minorca male or female, open only to Island exhibitors—W. Cudmore.

9. Daily Patriot, 1 year for best Buff Leghorn, cock, hen, cockerel and pullet—J. L. Curran.

10. $1.00 donated by G. Williams for highest scoring Black Minorca—Lorne Pigot.

11. Fern donated by James Tait, best female in any solid colored variety—Geo. Lightizer.

12. One dozen bulbs donated by William's Conservatory, for best female in any parti colored variety—E. J. Vessey.

13. $1.00 donated by Gordon & Co. for best Bramha cockerel and pullet—P. E. I. P. A.

14. Bushel wheat donated by John Inman for best Andalusian cockerel and pullet—W. McNeill.

15. $1.00 donated by Lorne Pigot, for best White Leghorn cockerel—G. Chilton.

16. $1.00 donated by Lorne Pigot, for best White Leghorn cockerel and pullet—G. Chilton.

17. $1.00 donated by W. B. Robertson, for best Black Spanish cockerel and pullet—G. Chilton.

18. $2.00 donated by Jenkins & Son, for best cock, hen, cockerel and pullet in Black Minorca classes— W. Cudmore.

19. $2.00 donated by Charles Chandler, for best Brown Leghorn cock, hen, cockerel and pullet. — H. Lapthorne.

20. $2.00 donated by McKinnon Drug Co., for best White Leghorn cock, hen, cockerel and pullet.— G. Chilton.

21. $2.00 donated by John Wonnacott, for best Plymouth Rock cock, hen, cockerel and pullet—Geo. Callbeck.

22. The Charlottetown Examiner for one year, for best Black Minorca cockerel and pullet—W. Cudmore.

23. $1.00 donated by John Whitlock, for best Hamburg cock and hen—L. Pigot.

24. Bushel wheat donated by Geo. Simmons, for best S. C. Brown Leghorn cock and hen—H. Lapthorne.

25. Box cigars donated by Two Mac's., for best Bantam cock and hen—A. Nelson.

26. Box cigars donated by G. Carver, for best Hamburg cockerel and pullet—P. E. I. P. A.

27. $1.50 worth of goods donated by G. Alysworth for best Black or buff Orpington cock—A. Nelson.

28. $1.00 donated by Bruce Stewart for best White or Buff Plymouth Rock.—G. Callbeck.

29. $1.00 donated by S. Craig, for best pair of Ducks, male and female—J. Whitlock.

30. $1.00 donated by Joseph Stanley for best cockerel and pullet A. O. V.—P. E. I. P. A.

31. Box cigars donated by D. O. M. Reddin, for best male in any solid colored variety—J. Whitlock.

32. $2.00 donated by S. R. Jenkins for best male in any parti colored variety.—J. Whitlock.

33. $1.00 in goods donated by Black & Co., for best pair of pigeons —P. E. I. P. A.

1 34. $1.00 donated by W. W. Stanley, for the best cockerel in all solid colored varieties—J. J. McKinnon.

35. $1.00 donated by W. W. Stanley for best cockerel in all parti colored varieties—J. J. McKinnon.

The Cape Breton Poultry Show.

The poultry show recently held in North Sydney under the auspices of the Cape Breton Poultry Association had no fewer than 501 birds. Over a hundred birds more than last year.

Frank E. Jackson and a committee of enthusiastic North Sydney poultry fanciers managed the show and J. P. Landry, Truro, placed the awards.

Prof. M. Cumming and John Bright Live Stock Commissioner, visited the show and spoke encouragingly of the general appearance of the exhibit.

Plucking contests were conducted—one for boys and another for men. At the latter contest, H. W. Corning, M. L. A., Yarmouth, acted as timekeeper and judge.

Following is a list of prize winners:

MOTTLED ANCONAS.—Cock— 1, W. Vooght; 2, H. W. Lovett. Hen—1 and 2, H. W. Lovett; 3, W. M. Vooght. Cockerel—1, H. W. Lovett; 2, M. W. Ross. Pullet—1 and 2, H. W. Lovett; 3, M. W. Ross.

BARRED PLYMOUTH ROCK.—Cock, 1, E. J. Johnson; 2, T. C. Munn. Hen—1, 2 and 3, T. C. Munn. Cockerel—1, W. Vooght; 2, T. C. Munn; 3, J. Munro. Pullet—1, T. C. Munn; 2, W. Vooght; 3, Cliff Thompson.

WHITE PLYMOUTH ROCKS.—Cock—1, R. M. Jackson. Hen—1, R. M. Jacvson. Hen—1, R. M. Jackson; 2, Geo. Musgrove; 3, Jas. Munn. Cockerel—1, Jas. Munro; 2, F. L. Kelly; 3, R. M. Jackson. Pullet—1, Jas. Munro; 2, R. M. Jackson; 3, F L. Kelly.

SILVER LACED WYANDOTTE.—Cock—1, F. H. Rudderham. Hen—1, F. H. Rudderham; 2 and 3, C. F. McDonald. Cockerel—1 and 2, John McDonald; 3, W. Vooght. Pullet—1, F. H. Rudderham; 2, W. M. Vooght.

GOLDEN, PARTRIDGE and COLUMBIAN WYANDOTTES.— All awards go to T. C. Munn, no competition.

WHITE WYANDOTTE.—Cock—1 and 2, Fred Jackson; 3, M. W. Ross. Hen—1, Fred Jackson; 2 and 3, M. W. Ross. Cockerel—1, 2 and 3, James Munro. Pullet—1, M. W. Ross; 2 and 3, Fred Jackson.

S. C. RHODE ISLAND RED.—Cock—1, C. Thompson; 1, C. W. Lovett. Hen—1 and 3, C. Thompson; 2, C. W. Lovett. Cockerel—1, T. C. Munn; 2, C. Thompson; 3, W. Vooght. Pullet—1, T. C. Munn; 2, C. Thompson; 3, J. Barrington.

R. C. RHODE ISLAND RED—Cock—1 and 3, C. Johnson; 2. H. W. Lovett Hen—1, H. W. Lovett; 2, A. B. McPhee; 3, C. Thompson. Cockerel—1, C. Johnston; 2, G. Musgrave; 3, H. W. Lovett. Pullet—1 and 3, G. Musgrave; 3, C. Johnston.

WHITE LEGHORN—Cock—1, J. Barrington; 2, H. W. Lovett. Hen—1 and 2, Jas. Munro; 3, C. Johnston. Cockerel—1, 2 and 3, C. Johnston. Pullet—1 and 2, C. Johnston; 3, H. W. Lovett.

S. C. BROWN LEGHORN.—Cock—1, W. Vooght; 2, H. W. Lovett; 3, Fred Jackson. Hen—1, G. Musgrave; 2, M. W. Ross; 3, W. Vooght. Cockerel—1 and 2, Fred Jackson; 3, W. Vooght. Pullet—1 and 3, Fred Jackston; 2, C. Johnston.

R. C. BROWN LEGHORN—C. Johnston won all firsts. Geo. Musgrave won 2nd cockerel.

BUFF LEGHORN.—1st cockerel, 3, pullet. Geo. Musgrave. 1 and 2 Pullet, W. M. Vooght.

BLACK MINORCA.—Cock— 1, W. Gillis; 2, W. Vooght. Hen—1, M. W. Ross; 2, Cliff Thompson. Cockerel—1, S. D. Burns; 2, W. Baendale; 3, W. Gillis. Pullet—1, W. Basendale; 2, and 3, W. Gillis.

WHITE MINORCA—Cock—1 and 2, M. W. Ross. Hen, 1 and 3, M. W. Ross; 2, Clif Thompson. Cockerel—1, Wm. Scott; 2, M. W. Ross. Pullet—1 and 3, M. W. Ross; 2, Wm. Scott.

BUFF ORPINGTON—Hen—1, W. M. Vooght. Cockerel—1 and 2, James Munro. Pullet—1 and 3, Jas. Munro; 2, W. M. Vooght.

GAMES (any variety)— All awards went to Henry Marr, no competition.

ANY OTHER VARIETY.—Cock—1, Jas. Munro; Hen—1, C. Thompson; 2, James Munro. Cockerel—1, T. Hart; 2 James Hough. Pullet—1, James Hough; 2, Jas. Munro; 3, T. C. Hart.

BUFF COCHIN BANTAM—Cock—1, F. McDonald; 2, H. W. Lovett. Hen, 1 and 2, H. W. Lovett. Cockerel—1, C. W. Lovett. Pullet—1, C. W. Lovett.

BLACK COCHIN BANTAM—Cock—1, H. W. Lovett. Hen—1 and 2, H. W. Lovett. Cockerel—1, C. W. Lovett. Pullet—1, C. W. Lovett.

GAME BANTAM (any variety) — Cock—1, M. W. Ross. Hen—1 and 2, M. W. Ross. Cockerel—1, C. Thompson; 2 and 3, H. W. Lovett. Pullet—1, C. Thompson; 2, G. Musgrave; 3, H. W. Lovett.

A. O. V. BANTAMS.—Hen—1, C. Thompson; 2, C. Thompson. Cockerel—1, M. W. Ross. Pullet—1, M. W. Ross.

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BREEDING PENS (adult birds)—Plymouth Rock—1, G. Musgrave; 2, W. Vooght. Wyandotte—1, H. W. Lovett. S. C. Rhode Island Red—1, and 2, C. W. Lovett; 3, H. W. Lovett. R. C. Rhode Island Red—1, H. W. Lovett. Minorca—1, M. W. Ross. Brown Leghorn—1, M. W. Ross; 2, H. W. Lovett; 3, G. Musgrave.

BREEDING PENS (young birds)—Plymouth Rocks—1, Cliff Thompson; 2, R. M. Jackson. Wyandotte—1, M. W. Ross. Orpington—1, W. M. Vooght. S. C. Rhode Island Red—1, C. W. Lovett; 2, H. W. Lovett; 3, T. C. Munn. R. C. Rhode Island Red—1 and 2, C. Johnston; 3, H. W. Lovett. Minorca—1, W. Gillis. W. Leghorn—1, 2 and 3, C. Johnston. Brown Leghorn—1, Fred Jackson; 2, H. W. Lovett; 3, L. Wilson.

TURKEY (Bronze)—Male and female—1, John McMullen.

GOOSE, Grey—Male and female—1, Fred Jackson.

DUCKS, Pekin—Male—1 and 3, H. W. Lovett; 2, John McMullen. Female11 and 2, H. W. Lovett; 3, J. McMullen.

Heaviest and best dozen White Eggs—1, M. W. Ross; 2, W. B. Ross.

Heaviest abd Best Dozen Brown Eggs—1, C. W. Lovett; 2, H. W. Lovett.

Best pair Fat Fowls—1, A. B. McPhee; 2, E. J. Johnston.

Highest aggregate of prizes won by one exhibitor—1, H. W. Lovett.

Highest scoring Bird in show—1, W. M. Vooght.

Best shaped Bird in Show—1, Fred Jackson.

Best colored Bird in Show—1, R. M Jackson.

Highest scoring class with competition—1, C. Johnston.

N. S. Poultrymen Organize.

At the close of the poultry meeting held at the Agricultural College on Thursday, Jan. 17th, the poultrymen of Nova Scotia organized. This is a move in the right direction and speaks well for the future of the poultry industry in the province.

The object of the organization is to assist in holding shows and secure money or prizes in order to better assist the industry.

The shows which have been started have a grand record and it has encouraged the poultrymen to carry the work on and to promote more shows in other parts of the Province.

The following are the officers:

Hon. Pres.—M. Cumming, Truro.

President—I. C. Craig, Amherst.

Vice-Pres.—W. W. Osborne, New Glasgow.

Sec.-Treas.—J. P. Landry, Truro; N. S.

Executive Committee—E. E. Frehill New Glasgow; W. A. Godfrey, Yarmouth; Frank Jackson, North Sydney; W. W. Henry, Shubenacadie; C. H. Wisener, Pictou, N. S.; Dr. Webster, Pictou, N. S.; Geo. Thompson, Halifax.

Are You Losing Money ?

Following is a sample of the many inquiries that reach this office, which goes to show that breeders of pure-bred stock are losing money by not taking full advantage of the advertising opdortunities offered by the Maritime Farmer:

Westville, N. S.

Editor Maritime Farmer:

Please notify some breeders of White Holland Turkeys and Silver Spangled Hamburg hens to advertise their wares in your paper. I want to get their address.

Respectfully yours,

J. J. CRAWFORD,

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I would like to send you my book on the subject. It contains formulas and plenty of information for farmers who want to get the most and the best for their money. The book will be sent free upon request.

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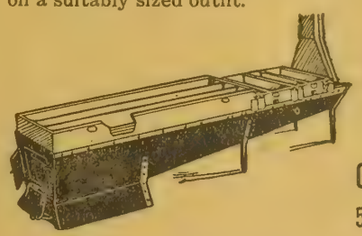
The entries will be exhibited in the magnificent Show Window of the "Montreal Star."

Why not properly equip yourself to be a WINNER in this contest? State number of trees you tap, and we will give you price on a suitably sized outfit.



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THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

"If you please, sir—"

Mr. Creakle whispered, "Hah! "Hah! What's this?" and bent his eyes upon me, as if he would have burnt me up with them.

"If you please, sir," I faltered, "if I might be allowed (I am very sorry indeed, sir, for what I did) to take this writing off, before the boys come back——"

Whether Mr. Creakle was in earnest or whether he only did it to frighten me, I don't know, but he made a burst out of his chair, before which I precipitately retreated, without waiting for the escort of the man with the wooden leg and never once stopped until I reached my own bedroom, where, finding I was not pursued, I went to bed, as it was time, and lay quaking, for a couple of hours.

Next morning Mr. Sharp came back Mr. Sharp was the first master, and superior to Mr. Mell. Mr. Mell took his meals with the boys, but Mr. Sharp dined and supped at Mr. Creakle's table. He was a limp, delicate-looking gentleman, I thought, with a good deal of nose, and a way of carrying his head on one side, as if it were a little too heavy for him. His hair was very smooth and wavy, but I was informed by the very first boy who came back that it was a wig (a second-hand one he said), and that Mr. Sharp went out every Saturday afternoon to get it curled.

It was no other than Tommy Traddles who gave me this piece of intelligence. He was the first boy who returned. He introduced himself by informing me that I should find his name on the right-hand corner of the gate, over the top-bolt; upon which I said, "Traddles?" to which he replied, "The same," and then he asked me for a full account of myself and family.

It was a happy circumstance for me that Traddles came back first. He enjoyed my placard so much, that he saved me from the embarrassment of either disclosure or concealment, by presenting me to every other boy who came back, great or small, immediately on his arrival, in this form of introduction, "Look here! Here's a game!" Happily, too, the greater part of the boys came back low-spirited, and were not so boisterous at my expense as I had expected. Some of them certainly did dance about me like wild Indians, and the greater part could not resist the temptation of pretending that I was a dog, and patting and smoothing me, lest I should bite, and saying, "Lie down, sir!" and calling me Towzer. This was naturally confusing, among so many stramgers, and cost me some tears, but on the whole it was much better than I had anticipated.

I was not considered as being formally received into the school, however, until J. Steerforth arrived. Before this boy, who was reputed to be a great scholar, and was very good-looking, and at least half a dozen years my senior, I was carried as before a magistrate. He inquired, under a shed in the playground, into the particulars of my punishment, and was pleased to express his opinion that it was a "jolly shame;" for which I became bound to him ever afterwards.

"What money have you got, Copperfield?" he said, walking aside with me when he had disposed of my affair in these termt.

I told him seven shillings.

"You had better give it to me to take care of," he said. "At least, you can if you like. You needn't if you don't like."

I hastened to comply with his friendly suggestion, and opening Peggotty's purse, turned it upside down into his hand.

"Do you want to spend anything now?" he asked me.

"No, thank you," I replied.

"You can, if you like, you know," said Steerforth. "Say the word."

"No, thank you, sir," I repeated.

"Perhaps you'd like to spend a couple of shillings or so, in a bottle of currant wine by-and-by, up in the bedroom?" said Steerforth. "You belong to my bedroom, I find."

It certainly had not occurred to me before, but I said, Yes, I should like that.

"Very good," said Steerforth, "You'll be glad to spend another shilling or so, in almond cakes, I dare say?"

I said, Yes, I should like that too.

"And another shilling or so in biscuit, and another in fruit, eh?" said Steerforth. "I say, young Copperfield, you're going it!"

I smiled because he smiled, but I was a little troubled in my mind, too.

"Well!" said Steerforth. "We must make it stretch as far as we can; that's all. I'll do the best in my power for you. I can go out when I like, and I'll smuggle the prog in." With these words he put the money in his pocket, and kindly told me not to make myself uneasy; he would take care it should be all right.

He was as good as his word, if that were all right which I had a secret misgiving was nearly all wrong—for I feared it was a waste of my mother's two half-crowns—though I had preserved the piece of paper they were wrapped in: which was a precious saving. When we went up-stairs to bed, he produced the whole seven shillings' worth, and laid it out on my bed in the moonlight, saying:

"There you are, young Copperfield, and a royal spread you've got."

I couldn't think of doing the honors of the feast, at my time of life, while he was by; my hand shook at the very thought of it. I begged him to do me the favor of presiding; and my request being seconded by the other boys who were in that room, he acceded to it, and sat upon my pillow, handing round the viands—with perfect fairness, I must say—and dispensing the currant wine in a little glass without a foot, which was his own property. As to me, I sat on his left hand, and the rest were grouped about us, on the nearest beds and on the floor.

How well I recollect our sitting there, talking in whispers; or their talking, and my respectfully listening, I ought rather to say; the moonlight falling a little way into the room, through the window, painting a pale window on the floor, and the greater part of us in shadow, except when Steerforth dipped a match into a phosohorus-box, when he wanted to look for anything on the board, and shed a blue glare over us that was gone directly! A certain mysterious feeling, consequent on the darkness, the secrecy of the revel, and the whisper in which everything was said, steals over me again, and I listen to all they tell me with a vague feeling of solemnity and awe, which makes me glad that they are all so near, and frightens me (though I feign to laugh) when Traddles pretends to see a ghost in the corner.

I heard all kinds of things about the school and all belonging to it. I heard that Mr. Creakle had not preferred his claim of being a Tartar without reason; that he was the sternest and most severe of masters; that he laid about him, right and left, every day of his life, charging in among the boys like a trooper, and slashing away, unmercifully. That he knew nothing himself, but the art of slashing, being more ignorant (J. Steerforth said) than the lowest boy in the school;- that he had been, a good many years ago, a small hop-dealer in the Borough, and had taken to the schooling business after being bankrupt in hops, and making away with Mrs. Creakle's money. With a good deal more of the sort which I wondered how they knew.

I heard that the man with the wooden leg, whose name was Tungay, was an obstinate barbarian who had formerly assisted in the hop business, but had come into the scholastic line with Mr. Creakle, in consequence, as was supposed among the boys, of his having broken his leg in Mr. Creakle's service, and having done a deal of dishonest work for him, and knowing his secrets. I heard that with the single exception of Mr. Creakle, Tungay considered the whole establishment, masters and boys, as his natural enemies, and that the only delight of his life was to be sour and malicious. I heard that Mr. Creakle had a son, who had not been Tungay's friend, and who, assisting in the school, had once held some remonstrance with his father on an occasion when his dicipline was very cruelly excerised, and was supposed, besides, to have protested against his father's usage of his mother. I heard that Mr. Crealke had turned him out of doors, in consequence, and that Mrs. and Miss Creakle had been in a sad way, ever since.

But the greatest wonder that I heard of Mr. Creakle was, there being one boy in the school on whom he never ventured to lay a hand, and that boy being J. Steerforth. Steerforth himself confirmed this when it was stated, and said that he should like to begin to see him do it. On being asked by a mild boy (not me) how he would proceed if he did begin to see him do it, he dipped a match into his phosphorus-box on purpose to shed a glare over his reply, and said he would commence by knocking him down with a blow on the forehead from the seven-and sixpenny ink bottle that was always on the mantlepiece. We sat in the dark for some time, breathless.

I heard that Mr. Sharp and Mr. Mell were both supposed to be wretchedly paid: and that when there was hot and cold meat for dinner at Mr. Creakle's table, Mr. Sharp was always expected to say he preferred cold; which was again corroborated by J. Steerforth, the only parlor-boarder. I heard that Mr. Sharp's wig didn't fit him; and that he need not be so "bounceable"—smebody else said "bumptious"—about it, because his own red hair was very plainly to be seen behind.

I heard that one boy, who was a coal-merchant's son, came as a set off against the coal-bill, and was called, on that account, "Exchange or Barter"—a name selected from the arithmetic-book as expressing this arrangement. I heard that Miss Creakle was regarded by the school in general as being in love with Steerforth; and I am sure, as I sat in the dark, thinking of his nice voice, and his fine face, and his easy manner, and his curling hair, I thought it very likely. I heard that Mr. Mell was not a bad sort of a fellow, but hadn't a sixpence to bless himself with; and that these was no doubt that old Mrs. Mell, his mother, was as poor as Job. I thought of my breakfast then, and what had sounded like "My Charley!" but I was, I am glad to remember, as mute as a mouse about it.

The hearing of all this, and a good deal more, outlasted the banquet some time. The greater part of the guests had gone to bed as soon as the eating and drinking were over; and we, who had remained whispering and listening half undressed, at last betook ourselves to bed, too.

"Good night, young Copperfield,"

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

WOMAN'S MOST SUCCESSFUL MEDICINE

Known All Over The World —Known Only For The Good It Has Done.

We know of no other medicine which has been so successful in relieving the suffering of women, or received so many genuine testimonials, as has Lydia E. Pinkham's Vegetable Compound.

In nearly every community you will find women who have been restored to health by this famous medicine. Almost every woman you meet knows of the great good it has been doing among suffering women for the past 30 years.

Fox Creek, N. B.—"I have always had pains in the abdomen and a weakness there and often after meals a soreness in my stomach. Lydia E. Pinkham's VegetableCompound has done me much good. I am stronger, digestion is better and I can work with ambition. I have encouraged many mothers of families to take it as it is the best remedy in the world. You can publish this in the papers."—Mrs. WILLIAM S. BOURQUE, Fox Creek, N. B.

In the Pinkham Laboratory at Lynn, Mass., are files containing hundreds of thousands of letters from women seeking health, in which many openly state over their own signatures that they have regained their health by taking Lydia E. Pinkham's Vegetable Compound, many of whom state that it has saved them from surgical operations.

LADIES !

HERE

IS A

DYE

THAT

ANYONE

CAN USE.

Home Dyeing

It's the **Cleanest, Simplest,** and **Best Home Dye,** one can buy—Why you don't even have to know what **Kind** of cloth your Goods are made of. So mistakes are Impossible.

Send for Free Color Card, Story Booklet, and Booklet giving results of Dyeing over other colors. The Johnson-Richardson Co., Limited, Montreal.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

Farmer Ads Are Business Getters

said Steerforth. "I'll take care of you."

"You're very kind," I gratefully returned. "I am very much obliged to you."

"You haven't got a sister, have you?" said Steerforth, yawning.

"No," I answered.

"That's a pity," said Steerforth. "If you had one, I should think she would have been a pretty, timid, little, bright-eyed sort of girl. I should have liked to know her. Good night young Copperfield."

"Good night, sir," I replied.

I thought of him very much after I went to bed, and raised myself, I recollect, to look at him where he lay in the moonlight, with his handsome face turned up, and his head reclining easily on his arm. He was a person of great power in my eyes; that was, of course, the reason of my mind running on him. No veiled future dimly glanced upon him in the moonbeams. There was no shadow picture of his footsteps, in the garden that I dreamed of walking in all night.

CHAPTER VII

My "First Half" at Salem House.

School began in earnest next day. A profound impression was made upon me, I remember, by the roar of voices in the schoolroom suddenly becoming hushed as death when Mr. Creakle entered after breakfast, and stood in the doorway looking round upon us like a giant in a story-book surveying his captives.

Tungay stood at Mr. Creakle's elbow. He had no occasion, I thought, to cry out "Silence!" so ferociously, for the boys were all struck speechless and motionless.

Mr. Creakle was seen to speak, and Tungay was heard, to this effect.

"Now, boys, this is a new half. Take care what you're about, in this new half. Come fresh up to the lessons, I advise you, for I come fresh up to the punishment. I won't flinch. It will be of no use your rubbing yourselves: you won't rub the marks out that I shall give you. Now get to work, every boy!"

When this dreadful exordium was over, and Tungay had stumped out again, Mr. Creakle came to where I sat, and told me that if I were famous for biting, he was famous for biting, too. He then showed me the cane, and asked me what I thought of that for a touch? Was it a sharp tooth, hey? Was it a double tooth, hey? Did it bite, hey? Did it bite? At every question he gave me a fleshy cut with it that made me writhe; so I was very soon made free of Salem House (as Steerforth said), and was very soon in tears also.

Not that I mean to say these were special marks of distinction, which only I received. On the contrary, a large majority of the boys (especially the smaller ones) were visited with similar instances of notice, as Mr. Creakle made the round of the schoolroom. Half the establishment was writhing and crying, before the day's work began; and how much of it had writhed and cried before the day's work was over, I am really afraid to recollect, lest I should seem to exaggerate.

(Continued in next issue!

Here is a message of hope and good cheer from Mrs. C. J. Martin, Boone Mill, Va., who is the mother of eighteen children. Mrs. Martin was cured of stomach trouble and constipation by Chamberlain's Tablets after five years of suffering, and now recommends these tablets to the public. Sold by all dealers.

For a sprain you will find Chamberlain's Liniment excellent. It allays the pain, removes the soreness, and soon restores the parts to a healthy condition. 25 and 50 cent bottles for sale by all dealers.

$5,000,000.00

FOR PEERLESS WAY POULTRYMEN

Into the pockets of the users of The Peerless Way last year went five million dollars made from the poultry these people raised. Yet chickens are scarce in Canada and eggs are the scarcest of all food commodities. That is positively the fact.

To-day there are not enough Canadian CHICKENS or EGGS to go around. Thousands of chickens and hundreds of thousands of dozens of eggs are being shipped into Canada from the United States and other countries to help meet the demand.

Yet there is a shortage! Eggs are commanding a tremendous price—chickens are worth dollars.

Now is the time to take advantage of this situation and make money out of it yourself. You can raise and sell 600 chickens this next year, and you will find a quick and sure market for every one of them. You can get the top notch price for all the hundreds of dozens of eggs that your poultry lay.

Let us tell you how!

Poultry raising is the best business for any farmer, any farmer's wife or farmer's child. The poultry crop is the one crop that never fails. It pays better for the time and money invested; the profit is surest; it isn't overcrowded and never will be.

Our book "When Poultry Pays," will show you. Let us send it to you. It is interesting; it is instructive, and it contains the proof.

You need this book. It will be mailed free. A post card will bring it.

LEE MANUFACTURING CO., LIMITED 200

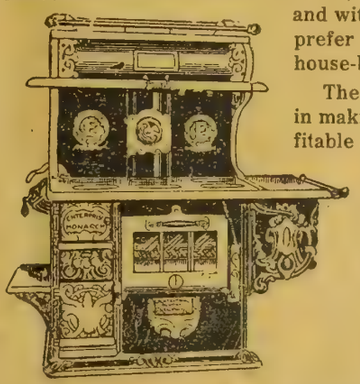
Head Offices: 33 PEMBROKE ST. PEMBROKE ONT. CAN.

IF EVERY SUFFRAGETTE IN ENGLAND

HAD A HOME, AND IN IT A STEEL RANGE LIKE THE

ENTERPRISE | MONARCH

and could know the delights of cooking delicious bread and cake, crisp pies, meats and fish "done to a turn," without odors from burned food, and with the minimum of labour she would prefer being a house-keeper instead of a house-breaker, every time.



The "MONARCH" leads all competitors in making housekeeping pleasant and profitable and divesting it of much drudgery--BECAUSE it has all the good features of other ranges and some that are distinctly its own.

Then it is backed by our written guarantee as to fit finish and operation.

It will pay you to write us for circular and particulars, if your dealer does not handle this well-known range.

THE ENTERPRISE FOUNDRY CO., Sackville, N. B.

MANUFACTURERS

NEW COAL OIL LIGHT

Beats Electric or Gasoline

ONE FREE To Use On Your Old Lamp !

Our special introductory offer entitles one person in each locality to one free. Powerful white incandescent mantle light. Replacing common oil lamps everywhere. Burns 70 hours on one gallon of coal oil (kerosene). No odor or noise, simple, clean. Brightest and cheapest light for the home, office or store. Better light than gas or electric. Send postal for FREE OFFER and agents' wholesale prices.

AGENTS WANTED Experience Unnecessary. Make Money Evenings or Spare Time. Write Quick.

MANTLE LAMP CO., 282 Aladdin Bldg., Montreal and Winnipeg, Can.

An advertisement in the Maritime Farmer will sell your surplus stock---Try it !

Dr. Morse's Indian Root Pills

are just the right medicine for the children. When they are constipated —when their kidneys are out of order —when over-indulgence in some favorite food gives them indigestion —Dr. Morse's Indian Root Pills will quickly and surely put them right. Purely vegetable, they neither sicken, weaken or gripe, like harsh purgatives. Guard your children's health by always keeping a box of Dr. Morse's Indian Root Pills in the house, They 51

Keep the Children Well

"Canada's Biggest Piano Value"

Style 70—Colonial

Sherlock-Manning 20th Century Piano

Examine the Sherlock-Manning 20th Century Piano. Listen to its exquisite singing tone. Ask about its many quality features —Otto Higel Double Repeating Action; Poehlmann Wire (the best **imported** piano wire); Weickert Felt Hammers; the famous Billings Brass Flange (the flange that endures); and other important features.

Then, when you've found out all there is to know about the **Sherlock-Manning 20th Century Piano**—when you've been **convinced** that this instrument represents the **best** piano value in the Dominion—then ask us the price. You'll find it much less than you expected.

But there are sound reasons to account for the lower price as for the greater excellence of these splendid instruments.

Write us to-day for full particulars and handsome art catalogue—and we'll tell you how **you can save $100** on the purchase of as fine a piano as can be made at any price. 27

Sherlock-Manning Piano & Organ Co.

LONDON, - CANADA

(No Street Address necessary)

Nova Scotia Fruit Growers Celebrate Their Golden Jubilee.

(Continued from page 307)

W. W. Pineo thought the Valley show was a one horse affair, and a waste of time and public money. All nonsense should be done away with and the fruit exhibition placed on a firm footing at Halifax.

L. D. Robinson, favored taking the show to Halifax.

R. S. Eaton said that after so many years of education which would now be looked after by the Short Courses it was time to turn to an advertising campaign and get started right by putting on a real fruit show at Halifax, and as an instance of what may be accomplished referred toMaxwell Smith's version of what the big Vancouver Fruit Show had done for British Columbia Fruit Growers.

S. B. Chute, representing the United Fruit Companies, favored doing away with tinsel shows and poor packs. He thought Halifax was the proper place for an N. S. fruit show.

A. E. McMahon scored the citizens of Halifax for their lack of interest in the provincial fair. They did not fully appreciate the patronage that the rest of the province was extending to them. He favored carrying the exhibition to foreign markets. S. C. Spurr, R. W. Starr, Prof. W. S. Blair and others favored Halifax as a centre for the show.

The following resolutions were then introduced and carried.
centres.

Whereas, the Nova Scotia Horticultural Exhibition which, during the past six years, has been held in various towns in Hants, Kings and Annapolis Counties, while affording a good opportunity for educational and competitive exhibits has failed in what we believe to be one of the most important functions of a Provincial exhibition viz: the exhibition of our fruit to the consuming public and hence the advertising of the industry and

Whereas, its location in these towns while attracting a large exhibit of fruit, has not been favorable to the exhibition of commercial packages of fruit and

Whereas, we believe that these results can only be achieved in one of the larger centres of the province and

Whereas, the exhibition has now been held an even number of times in each of the aforementioned counties.

Therefore resolved, that we, the N. S. F. G. A. do recommend that the next N. S. Horticultural exhibition be held in Halifax, the capital and leading shipping and public centre of the Province and that a strong committee from this Association be appointed to work with the Secretary for Agriculture to take steps toward inaugurating a larger and better exhibition.

Messrs. W. W. Pineo, A. E. McMahon, E. C. Schaffner, R. J. Messenger and Wm. O'Brien were appointed a committee to work out the details in connection with the proposed change.

* * * *

Wheras, the present Government Aid to the N. S. F. G. A. is deemed by the officers to be inadequate to the successful running of the Association.

Therefore resolved, that we petition the Government of N. S. to increase the grant to $500 per year and also tp pay for the printing of the annual report and that a committee be appointed to press the matter before the Government at Halifax.

* * * *

Whereas, efforts are being made by certain nursery firms to secure modifications in the regulations governing the importation of nursery stock into Nova Scotia and

Whereas, any such modification would be detrimental to the fruit industry of our Province.

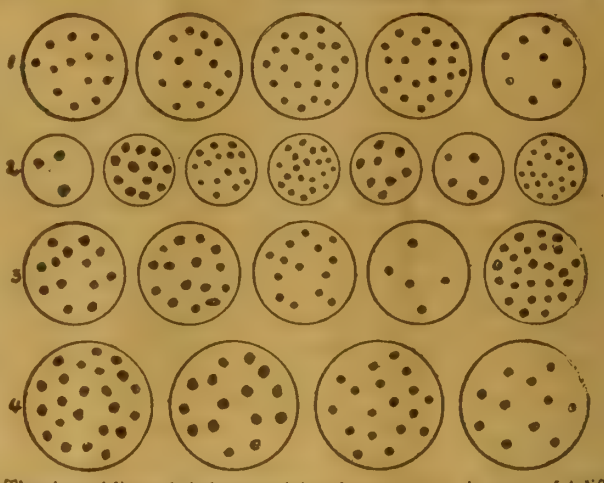
Therefore resolved, that we, the Fruit Growers assembled at our annual convention at Middleton, Jan. 29th, 1913, place ourselves on record as urging on our government the pressing necessity of the strict enforcement of aforementioned regulations.

FREE $300.00 IN PRIZES

IN THE GREAT DOT PUZZLE CONTEST

A Genuine Contest for WISE HEADS!

SOLVE THIS PUZZLE



The above 4 lines of circles containing dots represent the name of 4 different things described after each line. What are they?

HOW TO SOLVE THIS GREAT PUZZLE

Each circle of dots represents 1 letter of the word and the number of dots in each circle determine the letter in its relation to the alphabet. For instance: A is represented by 1 dot because it is the first letter in the alphabet, B is represented by 2 dots because it is the 2nd letter in the alphabet, C is represented by 3 dots because it is the 3rd letter in the alphabet. Now, with these simple instructions and a little patience you can soon have the puzzle solved. To give you a little assistance the 1st letter of the first word is M, because the circle contains 13 dots and M is the 13th letter of the alphabet.

After you have found the solution write your answer neatly on a piece of paper with your name and address and anything else you wish to say about the contest and send it in to us.

Those who send in the Correct or the Nearest Correct Answers; whose answers are the neatest and who live up to the condition of the contest (read rules of contest below), will win the following grand prizes:—

1st Prize, $125.00 in cash.
2nd " 50.00 "
3rd " 25.00 "
4th " 15.00 "
5th " Gent's Watch. Value $10.00.
6th " Ladies' Ring. Value $10.00.
7th " Fine Clock. Value $10.00.
8th " 44-Piece Dinner Set. Value $10.00.
9th Prize, Mission Upholstered Rocker Value $10.00.
10th Prize, Violin. Value $10.00.
11th Prize, Gillette Safety Razor. Value $5.00.
12th Prize, Waterman Fountain Pen Value $5.00.
13th Prize, Glass Water Set. Value $5.00.
14th Prize, Large French Doll. Value $5.00.
15th Prize, Silverware Set. Value $5.00.

READ THE SIMPLE RULES OF THIS CONTEST

1. Contestants may send in as many answers as they wish, but only one answer can win a prize. (2) Only 1 person in each family will be allowed to compete. (3) No employees of ours or any relation of any employee will be allowed to compete. (4) Children under 12 years of age will not be permitted to compete. (5) Write only on one side of the paper. (6) All letters must be fully prepaid in postage. We will not accept answers upon which we will have to pay postage. (7) The decision of the judges must be accepted as final. The judging will be in the hands of 3 gentlemen of integrity who are absolutely disinterested. (8) This contest is absolutely free. You are not asked to spend one cent of your money or buy anything to enter. As soon as we receive your answer we will immediately tell you if you are right, and how the prizes will be distributed. We guarantee the awarding of the prizes described above according to decision of the judges.

Address all answers to **Contest Department, 220**

NEW LIFE REMEDY COMPANY, TORONTO, ONT.

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, **free** of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure — **you**, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience**, we know better than any doctor. **I know** that my home treatment is a safe and sure cure for **Leucorrhoea** or **Whitish discharges, Ulceration, Displacement** or **Falling** of the **Womb, Profuse, Scanty** or **Painful Periods, Uterine** or **Ovarian Tumors** or **Growths**, also **pains in the head; back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar** to our sex.

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address**, tell me how you suffer, if you wish, and **I** will send you the treatment for your case, entirely free, in plain wrapper, by return mail. **I** will also send you **free of cost**, my book—**"WOMAN'S OWN MEDICAL ADVISER"** with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers** of **Daughters, I** will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, **I** can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all woman's diseases and makes women well, strong, plump and robust. **Just send me your address**, and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 309 - - - - WINDSOR, Ont.

Whereas, the custom of spraying orchards when the trees are in blossom is becoming common and

Whereas, the custom is detrimental to the fruit growers on account of killing insects which visit the blossoms.

Therefore resolved, that the Government be asked to pass restrictive legislation similar to that adopted by the Province of Ontario for the protection of bees.

Moved by F. H. Johnson.
Seconded by F. Wiltshire.

* * * *

Another resolution unanimously passed asked that the government conduct spraying demonstrations in various centres of the fruit growing sections.

SPRAYS AND SPRAYING

was the subject of a most instructive and practical address by Prof. J. P. Stewart. We will endeavor to give our readers a full synopsis of this address in a future issue.

ON WEDNESDAY EVENING

a letter from John N. Chute, European representative of the United Fruit Companies was read by the Secretary, in which was given a vivid description of market and marketing conditions in the various industrial centres of Great Britain. The letter in question as well as a paper read by W. W. Moore, Chief of the Market Division, touching on some phases of the export apple trade will be published in these columns.

Nova Scotia Fruits in Western Markets was the subject of a discourse by C. W. Baxter, Chief Fruit Instructor, Prairie Provinces. He advised shipping fruit to Manitoba in barrels and to the other Prairie Provinces in boxes. He thought Nova Scotia fruit growers would profit by advertising their fruit more extensively in the West. He also had a good word for the co-operative movement—a movement which was responsible for the present status of Nova Scotia fruit sales in the West.

At the close of Wednesday night's session votes of thanks were tendered to the town of Middleton, W. W. Moore, Inspector Baxter and to Prof. Stewart.

As Prof. Stewart purposed visiting Prof. F. C. Sears, at Amherst, Mass. on his homeward bound journey, the Association asked him to convey to Prof. Sears the fraternal greetings of the Fruit Growers, with whom he had so faithfully labored as a co-league during his sojourn in Nova Scotia.

"Thinning Apples on a Commercial Basis" by John Buchanan and J. M. Robinson, Berwick. "The Brown Tail and Gipsy Moth" by Dr. Robert Matherson and "Is the Brown Tail Moth Spreading in Nova Scotia," by Inspector Saunders, Roundhill, were the subjects up for discussion at the closing session on Thursday morning. Messrs. Buchanan and Robinson showed by facts and figures gleaned from their own personal experiments that it was a paying proposition to thin some varieeies of fruit immediately after the June drop.

Dr. Matherson gave the life history of the Brown and Gipsy moths and strongly urged the fruit growers to co-operate with the inspectors who are actively engaged in locating and destroying the pest.

Acrording to Inspector Saunders' report the Brown Tail moth has a firm foothold in Nova Scotia. It is found quite plentiful in the little valleys opening from the main valleys into the North and South Mountains and only the concerted efforts of fruit growers, farmers and all concerned can stay its ravages and keep it under control.

The fiftieth annual convention was the largest in the history of the Fruit Growers and each and every member felt that they had most interesting and instructive sessions.

MAKES LIFE EASIER

To lessen household drudgery and make life easier for housewives is the basis on which our establishment is founded, and the growth of our business is due entirely to the fact that we have accomplished that object.

The patented and exclusive features that make the "Playtime" superior didn't "just happen." They are the results of years of experience and study. In OUR opinion it is the best washing machine ever made for farm use. We would like YOUR opinion after a careful examination of its merits. See it at your dealer's or send to us for full information

Cummer-Dowswell Limited,
Hamilton - Ontario. 107

INCREASES QUANTITY
IMPROVES QUALITY

POTASH

PROMOTES MATURITY
PRODUCES PROFIT

The increasing consumption of Commercial Fertilizers in the Dominion proves that Canadian farmers are rapidly becoming alive to the great possibilities of these materials in agriculture. All fertilizer mixtures should contain a high percentage of POTASH.

POTASH in the highly concentrated forms of

MURIATE OF POTASH and SULPHATE OF POTASH

can be obtained from all reliable fertilizer dealers and seedsmen.

Secretaries of Agricultural and Horticultural Clubs and Societies desiring one of our representatives to address any of their meetings are requested to communicate with us as soon as possible so that date may be arranged.

Write us for copies of our free, educative bulletins, which include:

"Fertilizing Fodder Crops"
"The Potato Crop in Canada"
"Artifical Fertilizers; Their Nature and Use"
"Farmer's Companion"
"Principal Potash-Crops of Canada"

GERMAN POTASH SYNDICATE 1105 I. O. F. Temple Bldg. TORONTO, - ONT.

WAKE UP, WEAK MEN!

GET SOME LIFE INTO YOU

What's the use of dragging your legs about like a wooden person. Feel like a person with spirit. Away with the pains and aches; off with this wretched feeling as if you were eighty years old and had one foot in the grave. Come and let me put life into your nerves; let me give you a new supply of youthful energy. Let me make you feel like throwing your chest out and your head up, and saying to yourself: "I AM STRONG AND HEALTHY!" Let me give you back that old feeling of youthful fire, vim and courage. I can do it, so that in two months you will wonder that you ever felt so slow and pokey as you do now.

It is for men who open their eyes in the morning upon a world that looks blue and discouraging, for men who feel tired, despondent and out of luck; who have lost the fighting spirit—those fellows who have almost concluded that nothing is worth fighting for—who have pains in the back, and who can't get rest from their sleep, and who wish that they were as strong as they used to be. It is all a matter of nervous energy—that is what ambition comes from—and that is what you can get from Dr. McLaughlin's Electric Belt. It is an invigorator of men.

It will make you strong. It will send the life blood dancing through your veins, you will feel the exhilarating spark warm your frame, the bright flash that comes to your eye, and a firm grip to your hand, and you will be able to meet your fellow man and feel that what others are capable of doing is not impossible to you. This grand appliance has brought strength, ambition and happiness to thousands in the past year. What would you not sacrifice to feel as you did a few years ago, to have the same snap and energy, the same gladness, joyous, light-hearted spirit, and the physical strength you used to have? You know you are not the same man, and you know you would like to be. You can be.

Dr. McLaughlin's Electric Belt makes you noble; it causes the nerves to tingle with the joyous exhilaration of youth; it fills the heart with a feeling of gladness, makes everything look right, and makes the nervous like bars of steel. It has cured Debility, Weakness of every kind, whether in Nerves, Stomach, Heart, Liver or Kidneys, Rheumatism, Pains in the Back and Shoulders, Sciatica, Lumbago, Indigestion, Neuralgia, Constipation, Dyspepsia, and all troubles where new life can restore health. It does all this while you sleep, by pouring electricity, which is Nature's energy, into your nerves and blood. Electricity is life to the vital parts; when they are weak it will make them strong.

Now what would you give to be able to say as these men do—that you are twice the man you have ever been before. You can do so, and it will cost you nothing until you experience these grand benefits. I have cured thousands of men who have squandered the savings of years in useless doctoring.

READ WHAT THE CURED SAY:

Read the Proof—Nothing Short of Miracles Are Being Performed Every Day

Dear Sir,—I write to let you know that I am highly pleased with the work your Belt has done for me. It has done what no medicine would do. For years I have had to take medicine every night for constipation, and now your Belt has completely cured that trouble, also dyspepsia. I cannot thank you too highly for what you have done for me. I am recommending your Belt to all troubled with similar ailments, and no doubt you will hear from some of them soon.

J. ALLAN, North Nation Mills, Que.

Dear Sir,—I wish to say that I think I can honestly say that I am cured. I am perfectly satisfied with the results of wearing the Belt. Before using it I could not go more than two weeks without medicine of some kind, and I often wondered if the time would ever come when I could stop taking it. Now I have not taken a drop of medicine for the last three months, and I do not need it either. I have no more headaches or distress after eating or colic or scalding urine. I can eat anything in the line of food with no bad effect.

ANGUS McKENZIE, Mitchell's Bay, Ont.

My Belt is easy to use, put it on when you go to bed, you feel the glowing heat from it (no sting or burn, as in the old style belts) and you feel the nerves tingle with the new life flowing into them. You get up in the morning feeling like a two-year-old.

Wherever you are, I think I can give you the name of a man in your own town that I have cured. Just send me your address and let me try. This is my twenty-fourth year in the business of pumping new vim into worn out humanity, and I've got cures in nearly every town on the map.

If you will come and see me, I'll explain it to you. If you can't call, let me send you my books, full of the things a man finds inspiring to strength and courage. Free if you send this ad.

Office Hours:--9 a.m. to 6 p.m. Wednesday and Saturday to 9 p.m.

DR. M. K. McLAUGHLIN,
237 Yonge St., Toronto, Ont.

Please send me your book free.

NAME .....

ADDRESS .....

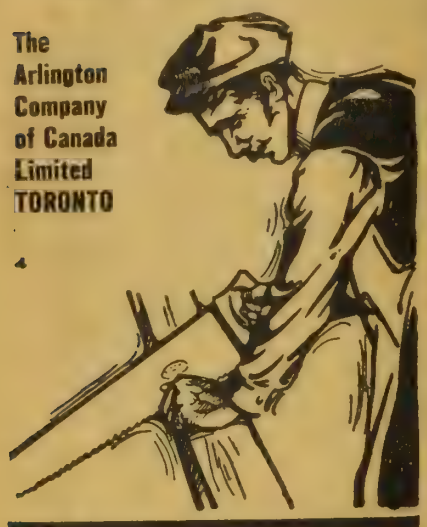
Try an Ad in The Maritime Farmer.

CHALLENGE COLLARS

"FOR THE MAN WHO WORKS"

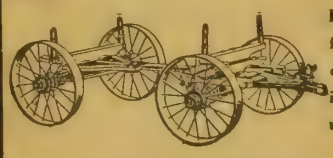
Hard work is no excuse for an untidy appearance. A Challenge Waterproof Collar with its dull linen-like finish will keep you neat and well-dressed. Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

The Arlington Company of Canada Limited TORONTO



T-A Wheels Defy Bad Roads

These Wide-Tire Steel Wheels are built especially to overcome the troubles of travelling over rocky, sandy or muddy roads. They carry 25 to 50 per cent. heavier loads without causing any heavier draft on the horses.



Built low for ease of loading and unloading

Get a T-A Handy Farm Wagon---It's just the kind you need on your farm. This sturdy little wagon will get over the ground quicker and with less strain on your horses than any other wagon that's made.

Tudhope-Anderson Co., Ltd.,
Orillia, Ont.

Drop us a card and get our catalogue telling all about

T-A Handy Farm Wagons and Wide-Tire Steel Wheels

Gates' Nerve Ointment
For Frost Bites

C. Gates, Son & Co.,
Middleton, N S.

Gentlemen:--I had the misfortune to freeze my toe which caused me a great deal of suffering, and although I had it treated, yet without success till I used your Nerve Ointment, which has completely cured it, and I have no hesidency in recommending it to others as the best I ever used,

Yours sincerely,
Matthew Wood,
Point Phillip, N. S.

The Prevention of Colds

This is the season of the year when colds are taken more easily, due to carelessness more often than any cause, and so many diseases may follow in the train of what we term an ordinary cold that we need to avoid the beginning of evil; and colds, aside from the temparary discomfort, are apt to leave an enfeebled system upon which some serious disease may fasten. It is much better to take the trouble to wear extra wraps and put on good rubbers when one must be out on damp or very cold days than to suffer from neglect of such precautions. Damp feet are especially provocative of bodily chill and the ankles should always be well covered in cold weather. If the feet and legs are cold and damp, the blood flowing through them quickly becomes (nilled and the same may be said of cold hands and wrists. This may produce a serious chill in many important organs, and the slight discomfort of wearing overshoes and heavy glopes will be more than compensated by the protection from far worse ills.

In times of severe cold weather or long exposure in moderately cold weather, a good supply of nourishing food, not difficult of digestion, is very valuable in maintaining the bodily temperature and thus warding off colds. Never omit regdlar bathing, for unless the skin is in active condition the cold will close the pores and favor congestion or other diseases. One cause productive of harm is damp cellars and dampness of dwelling rooms, as dampness will bring on colds, rheumatism and many other ills. One of the chief causes of colds in persons living in rooms heated with stoves lies in the extreme dryness of tne air. A vessel of clean water on the stove will supply moisture to the atmosphere, and this lessens the irritation in the nose and throat that is caused by the dry air. When radiators are used a damp cloth hung near (he radiator will be of help.

One mother says she keeps her children free from colds and other diseases by allowing them to eat freely of onions and apples all through the winter, and she has taught them to drink plenty of cold water, and especially a drink in the morning and at least one at night. Wet mittens have been the cause of many colds. Every child should have two or three pairs for everyday use, and in snow ball season they shod d be exchanged as often as wet. One of the best ways to prevent colds and sore throats is to use an antiseptic wash and make a practise of gargling thoroughly every night and morning. There is nothing better to use for this purpose than a borax solution prepared by dissolving a heaping tablespoonful of powdered borax in a quart of hot water, then adding a little salt and keeping in a bottle ready for use. Use a little of this borax solution as a snuff night and morning to prevent colds in the head. This preparation will almost always stop a cold if one uses it in time. There seems to be a little doubts that colds result from a disease germ, and the borax solution cleans the air uassages of the nose. It is said that dust may convey the specific germ of cold, and it is wise when sweeping a room or driving out in the dust tr put a little vaseline in each nostril to keep the dust from finding its Aay to the air passages.

Last, but not least, is the subject of ventilation, as a lack of ventilation in living rooms will oftener induce a cold than too much fresh air. It is a good plan to air the sleeping rooms twice a day, early in the morning and late in the evening, and keep one window down at the top day and night.

FREE TO BOYS AND GIRLS

This beautiful Gold Finished Watch in Gents' and Ladies' size hunting case, stem wind and set, the case is engraved in a large variety of designs. The Locket is complete with chain and strong clasp, correct length and suitable for photographs. Your choice of these three articles is given Free for selling 35 sets of our embossed post cards at 10c. per set (6 cards in a set). These are fast selling cards—not trash, and are composed of Easter, St Patrick, Valentine, Views, Comics and Birthday, etc. Send us only your name and address and we will send the cards; when sold return the $3.50 and your premium will be sent at once post paid.

MONARCH NOVELTY CO. Dept. 26 - - Toronto, Ont.

New Vitality For Men

USE THE

Free Coupon

Vitality gives you the manly courage to protect those depending upon you, as portrayed in the picture. No matter what thoughtless action or early indiscretion may have sapped your strength, vitality restores it to you. It makes you over into a strong, vital, manly man, without an ache, pain or weakness. Vitality puts the real VIGOR OF YOUTH into your blood; no matter how nervous or debilitated you may be, it puts the sunshine of vigorous manhood into your life; I make you feel young and keep you feeling young, without the use of drugs, without the necessity of dieting, without one bit of change in your present mode of living, except, of course, dissipation must cease. Just lead a manly life and use my HEALTH BELT; everything else will come. My HEALTH BELT, worn at night, pours a great, soft stream of VITAL STRENGTH into your blood, nerves and organs during all the hours you sleep; in one night it takes the kink, pain or weakness out of your back, ere long friends will be saying: "How well you look," and you are answering: "Never felt better in my life!" Your eyes will sparkle with health; you will have that pleasing influence to fascinate and control which comes to all full-blooded, strong, vital, manly men. Thousands upon thousands are now using my Health Belt all over the world. With special attachments it cures rheumatism, kidney, bladder, stomach disorders, etc.

Let Me Send You This Book Free....

Here is my latest illustrated book: "Health In Nature," containing a fund of private information relating to weakness of men. All men, young or old, can read every word of this little publication with great profit. Sent to you in plain, sealed envelope by mail. The book is not not written with the idea of compelling you to use my Health Belt; it is meant merely as a guide for men, and while my Belt is fully described, there is absolutely no obligation on your part to purchase. I simply want you tc read this book that you may know certain truths about all weaknesses, which have never been printed before. Vitality is the greatest thing in the world, and I can supply you with it. Please fill in the coupon for the free book.

DR. M. F. SANDEN CO., 140 Yonge Street, TORONTO, Ont.

Dear Sirs—Please forward me your book as advertised free.

NAME ....

ADDRESS ....

I'd Rather

I'd rather be a could be
If I cannot be an are,
For a could be is a may be,
With a chance of reaching par.

I'd rather be a has bt*h
Than a might have been, by far;
For a might be is a hasn't been,
But a has was once an are.

Also an are and am, is
But a was was all of these;
So I'd rather be a has been
Than a hasn't, if you please.

Fear

Four years ago a young man was ordered south by a northern physician. After several months chasing, in which the M. D.'s. rid him of all his worldly possessions, he was informed by a specialist that he would shuffle off within three months. He told the doctor that he had an opportunity to make $25,000 if he could live six months, and he was advised to get busy and get all he could in the shortest possible time, so that he codld leave a legacy to his wife and family.

The other day the doctor who gave this advice was visiting in a distant town, when he was approached by a 200-pound husky, who greeted him cordially. The doctor was at a disadvantage, as he did not recognize him. The Heavy recalled himself to the genial M. D., by reminding him of the lunger he had sent away four years before to earn $25,000. The doctor, though accustomed to surprises, was dumfounded, in beholding a man of fine physique and in perfect health.

This man was so busy making the $25,000 and the subsequent thousands that he forgot all about his disease and became a cure.

Here is an illustration of what total absence of fear will accomplish.

One-half of disease is in one's mind, the other half in the stomach.

A small ill, stimulated with proper fear, will finish the best.

One should not fear learning one's actual condition. Equipped with the proper knowledge, fight it, by occupying the mind with something cheerfully nourishing.—Fruit Magazine.

Quiet Refinement

There are some people who never need to conform to any established rule of society, to whom an easy and refined manner is second nature, and even though they may be placed in the most awkward of positions, yet they never seem disturbed.

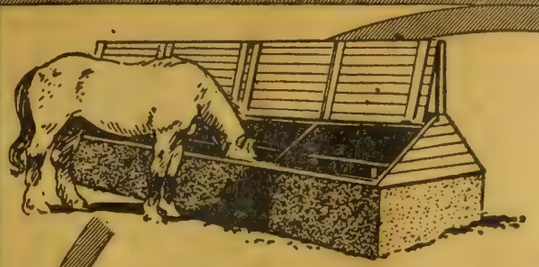
But most people are obliged to keep abreast of the times both by study and observation. To such I would say, if you are a housewife without servants, do not attempt a greater display upon the arrival of guests than your own family are in the habit of receiving, for only humiliation will reward your labors.

Sit down and chat with your friends and make them at home, and they will enjoy themselves much better than if you spent the greater part of your time in the kitchen. If you cannot serve a dinner with all its courses without weariness and nervousness, prepare a simple meal which has cost you but little labor and has left you free to entertain comfartably and easily.

Quiet refinement shows better breeding than great display. Be yourself and not an imitation of others.

A Precious Addition to the Flock

On December 26th, 1912, the stork called at Black Adder Farm, French Fort, P. E. I., and left a young shepherdess to grace the home of Mr. and Mrs. Geo. L. Boswall.



Ask us for this book it is free.

CONCRETE watering-troughs and feeding-floors help to keep your live-stock healthy.

HORSES and cattle watered from a concrete trough are less likely to contract disease. Concrete is sanitary, easily cleaned — does not rot or leak. Once built, a concrete watering-trough will last forever. You need never waste time "patching it up." Like all concrete improvements, its first cost is its final cost.

MANY diseases of hogs are directly due to feeding from the filthy, unwholesome mud of the barn-yard. This manner of feeding is also wasteful, because the grain is trampled into the ground, in such a condition that not even a hog will eat it. Concrete feeding-floors, with concrete swill-troughs are clean, sanitary. They keep hogs in better health and save feed.

WATERING-TROUGHS and feeding-floors are only two of scores of valuable, every-day improvements that may be made of concrete. All are fully described in our 160-page, illustrated book,

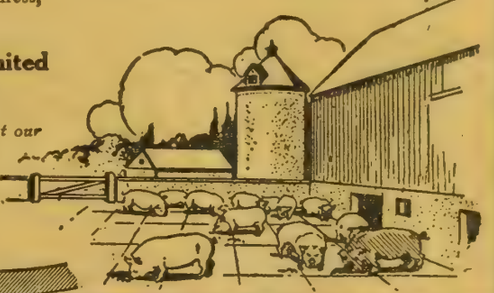
"WHAT THE FARMER CAN DO WITH CONCRETE"

sent free to any farmer upon request. This book has shown thousands of Canadian farmers how to make their farms more profitable. In asking for it, you do not place yourself under the slightest obligation to buy cement, or to do anything else for us. Simply ask for the book, by letter or post card, and it will be mailed at once. Address,

Publicity Manager
Canada Cement Company Limited
514-561 Herald Building, Montreal

REMEMBER, when in doubt, that our Farmers' Free Information Bureau will answer any questions on the use of concrete that you desire to ask. This service is free of charge.

Be sure that this label is on every bag.



Practical Dishwashing

A dessert spoonful of borax in a gallon of dishwater polishes the china so well, without harm to the hands. My best "dishrags" are made of half an old flour sack basted double, making a double soft cloth a foot square. A metal kettle scraper, consisting of an iron dishwasher, with the rings removed from the handle, is something I should not try to do without for common every-day dishwashing. A meat rind kept handy with which to go over all bottoms of kettles, pans, etc., that may be set next the blaze will make it easy to rub off the black with a paper, using a little soda. I keep papers in the kettle cupboard.

A cotton mit to wear while brushing off the range with a dusky cloth will save the hands, and once can then wash a cotton mit once a week instead of scrubbing a live "mit" twenty-one times a week.

The only thing we know as changeable as the weather these days is our young lady's disposition toward us.

"EASTLAKE" METALLIC SHINGLES FOR YOUR HOME ROOF

"EASTLAKE" METALLIC SHINGLES

Have been used for many years in preference to wooden shingles, and they are now rapidly replacing slate roofing. Why?

Because "EASTLAKE" METALLIC SHINGLES will not split, crack or wear out, neither can they warp or swell, and are not affected in any way by weather conditions.

They do not require heavy timbers to support them, thus lessen the weight of the roof to a considerable extent.

Barns and public buildings covered twenty-six years ago with "EASTLAKE" STEEL SHINGLES are as good as new to-day.

We will tell you the cost, if you send the measurements of barn, house or building to be roofed. *Let us send you our free booklet.*

685

THE METALLIC ROOFING CO. LIMITED
MANUFACTURERS - TORONTO & WINNIPEG

AFTER WORK USE

SNAP

It will clean your hands thoroughly and quickly no matter how soiled they are and leave them smooth and soft. Ink, paint, oil or grease stains, off they come with Snap. Get a Can To-day. 15c. at Your Dealers. Save the Coupons.

Snap Company Limited, Montreal

$2.00 Worth for $1.00

This illustration shows the inside working of the 2 in 1 Automatic Awl. This is absolutely the only tool in the world that will sew with either a waxed thread or steel wire. The 2 in 1 is a combination of the two best dollar tools in the world, and should sell for $2.00, but to introduce it we will send it all charges paid to any address for $1.00. The 2 in 1 will sew harness, boots, bags tents, pulley-belts, etc., making a perfect lock-stitch and yet it is so compact that it can be carried in the pocket like a knife.

We will send the 2 in 1 complete, with a large reel of waxed thread, a skein of special process steel wire and three extra needles, charges paid for $1.00.

FISHER-FORD MFG. CO. 31 QUEEN STREET W. TORONTO, ONT. Dept. 54 Agents Wanted

Mill Work

Mr. Mill Man

get your mill repair work done by the Sussex Manufacturing Co. We are fully equipped for all kinds and can guarantee satisfaction. Orders will be promptly attended to.

We also manufacture Trimmers, Mill Rollers in all sizes, Arbors to order, Smoke Stacks, Frictions, Wood Pulleys split or solid, Boxes in all sizes, Flanges, Set Collars, Couplings etc.

PRICES ON APPLICATION

The Sussex Manufacturing Co., Ltd.

There is no better medicine made for colds than Chamberlain's Cough Remedy. It acts on nature's plan, relieves the lungs, opens the secretions, aids expectoration; and restores the system to a healthy condition. For sale by all dealers.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V.S. Kingston, Ont.

Full line of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

Nova Scotia Farmers' Association in Annual Session.

(Continued from page 299!

Whereas, the Provincial Exhibition held annually at Halifax is not rearhing the majority of our farmers as it should and,

Whereas, we believe the expense attendant on transportation of live stock to and from the exhibition is one of the chief reasons why the ordinary farmer does not exhibit.

Therefore resolved, that the Nova Scotia Farmers' Association as at present convened in the town of Sydney respectfully request the Exhibition commission to take such steps as may seem best to them in order that all transportation charges on live stock and farm products may be fully paid believing this to be in the interest of the exhibition.

C. B. Blanchard,
H. W. Coombs.

* * * *

At the invitation of the Cross Fertilizer Co. many of the farmers took advantage of the opportunity to visit their up-to-date fertilizer factory.

At the close of Wednesday night's meeting The Cross Fertilizer Co. entertained the visiting delegates at a banquet at the Sydney Hotel. Plates were set for about two hundred guests and an enjoyable season was spent. The various toasts brought forth clever responses.

On Thursday morning the delegates visited North Sydney and Glace Bay and on Thursday afternoon the Dominion Iron & Steel Co. threw open their doors and the farmers were allowed to start at the raw products end of the plant and follow the various phases of its manufacture through to the finished products department, after which the delegates returned to their respective homes well pleased with the convention and with a better appreciation of the Island of Cape Breton.

The P. E. I. Short Courses.

The Prince Edward Island Department of Agriculture, ever alive to the best interests of the young men of the farm, this year inaugurated an agricultural short course, which has been successful beyond the most sanguine expectations of its promoters.

To cope with this undertaking, the Agricultural Hall was purchased and equipped with ample seating accommodation for the students and stalls and pens .or the horses, cattle, sheep, pigs and poultry used for class demonstration work.

The teaching staff consisted of Miss Dutcher and Miss James, on Domestic Science; Mr. Williams, Mr. Carey and Prof. W. S. Blair, on horticulture and apple packing; Mr. T. A. Benson and Pro.. J. P. Landry, on Poultry; Mr. Harvey Mitchell, on Dairying; Mr. J. A. Clark, Mr. S. J. Moore and Prof. Landells, on Cereal Husbandry; Messrs. R. Robertson, Reid, McRae and Telfer on Animal Husbandry and Dr. Pethick on the Diseases of Animals.

Prof. Ross, the capable secretary of the Island Agricultural Department, under the direction o Hon. Murdock McKinnon, the Commissioner, directed the whole course, and it must have done their hearts good to witness the zest with which the five hundred students, all ages, applied themselves to their respective studies.

The Department deserves every congratulation on the success of this their first short courses in agriculturw. We know the students returned to their respective homes with a new zeal in and .or their chosen profession.

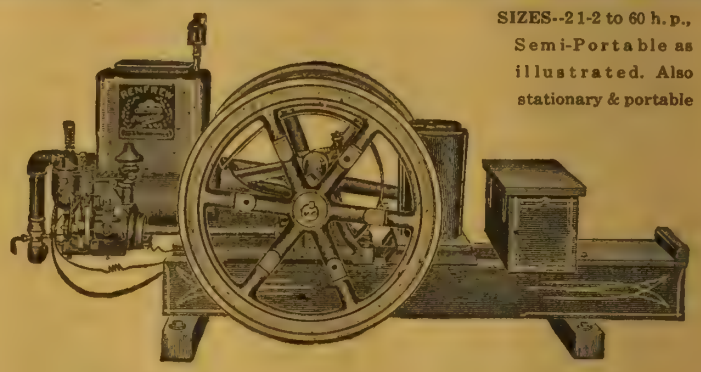
Roofing

Free Samples
Free Catalogues
Free Plans

Are you interested in a roofing that will protect your barn against fire, water and lightning.

Important information on this subject together with particulars about Galt Steel Shingles will be sent to you without charge or obligation. A post card will bring it by return mail.

The Galt Art Metal Co. Limited
265 Stone Road, Galt, Ontario.



SIZES--2 1-2 to 60 h.p., Semi-Portable as illustrated. Also stationary & portable

"That's the slickest engine I ever saw"

So remarked an agent who has handled many different makes of gasoline engines in the last twenty years. "Why, he said "that special governor of yours would make any man want the

Renfrew-Standard

gasoline engine if he had no other reason for buying it."

The governor that the agent spoke so enthusiastically about is, we might say, one of the principal features of the Renfrew-Standard engine. It is undoubtedly the most efficient governor yet devised—immediately superior to the old fly wheel type. It controls the engine perfectly, allowing speed to be changed at will while engine is running, and automatically cutting off the supply of gasoline and electricity from batteries should engine exceed speed for which it is set. The simplicity and durability of this governor also makes the Renfrew-Standard engine especially adapted to withstand rough usage.

Other special features of the Renfrew-Standard are told about in our engine booklet. Send for a copy and learn what they are.

The Renfrew Machinery Co. Ltd.

Head Office and Works, RENFREW, ONT.
Sales Branches at WINNIPEG, Man. and SUSSEX, N. B.

If you want a little engine write us about the Gifford 1½ h.p. This is, we believe, the most effective and reliable little engine made.

BUTTER Direct Importers and Printers
WRITE PARCHMENT
FOR SAMPLES AND PRICES PAPER.
The D. P. Brown Paper Box & Paper Co. Ltd., ST. JOHN, N. B.

EGG BOXES
MILK BOTTLE CAPS
APPLE BARREL
PULP HEADS

An advertisement in the Maritime Farmer will sell your surplus stock---Try it!

British Columbia Farmers Do Not Want Tubercular Cattle---No Sane Person Can Blame Them.

Editor Maritime Farmer.

In the December 27th issue of 'Canadian Farm,' there appeared an editorial criticism of the new Dominion regulation relating to the tuberculin testing of pure bred cattle received for shipment to British Columbia. The article appeared to be somew a misleading, and the writer apparently assumes that this is the first step taken to eradicate tuberculosis from the herds of British Columbia. A brief resume of work already done would not be amiss.

We beg to state that the regulation in question was not "recommended at the instigation of the veterinary profession of the Pacific Province. At the request of the farmers of the province, the Provincial Department of Agriculture began the work of eradicating bovine tuberculosis in 1909, and consistent efforts have been put forth ever since that date. The progress made has been even greater than was anticipated by the most sanguine, and it is expected that within a few months the disease will be practically eradicated. Diseased animals are slaughtered, and remuneration made to the owners to the extent of one half of the value of the animal. The maxium valuation, however, is limited to $75.00 in the case of a grade animal and $150.00 in the case of a pure bred.

Looking at the situation from all standpoints, we cannot believe that an unprejudiced person can see any injustice in the regulation. Surely the farmers and stockmen of British Columbia have the right to purchase healthy animals. Furthermore, we believe that, indirectly, the regulation protects the breeders in other provinces. Should a farmer of British Columbia purchase an expensive pure bred animal and shortly after have it condemned for tuberculosis, neither he nor his neighbors would be likely to purchase another from the same source.

We sincerely hope that in the very near future the regulation will be amended to include all animals shipped into British Columbia, except those brought in for immediate slaughter.

Quoting from the editorial, "This "regulation strikes at the very foun-"dation of this (inter-provincial) "trade, and if allowed to remain in "force will deal a death blow to live "stock trading between the different "provinces." Surely not. We do not believe it is fair to the live stock industry of Canada to insinuate that in any part of the Dominion there are not enough animals free from tuberculosis to supply the inter-provincial trade. We agree with the editor of "Canadian Farm" that the disease is contagious, and on this knowledge we base our belief that the restriction of the movement of diseased animals is desirable.

In addition to tuberculin testing, the Provincial Department of Agriculture has had in operation for several years, a very complete system of inspection of cattle stables. All premises are graded according to the existing sanitary conditions, and our inspectors give instructions as to how the sanitary conditions may be improved.

In conclusion, we would venture the opinion that, in addition to giving protection to the British Columbia farmer, the new regulation will stimulate trade between this province and the other provinces of the Dominion. Furthermore, it will lend encouragement to the breeders in other provinces who have been keeping their herds free from the disease, and, in general, should encourage the fight against bovine tuberculosis. We are convinced that the new regulation will be welcomed by all progressive cattle breeders as an important step in the right direction, and trust that what British Columbia has been able to accomplish may serve of value to the other provinces, indicating as it does, that bovine thberculosis may be successfully combated.— W. T. McDonald, Live Stock Commissioner.

Editor's Note.—We believe our Maritime Province stockmen are all in accord with the regulations passed by the Pacific province. It is a move in the right direction and one that must eventually come in force in all the provinces. No measure is too drastic in prevention of further infection and stamping out of the loathful disease.

The Basis of Oliver Success

THERE is one point about Oliver plows which gives them peculiar value in the plowing of Eastern Canadian fields. Each type of Oliver plow is manufactured for a certain section of the country, and can be depended upon to do good work under the conditions obtaining in that section. Before offering a type of plow for sale in any locality, Oliver plow manufacturers always send their expert plow designers to the place where the plows are to be used. These men study the conditions of climate and soil, learn the likes and dislikes of the people who are to use the plows, and when they return to the factory, they are able to superintend the manufacture of a plow which meets all the required conditions in the place where it is to be used.

Oliver Plows for Eastern Canada

The group of Oliver plows built for Eastern Canada includes walking plows of the famous Oliver No. 40 series, sulky plows, gang plows, and walking gang plows. Each of these is built for a certain purpose, and is the best plow obtainable for that particular purpose.

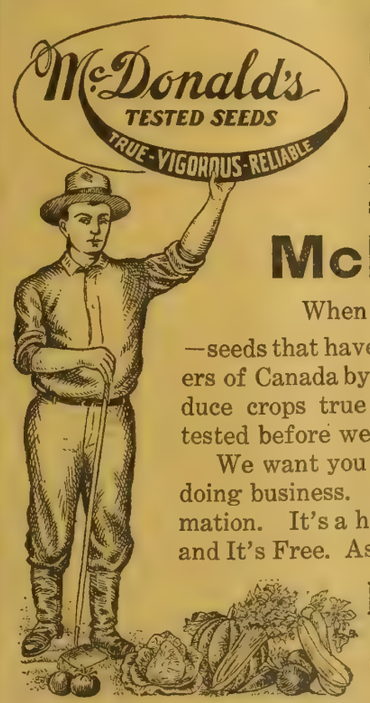
Back of the whole group is the fifty-seven years of successful plow experience of the Oliver Plow Works. This experience eliminates everything in the way of chance. You do not have to experiment with Oliver plows. Go to the I H C local agent and tell him what kind of plowing you have to do, and he will show you a plow built to do that kind of work and do it in the best possible manner. You can get catalogues and full information of the entire Oliver line from him, or, if you prefer, write the nearest branch house.

Eastern Canadian Branches

International Harvester Company of America
(Incorporated)

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

These machines are built at Hamilton, Ont.



SEEDS THAT GROW GOOD CROPS

YOU can't afford to buy anything but the best in seeds, because what you buy in seeds largely determines what you'll reap in harvest. It's easy to raise big, plentiful crops from the seed of strong pedigreed strains, that's why so many people use

McDonald's Tested Seeds

When we say "Tested Seeds" we mean seeds that we know all about —seeds that have won the confidence of the most critical farmers and gardeners of Canada by their ability to yield big, bountiful crops,--seeds that produce crops true to name and description,--seeds that are all carefully tested before we send them out.

We want you to know all about our seeds, and about our way of doing business. Our 1913 Catalogue will give you lots of information. It's a handsome, helpful and finely illustrated book--and It's Free. Ask for it on a post card, or use the coupon.

Kenneth McDonald & Sons, LIMITED

OTTAWA ONTARIO

FREE CATALOGUE COUPON

NAME.....

Address.....

PLEASE SEND ME YOUR NEW SEED CATALOGUE FOR 1913

Farmer's Butter Parchment Offer.

The Maritime Farmer's co-operative butter parchment offer is attracting much attention from those engaged in dairying. Hardly a day passes now but the mail brings one or more enquiries from those who are desirous of effecting a big saving in their butter parchment bills. By buying direct from the largest mill in Germany, the Maritime Farmer is able to save all superfluous profits and in turn offers its parchment at prices that have never been touched in the Maritime Provinces. The Farmer's offer brings to users of butter parchment, wholesale prices. The idea of co-operation is that users will band together and send us orders for not less than five reames (2,500 sheets), printed or plain. In either case a big saving is assured those who use parchment. The Maritime Farmer will appreciate an enquiry from you. It will be answered promptly. Already we have shipped out a lot of orders and buyers should provide for their wants early. The order should be accompanied by cash, as we prepay all freight charges to the nearest railway station.

The Maritime Farmer will send to any address, post paid, one of its useful stallion record books. Each book contains 100 forms for recording full description of mares, 100 receipt forms and 100 blank notes of hand. It is a perfect system of keeping an accurate record of all transactions during the season. Every groom should have one. It provides him with a complete bookkeeping outfit and the books fit comfortably into an inside pocket.

Dairymen of N. S. Hold Convention

To help advance the dairy industry in Nova Scotia, a convention of the cheese factory and creamery men was held in the Dairy Building, at the Agricultural College, Truro, on Tuesday, January 10th.

The meeting was called to order at 11 a. m., by W. A. McKay, Dairy Superintendent, who outlined the objects for having called the convention together, stating that up to the present 7time the factorymen had had no opportunity of meeting each other. In fact, they didn't know each other and that such a meeting as this was the only means of getting the men together for discussing the many problems which arise that are peculiar to creamery and cheese factory men, and trusted that the outcome of this meeting would be a more hearty co-operation among the men on whose shoulders largely rests the responsibility of increasing and encouraging the dairy work in the Province, and that free discussions would be taken part in on all the questions to be discussed.

C. W. MacDougall, Dairy Superintendent for New Brunswick, was appointed chairman of the Convention, and W. A. MacKay, secretary, and a resolution committee was appointed.

Prof. Cumming, Secretary of Agriculture, gave a short practical address of encouragement, expressing the willingness of the Department of Agriculture to assist the dairy industry in the province in any tangible and businesslike way possible.

The afternoon session was given over to short papers as follows: Marketing of Dairy Produce, F. E. Porter, Yarmouth; Co-operation between Factoryman and Patron, R. L. Rutherford, B. S. A., River Herbert; Winter Dairying and Its Advantages, R. B. McLennan.

Mr. G. A. McKenzie, of Scotsburn, being unable to be present, sent a valuable paper on Milk and Cream Testing.

These papers were all short and practical and were thoroughly discussed by all present after each one was read. These papers can be seen in this and succeeding copies of the Maritime Farmer.

The resolution committee submitted the following resolutions at the evening meeting which were read, discussed and passed unanimously.

Resolution No. 1. Whereas under the existing conditions for marketing the produce of the cheese factory and creameries in the Province of Nova Scotia are not as satisfactory to the factoryman as might be owing to the fact that to the average salesman it is difficult to ascertain the market price of butter and cheese, be it resolved that we, the Dairymen of Nova Scotia, here assembled, appoint a secretary to receive a weekly report every Saturday from the difierent cheese factories and creameries in the Province stating the average selling price for the week previous, F. O. B local station, and that the secretary take steps and means to get an accurate market report weekly from the markets of Montreal, Halifax and elsewhere, make a summary of the market prices and conditions and the average price of all factories from the last report and mail a statement of the above to each of the factories sending in weekly reports for the previous week on Monday, or as early in the week as possible, provided funds to carry on the work can be realized.

Resolution No. 2.—That we approve of holding a Dairy Herd Competition in the province during the year, according to the plan drafted and presented to us by W. A. MacKay.

Resolution No. 3.—That owing to the fact that the refrigerator car service in operation during the past season was not satisfactory to some of the factories, that we urge that the service be improved and extended to overcome the existing difficulties and that we request Mr. MacKay to take the matter up with the proper authorities.

Resolution No. 4.—That we recommend that we hold an annual meeting of the Dairymen and that the chairman appoint a committee of three to appoint time and place and make necessary preparations.

Resolution No. 5.—That we recommend that the committee appointed to prepare programme for next meeting, prepare plans, etc., for the organization of a Dairymen's Association.

The chairman appointed W. A. MacKay, F. E. Porter and R. L. Rutherford as a committee as provided in Resolution 4.

The convention was not large in number but a representative one of nearly all the creameries and cheese factories in the Province and what

ROYAL WIRE FENCE

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SARINA, ONTARIO.

WHEN we say direct from Factory to Farmer, it means a saving in dollars to our farmer customers, our method of selling means that we permit our customers to retain for themselves the commissions and profits which under usual methods of selling fence go to the agent or dealer. Efforts are made by these agents to have you believe that the difference in price of Royal fence and the prices of other makes is due to inferior quality. This is not the case; fifty thousand of the most prosperous farmers in Canada bought Royal fence during 1912. They are far too wise to buy wire fence for mere price reasons, they investigated and acted on their best judgment, and every one of them stand ready to tell you that Royal fence is made of the best all number 9 hard steel wire with the best galvanizing, and the most perfectly woven fence they ever used, and they had it delivered at their railroad station at from 5c to 10c per rod less than their dealer or agent could possibly sell them.

We know that our direct from factory to farm method is such a dollar saving proposition that we fearlessly publish our prices which include freight prepaid by us to any railroad station south of North Bay in old Ontario. Stop for one moment and think what price you were compelled to pay for fence before the Sarina Fence Company came into the field, and in recalling the old prices you would not need to draw very much upon your imagination to know where the price of fence would go if the Sarina Fence Company could be gotten rid of, it is therefore in the interests of every farmer not only to purchase Royal fence, but to use his influence with his neighbors as every customer helps us reduce our cost of manufacturing and enables us to keep our prices down. Our entire plant which has more capacity than any three other plants in Canada is running day and night, and our entire product is marketed to the farmer direct. We want your orders whether for one bale or a car load, and we sell all our fence with the guarantee, **your money back, and we pay freight both ways, if dissatisfied.**

The following are the prices at which we are selling fence. On account of the continued upward prices of the wire market, we do not guarantee them for any given period. We may be compelled to advance the prices again, but you may rest assured that we will not advance until compelled to, we therefore urge you to buy your fence as early as possible.

5-40-0 HORSE AND CATTLE FENCE, has 5 line wires 40 in. high, 9 stays to the rod, al lNo. 9. Hard Steel wire, spacing 10, 10, 10, 10. Weight per rod 6 1-2 lbs. Price per rod freight prepaid in Old Ontario..... **19c**

6-40-0 HORSE AND CATTLE FENCE, has 6 line wires 40 in high, 9 stays to the rod, all No. 9. Hard Steel wire, spacing 7, 7, 8, 9, 9. Weight per rod 7 1-2 lbs. Price per rod freight prepaid in Old Ontario..... **21c**

7-40-0 HORSE, CATTLE AND SHEEP FENCE, has 7 line wires 40 in. high, 9 stays to the rod, all No. 9 Hard Steel wire, spacing 5, 6, 6, 7, 7 1-2, 8 1-2, Weight per rod 8 1-2 lbs. Price per rod freight prepaid in Old Ontario **23c**

7-48-0 HORSE AND CATTLE FENCE, has 7 line wires 48 in high, 9 stays to the rod, all No. 9. Hard Steel wire, spacing 5, 6, 7, 9, 10, 11. Weight per rod 9 lbs. Price per rod freight prepaid in Old Ontario..... **24c**

8-34 SHEEP AND HOG FENCE, has 8 line wires 34 in. high, 12 stays to the rod, all No. 9. Hard Steel wire, spacing 3, 3 1-4, 3 1-2, 4 3-4, 5 1-2, 6, 8. Weight per rod 10 lbs. Price per rod freight prepaid in Old Ontario **27c**

8-40 GENERAL STOCK FENCE, has 8 line wires 40 in. high, 12 stays to the rod. all No. 9. Hard Steel wire, spacing 3, 4, 5, 6, 7, 7, 8. Weight per rod 10 1-2 lbs. Price per rod freight prepaid in Old Ontario..... **28c**

8-48 GENERAL STOCK FENCE, has 8 line wires 48 in. high, 12 stays to the rod, all No. 9. Hard Steel wire, spacing 4, 5, 6, 7, 8, 9, 9. Weight per rod 11 lbs. Price per rod freight prepaid in Old Ontario..... **29c**

9-48-0 GENERAL STOCK FENCE, has 9 line wires 48 in. high 9 stays,to the rod, all No. 9. Hard Steel wire, spacing 3, 4, 5, 5, 6, 8, 8, 9. Weight per rod 11 lbs. Price per rod freight prepaid in Old Ontario..... **29c**

9-48-0-S HORSE AND CATTLE FENCE, has 9 line wires 48 in. high, 9 stays to the rod, all No. 9. Hard Steel wire, spacing 6, 6, 6, 6, 6, 6, 6, 6. Weight per rod 11 lbs. Price per rod freight prepaid in Old Ontario..... **29c**

9-48 GENERAL STOCK FENCE, has 9 line wires 48 in. high 12 stays to the rod, all No. 9. Hard Steel wire, spacing 3, 4, 5, 5, 6, 8, 8, 9. Weight per rod 12 lbs. Price per rod freight prepaid in Old Ontario..... **31c**

10-50 HORSE, CATTLE, SHEEP AND HOG FENCE, has 10 line wires, 50 in. high, 12 stays to the rod, all No. 9. Hard Steel wire, spacing 3, 3 1-4, 3 1-2, 4 3-4, 5 1-2, 6, 8, 8, 8. Weight per rod 13 1-4 lbs. Price per rod freight prepaid in Old Ontario..... **33c**

11-54 HORSE, CATTLE, SHEEP AND HOG FENCE, has 10 line wires 54 in. high, 12 stays to the rod, all No. 9. Hard Steel wire spacing 3, 3 1-4, 3 1-2, 4 3-4, 5 1-2, 6, 6, 6, 8, 8. Weight per rod 14 1-2 lbs. Price per rod freight prepaid in Old Ontario..... **37c**

15-50P STOCK AND POULTRY FENCE, has 15 line wires, 51 in. high, 24 stays to the rod, top and bottom, No. 9 filling, No. 12 Hard Steel wire, spacing 1 7-8, 1 7-8, 1 7-8, 1 7-8, 2, 2, 2 1-2, 3, 4, 5, 5, 6, 6, 7. Weight 12 lbs. Price per rod freight prepaid in Old Ontario..... **37c**

FARM GATE 12x48 Freight paid with fence orders.... **$4.00**

FARM GATE 13x48 Freight paid with fence orders.... **$4.25**

FARM GATE 14x48 Freight paid with fence orders.... **$4.50**

WALK GATE 3 1-2x48 Freight paid with fence orders.. **$3.00**

STAPLES GALVANIZED 1 3-4. in per box of 25 lbs., freight paid with fence orders only..... **$0.75**

BARBED WIRE, GALVANIZED, Two point per spool of 80 rods. freight paid with fence orders..... **$2.25**

BRACE WIRE No. 9, Soft per coil 25 lbs. freight paid with fence orders..... **$0.85**

STRETCHER, All iron, top and bottom draw, very heavy tested chain, extra single wire Stretcher and splicer, the best stretcher made at any price, freight paid with fence orders..... **$7.50**

The above prices include freight prepaid by us to any railroad station (electric and boat lines not included) south of North Bay in old Ontario. We do not prepay freight on gates, stretchers, barb wire, brace wire or staples, except when ordered shipped with fence. All fence in 20, 30 and 40 rod rolls only.

Customers in New Ontario, Quebec, Maritime Provinces, and the North-West may deduct 2c. per rod from the above prices of fence, 25c. from the gates, stretcher and barb wire, 10c. from the brace wire, and 15c. from the staples; customer to pay his own freight from Sarina. Write us, tell us what style you want and we will tell you what your fence will cost you after paying your freight. We have never yet found a locality in the Dominion of Canada where our price with the freight added was not less by a good margin than your local dealer or agent will ask you.

The SARNIA FENCE COMPANY, Limited, Sarnia, Ont.

was lacking in numbers was made up in enthusiasm and optimism. Everyone present expressed himself freely on the different questions discussed, indicating that there is a bright future for factory dairying in Nova Scotia, that we had advantages here for dairying not equalled by any province in the Dominion, and that a determined united effort by all interested would mean that greater advances would be made in years to come than in the past and that the business would go along from year to year showing rapid increases.

We hope next year to report the organization of the Dairymen's Association of Nova Scotia and that it will be the means of bringing more hearty co-operation among the factories, offer encouragement for new factories to start in unoccupied territories and be the means of disseminating useful information among those interested in the different factories.

The N. S. A. C. 1913 Short Courses.

The Short Courses at the Nova Scotia Agricultural College held from Jan. 7th to the 17th have been the most successful of the whole series held in the history of the college. The attendance was 250 and in addition there was a special class of some fifty ladies who took a course in dairying, poultry, horticulture and domestic science.

In previous years, the short courses at Truro have included students from all of the Maritime Provinces. This year Prince Edward Island is holding its own short course and hence the usually large contingent from that Province did not go to Truro. The attendance at Truro was made up of some fifty-seven from New Brunswick, and the balance, with the exception of nine, from Nova Scotia. These nine hailed from the ancient colony of Newfoundland, where a great awakening in agriculture is taking place and where the desire for further knowledge along agricultural lines is very great.

The short courses at Truro differ from short courses held at some of the other institutions in that optional classes are held throughout the whole course and, while certain of the more important subjects, such as live stock judging, seed judging, and the general lectures on the care and management of live stock and the cultivation of the soil, are attended by all, yet opportunity is afforded for students to take special work in dairying, horticulture, or veterinary science and other departments as well. In this way as many as five or six different classes were being conducted at one time.

The special addition made to the short courses for this year was a course in road making, which consisted of some six lectures and demonstrations given by the Honorable Commissioner, the Hon. B. A. Armstrong, and the men of his Department, who are responsible for the carrying out of the road policy of the Province and also by B. W. McKenzie, Chief Engineer I. C. R., and Dr. L. I. Hewes, of the Road Division of the Department of Agriculture, Washington, D. C. This part of the course was exceptionally well received and must be regarded as a very valuable addition to the short course for farmers who are so dependent upon good roads.

As an evidence of the interest taken in this matter it is worth noting that the Morning Chronicle, one of the leading daily papers of Halifax, devoted from one to two columns in the front page of the paper to a description of the classes as carried on from day to day besides many of the other papers of the Province gave a publicity to the work at Truro such as it has never received before.

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WE could sell wagons for less money, but we don't care to sell that kind of wagon. We want your second order, and your third, and every order you give for a wagon. We can't be sure of getting those orders unless the first wagon you buy from us proves so satisfactory that you would not think of going anywhere else for the second. We have to tell you how good our wagons are to get your first order. After that, we expect the wagon itself to do the selling. I H C wagons

Petrolia Chatham

are made of selected, high-grade material throughout. Come with us to the works where these wagons are built, and see the tremendous sheds where the lumber is air-dried—seasoned out of doors—for three years or more before it is used. Do you know the difference between air-dried and kiln-dried wood? One process takes years of time, and leaves the fibres of the wood filled with and cemented together by the natural resinous residue of the sap. The other requires only a few days' time, drives out all the sap, resin and all, and leaves the wood brittle and weak. Air-drying produces elastic lumber, wagon parts that bend and give under loads and strains, but that come back to their original position when the strain is removed. Try for yourself some day the difference in breaking strain between an I H C wagon axle and a piece of kiln-dried wood a third larger. Then you will know why we can hardly keep up with orders.

The I H C local agent knows which wagon is best suited to your work, and will give you catalogues and full information about the wagon he sells. See him, or, if you prefer, write

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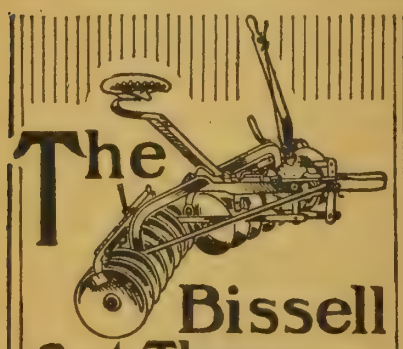

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The machine in actual use is our best advertisement. No need to send special travellers to sell the "Bissell." We put our name on every Harrow. If you would like to learn more about Disk Harrows, send to Dept. M for free booklet of both out-throw and in-throw styles. 72

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Clover and Timothy Seed.

In November a conference was held with representatives of the wholesale seed trade at which samples were prepared and agreed upon to represent the minimum standard of general quality, apart from weed aged content, that would be recognized in official grading for Nos. 1 and 2 timothy, red clover, alsike and alfalfa seed during the season of 1912-13. On the whole the standards are some what lower than last season, with more spread between No. 1 and No. 2. The grade No. 1 American standard for timothy seed, which was recognized last season owing to the unusual circumstances, has been eliminated and the standard for No. 1 lowered to allow a larger proportion of hulled seed than last year; while grade No. 2 has been raised to prevent too wide a spread. With the clovers the standards for No. 1 are nearly as high as last season, but the No. 2 standards are considerably lower, especially for red clover. Samples of the standard grades have been distributed to the leading seed merchants.

Owing to the very light crop of red clover, alsike and alfalfa seen in Canada and the United States and its low average quality, it is exceedingly difficult for seed merchants to secure sufficient good Canadian and United States grown seed to meet their requirements. Canadian grown alsike and clover seed that will grade No. 1 is extremely scarce, while No. 1 Canadian alfalfa seed is almost non-existent and there is very little of the lower grades available. American grown Mammoth clover seed that will grade No. 1 is practically impossible to obtain in quantity and the supply of No. 2 is extremely limited. The fact that there is such a small amount of Canadian and United States grown clover seed has produced some unusual features of the trade that farmers and retail dealers would do well to consider. During the last few years the demand for No. 1 seed has greatly increased and now, when locally grown supplies cannot be had, the wholesale seedsmen are forced to depend largely on foreign seed for their No. 1 stocks. Red clover seed is being brought in from Chili and Europe to make up the No. 1 grade. The same applies to alfalfa seed in even a more marked degree, as practically all that grades No. 1 is being imported from the United States or Europe. The preponderance of foreign seed in the No. 1 grade this year is sufficient reason for the farmers and retail dealers to look more favorably on the lower grades, provided the seed is not graded down for weed seed content. It is well known that foreign grown seed is not so suitable for Canada as home-grown acclimatized seed; and it is quite possible that No. 2 Canadian grown seed would be really more valuable than No. 1 seed of foreign origin, provided that the weed seed content is the same.

When pure Canadian grown seed can be secured, although it grades No. 2 or even No. 3 on account of general quality, it would be advisable to use it, applying more to the acre to make up for the poor seed that will not grow. This is especially true of alfalfa, as with it the origin of the seed is of even greater importance than with red clover or alsike.

The scarcity of high grade clover seed is reflected by the number and character of the samples received at the seed laboratory. During December there was a decrease of about 40 p.c. in the number of samples of red clover and alsike received for test compared with the same month last year, and the proportion of No. 1 seed was much lower. During the month 697 samples were received at the Ottawa seed laboratory for purity and germination test. Those graded under the Seed Control Act standards were:

Although there was much less damage from frost to the cereal crop in the west last fall than a year ago, and there will probably be no difficulty in securing plenty of good seed in all districts, the work of seed testing in the Calgary laboratory has materially increased. During November and December 1,302 samples were received, compared with 91½ during the same period in the previous year. About 95 p.c. of the samples were for germination test.—Geo. H. Clark

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38th ANNUAL

Farmers' and Dairymen's Ass'n CONVENTION

February 17th to 21st

AND

FIRST ANNUAL

Women's Institute Convention

February 18th and 19th

FARMERS & DAIRYMEN'S ASSOCIATION SESSIONS at City Council Chamber, City Hall. Judging of Stock and Provincial Seed Fair at Exhibition Building.

WOMEN'S INSTITUTES CONVENTION SESSIONS at Y. M. C. A. Building, York street.

For programme, prize lists and other information, address

The Secretary for Agriculture, Fredericton, N. B.

Return fares on railways for delegates on standard certificate plan.

From Grand Pre to Tantamar.

A. N. Griffin, Willow Glen Farm, New Minas, N. S. writes:—"I have sold Emily of Willow Glen, sweepstakes Shorthorn female at Halifax, and the bull calf, Willow Glen Hero, first prize bull, under one year at the Provincial Exhibition, Halifax, in 1912. Both went to New Brunswick. The heifer to Harold Etter, Westmorland Point, and the bull to the Penitentiary Farm, Dorchester.

WAS SO NERVOUS
COULD NOT EAT OR SLEEP.

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Mr. George McBeath, Round Hill, N.B., writes:—"I take the pleasure of writing to tell you the great benefit Milburn's Heart and Nerve Pills did for me. I was so nervous I could not eat or sleep, and could not even do my work, and I failed to a shadow. Finally I consented to try Milburn's Heart and Nerve Pills, and have only taken two boxes, and am able to work as well as ever, and can eat and sleep as well as ever I did. I can't praise your medicine too highly. My wife is taking them now for palpitation of the heart and is improving greatly."

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SOLD BY FROST & WOOD CO., ST. JOHN, N. B.

EUREKA MOWER COMPANY, BOX 745, UTICA, N. Y.

CHIPMAN BLACK FOX COMPANY, Limited, are offering shares at $100.00 snap. We have one yearling female bear at $25.00. Our R. I. Reds paid $1.52 profit in 1912. Eggs 75c for 13. Box 54, Chipman, N. B.

FARMER ADS BRING RESULTS

Hallams Weekly Market Report

BEEF HIDES are in good demand for the better grades, and we can look for a lower range of prices as the season advances, and the quality becomes poorer. City Butcher Hides green, flat, 13c per lb. Inspected hides No. 1, 14c; No. 2, 13c; No 3 12c. Country Hides flat cured, 13½c to 14c; part cured, 12½c to 13½c. Green, 12c to 12½c.

CALFSKINS continue dull, stocks are accumulating the tanners are waiting for a lower range of prices. City skins, green flat, 15c. Country, green flat, 15c; part cured, 16c; cured, 17c.

HORSE HIDES are staple, with the supply about sufficient to supply the demand. City take off, $3.50 to $4.00 Country take off, No. 1, $3.50 to $4.00 No. 2, $2.50 to $3.50.

SHEEPSKINS are steady with offerings taken up at current prices. City take off according to size $1.00 to $1.50. Country, 75c to $1.50.

WOOL is in good demand with small stocks in the hands of dealers, offerings being takes at full quotations. Washed combing fleece, 21c to 23c. clothing fleece, 25c to 26c; rejects, 17c to 18c; unwashed fleece combing, 13½c to 14c; clothing 15½c to 16½c.

TALLOW market unchanged at current urices. City rendered solid, in barrels, 6½c to 6¾c; country stock, solid in barrels, No. 1, 6¼c to 6½c; No. 2, 5c to 6c; Cake No. 1, 7c to 7½c; No. 2, 6c to 6¾c.

HORSE HAIR. Farmer or pedlar, fair stock, 28c. to 40c.

OLD RUBBERS, ETC., are in moderate demand, deliveries about sufficient to supply present needs at unchanged prices. Boots and shoes, 6c to 8½c; auto tires, 6c to 8c; bicycle tires, 3½c to 4½c; lead, deavy, 3½c to 4c; tea lead, 3c to 3½c, brass, heavy 9c to 10c; light, 7c to 8c; Copper, heavy, 10c to 11c; light, 7c to 9c; Zinc, 2¾c to 4½c.

'Some Pigs in Lunenburg County.

Editor Maritime Farmer:

While looking over a recent issu? of your paper, The Maritime Farmer, I noticed an article written by Harry Alliston re the large pigs he raised, and wanting to know if any reader had any to beat them.

John Best, Blockhouse, Lunenburg Co., N. S., killed his pig when 7 months and 20 days old and it tipped the scales at 440 lbs.

Mr. William Mills killed his pig when 7 months old, it weighed 404 pounds.

A neighbor of mine, Mr. Isaac Zwicker, killed his pig when 15 months old and it tipped the scales at 652 pounds.

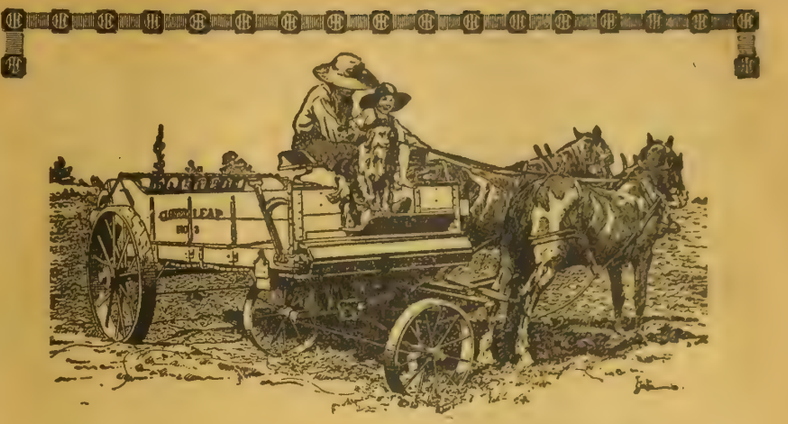
Mr. Albert Desmond killed one 17 months old and it weighed 672 lbs. These were raised in Lunenburg Co., N. S., and I don't think you can find any to beat them.—A member of the Lunenburg Co. Farmers' Association.

An Open Challenge

Editor Maritime Farmer:

W. M. McAdam, Killam's Mills, grew a little patch of Kangaroo Swede turnips, twenty-six short drills, during the season of 1912, from one-half pound of seed sown on June 15th. He thinned them carefully and cultivated them twice. He harvested sixty-seven barrels of fine table turnips. The two largest turnips weighed twelve and thirteen pounds respectively.

Can any one in Westmorland Co. beat this record? Reader, West. Co., N. B.



Land Value Almost Doubled

IT is no longer an unusual thing for us to get reports from farmers who have been using manure spreaders properly and consistently for periods ranging from three to five years, to the effect that the land on which the manure spreaders have been used is regularly raising so much more produce that the value of the land is almost doubled.

"The beauty of it is," writes one Ontario farmer, "that the increased fertility seems to be permanent. Dry weather has less bad effect on our crops now than it used to, the soil is much more easily worked, making the day's work easier both for the horses and for the men, it is less trouble to raise better crops, and we are a good deal surer of good returns since our soil was built up by the use of an

I H C Manure Spreader

I H C manure spreaders, **Corn King** or **Cloverleaf**, are made in various styles and sizes to meet any and all conditions. There are wide, medium and narrow machines, all of guaranteed capacity; return and endless aprons; in short, a spreader built to meet your conditions and made to spread manure, straw, lime, or ashes as required.

I H C spreaders will spread manure evenly on the level, going up hill or down. The wheel rims are wide and are equipped with Z-shaped lugs, which provide ample tractive power without jarring the machines excessively. The apron moves on large rollers. The beater drive is positive, but the chain wears only one side. The I H C agent will show you the most effective machine for your work. Ask to see an I H C manure spreader. You can get catalogues from him, or, if you prefer, write the nearest branch house.

CANADIAN BRANCH HOUSES

International Harvester Company of America

(Incorporated)

At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton

The Life of the Cow.

Professor C. H. Eckles, of the Missouri Experiment station, says that probably the majority of dairy cattle are rejected from the herd on account of failure to breed, or from udder trouble, before the effect of advancing years can be obsesved to any marked extent. It is a fact often observed that a cow may make her best record when ten or eleven years old, although as a rule she does her best rather earlier. If a dairy cow continues to breed, she usually shows no marked decline until at least twelve years old. Occasionally a cow continues to breed until she is sixteen or eighteen years old. While it is not entirely safe to judge the future milk production of a cow from her two-year-old record, it is reasonably safe to judge the richness of her milk. A dairy cow on the average as a two-year-old may be expected to produce about 70 per cent.; as a three-year-old around 80 per cent.; as a four-year-old about 90 per cent of the milk and butterfat she will produce under the same treatment when mature. The richness of the milk remains practically constant from year to year, except that after the third milking period there is a slow gradual decline with advancing years.

Farming as an Occupation.

is the tille of an interesting new book by Rev. James Crisp, Dorchester, N. B. The author gives a vivid description as a province in which to make a home. The book opens up a way in which the native as well as the foreign born citizens of New Brunswick may be in a better position financially, socially and morally.

Mr. Crist expresses very strongly the opinion that N. B. offers splendid opportunities to men of limited resources, and is convinced that many people in the Old Country would better their conditions materially if they came out here and located on the land. The book is well worth many times its price, 25 cents.

Animal Food for the Fowls.

During the fall and winter it is necessary to furnish the fowls animal food in some form. The best egg yield is not possible unless it is included in the ration. Poultrymen usually supply this element in the form of beef or fish scrap.

In most localities animal food can be obtained at home at a low cost. Beef cracklings, found at all slaughtering houses make an ideal poultry food, and are identified with the scrap sold by dealers.

Fresh bone also makes a good poultry food, and is, perhaps, the cheapest as well as the best egg-making food. The soft bones from fresh-killed animals, vertebrae, ribs, etc, are easily reduced to chicken feed with a good bone cutter or even sharp hatchet. In feeding either the cracklings or bone about one pound should be fed to 10 pounds of whole and ground grain.—T. Z. Richey, Perry Co., Pa.

Send your Raw FURS to John Hallam

Sixty Thousand trappers now send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada.

FREE Our "Up to the minute" Fur quotations and the last Edition of HALLAM'S TRAPPERS GUIDE, a book of 96 pages, mailed FREE.

Write to-day to John Hallam, Mail Dept 18 . TORONTO, 111 Front St. E.

$60 Engine

Runs small machinery like pumping water, churns, small drag saw, ice cream freezers, or as good as any two men on the farm, drop a line for circulars and other sizes.

Guarantee Motor Co.,

370 Bay N, Hamilton, Ont.

THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking,

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address me personally;

E. L. MORRIS, Manager 1900 Washer Co'p'y.

357 Yonge Street, Toronto, Can.

Potato Growing Contest for Boys.

A movement that promises to have important results was set on foot last year by a small Committee, consisting of Mr. R. B. Whyte of Ottawa (Chairman), Mr. W. D. Jackson, Agricultural representatives for Carleton County of the Ontario Department of Agriculture, Mr. W. T. Macoun, Horticulturist of the Central Experimental Farm and Mr. L. H. Newman, Secretary of the Seed Growers' Association, who also acted as secretary for the competition. By Mr. Whyte's generosity substantial prizes were offered for a potato growing contest open to boys in Carleton County, Ontario, of between 12 and 18 years of age, who live on farms of not less than 50 acres in extent. With certain exceptions in the case of the younger boys all the work was to be done by the competitors themselves. Each competitor had to keep an accurate account of expenses and profits, a record of date of planting, variety planted, etc., and he was encouraged to send in a short history of the work for which credit was given in the making of the awards. Each plot occupied one-tenth of an acre, and instructions were given to the boys by Mr. Jackson, who also inspected and reported upon the field work. The scale of charges allowed to be charged in the account by each competitor was $3 for rent, 10c. per hour for each horse, 20c. per hour for each man, $1 per ton for stable manure, seed at the market price per bushel, and spraying material at current prices. The prizes were awarded upon the following scale of points: (a) thoroughness of field culture 100; (b) report of yield 100; (c) award of judge on exhibit of one bushel sent to Richmond Fair 100; (d) written report of competition 100. Total 400.

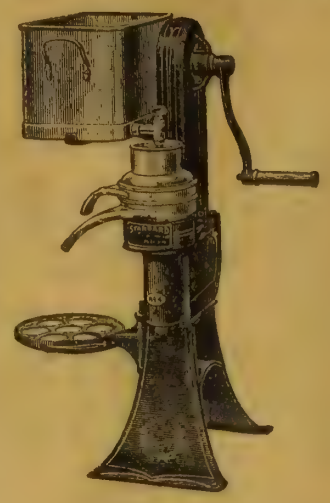
Entries were made by 35 boys, of whom 22 carried out the work in all its details. Amongst the first six prize winners the total cost per acre ranged from $60 to $135.50 and the net profit per acre from $102.20 to $179.00, the last named sum being the profit gained by the second prize winner. The average yield of the first six prize winners was 388 bushels per acre, that of the first 13 competitors 343 bushels and that of all competitors 285; so that even in the case of the less fortunate competitors the average yield obtained was more than double the average of the province of Ontario in 1912, viz. 134 bushels, as estimated by the Ontario Department of Agriculture.

The prizes were presented to the successful candidates at a public meeting held at Ottawa on November 30. On this occasion Dr. J. W. Robertson delivered an address in the course of which he said that the contest pointed the way for extending and enlarging the practical education of farm boys who have left school. It became an educational farming project, combining productive work and systematic study. It trained the boys into observing, thinking, learning, judging, doing and recording. Out of this came most creditable results in the products. The "left-overs" in material things were clean land, good potatoes, and very handsome profits. The "left-overs"—the evidence and substance of real culture in the boys themselves—were increased intelligence, enlarged activity and quickened capacity and desire to work with others for a good purpose. In brief the contest had its first product in the development of knowledge, power and good will.

It is proposed to repeat the prizes in 1913, and it is hoped that ultimately a potato growers' association or club for the county of Carleton will be organized.

The turnip growing competition in Cumberland and Colchester counties,

For These Reasons



FREE

Write for the Standard Booklet, giving a full description of "The World's Greatest Separator," also folder entitled "Skimming Results."

TO tell all the reasons why we believe your choice of a cream separator should be the Standard would be impossible in this space, but here are four. **FIRST**--Because the

Standard

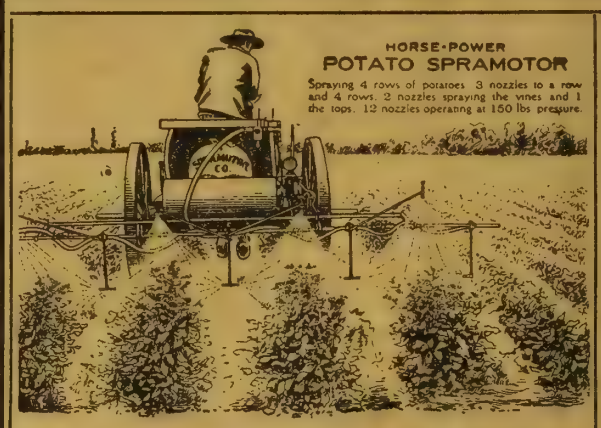
cream separator under ordinary conditions skims to .01 per cent. or less. It loses but one-tenth of a pound of butter fat in 1000 pounds of milk skimmed. The ordinary separator loses a full pound. **SECOND**--Because the Standard has a wide open bowl, and no cream or milk tubes to clog up. Everything easy to clean. **THIRD**--Because the supply can is more than a foot lower than on ordinary machines. No high or awkward lifting to do with the Staudard. **FOURTH**--Because the Standard has a self-oiling system and lubricates its working parts automatically all the time it is running.

The Standard will save more time and labor, and make more money for you, than any other cream separator. Try one and let the machine prove these facts.

The Renfrew Machinery Company, Limited

Head Office and Works, RENFREW, ONT.

Agencies Everywhere In Canada



15 MINUTES To The Acre

Does the work with the Horse Power Spramotor, and does it well. Four rows, three nozzles to a row, adjustable up to 40 inch rows. *Nozzles will not clog.* 12 gal. air tank, automatic and hand-controlled. Guaranteed pressure of 125 ponnds with all 12 nozzles working. Agitator, clean-out pressure relief into tank, nozzle protector under driver's seat. For 1 or 2 horses. Adjustable for vineyards, row crops or orchards. Write for free treatise on crop diseases.

Shall I Buy a

SPRAMOTOR

or an ordinary spraying outfit?

That's *the* question— Your decision should be *determined* by *what* you expect the machine to do and *how long* you expect it to do it.

If—you want a *durable* hand machine for the purpose of destroying weeds—spraying orchards, potatoes and row crops—one that you can also paint with—you want a

Hand Spramotor

If you want a *durable* H. P. machine to do all these things besides spraying grain and doing the white-washing you want a

H. P. Spramotor

If you want a *durable* gasoline machine to do all these things in a *bigger* way but *mainly for orchard work* and *white-washing* you want the

Model "C" Spramotor

The SPRAMOTOR in every class, has *demonstrated* its *superiority* to all other spraying outfits and *there's one built specificially* for your needs. Prices range from $6.00 to $350.

N. B.- When you buy a SPRAMOTOR you make a *permanent investment* because every machine bearing the name is built to endure.

SPRAMOTOR CO., 1530 King St. E., London, Can.

N. S., last year was along the same lines. We trust this good work may be an incentive for other good thinking citizens to come forward with contributions for many contests of this kind.

The Cause of the Destruction of the Canadain Tamarack

The almost total destruction of the tamarack, or larch, which took place throughout eastern Canada almost thirty years ago was caused by an insect, the Larch Sawfly. It appeared again about eight years ago and in its spread westward it is repeating its former devastation on the younger tamaracks.

To all who are interested in our forests the appearance of a comprehensive account of this insect entitled "The Large Larch Sawfly, with an account of its Parasites, other Natural Enemies and Means of Control," by the Dominion Entomologist, Dr. C. Gordon Hewitt, will be welcome. This has been published by the Dominion Department of Agriculture as Entomological Bulletin No 5 and Bulletin No. 10, of the second series of the Experimental Farms Bulletins, and may be had free, on application to the Publications Branch, Department of Agriculture, Ottawa.

Dr. Hewitt has studied the life history, habits and means of control of this injurious Sawfly, both in England and North America. In England it was found that the natural enemies, especially parasitic insects, effectively gained control of outbreak of the insect. Other natural enemies were mice and birds and a system of bird encouragement was started on a large scale. The devastating spread of the Sawfly in North America was due to the comparative absence of the natural means of control. Several important species of parasites new to science were discovered and have been studied and described. To increase the number of natural enemies of the Sawfly, attempts are being made to introduce and establish in Canada, parasites which were discovered in England and which appeared to control the pest there. An account of these interesting experiments and of the methods devised to encourage the birds and other means of control are described in this bulletin, which consists of forty-two pages and contains twenty-six figures, including a colored plate. The publication of this bulletin is indicative of the attention which the Division of Entomology is now devoting to the insect pests of our forests which are responsible for incalculable loss each year.

Mr. and Mrs. Geo. H. Pedlar Present New Wing to Oshawa Hospital

At the Board Meeting of Oshawa, (Ont.) Hospital, on Jan. 14, a Deputation, consisting of Drs. Kaiser, McKay and Carmichael, waited upon the board with an offer of $10,000 from Mr. and Mrsf George H. Pedlar, of Pedlar shingle fame, to be used in the construction of a new surgical wing to the Oshawa Hospital, in connection with the proposed addition to the present building.

This handsome donation came as a genuine surprise, and was immediately accepted with the heartfelt thanks of the Board. The surgical wing was presented by Mr. and Mrs. Pedlar as a memorial to their son, the late George H. Pedlar, Jr., after consultation through Dr. Kaiser with the other doctors of the town, as to the type of equipment most urgently needed.

R. of P. Guernseys

Editor Maritime Farmer:

The following Guernsey cows have recently qualified in the Canadian Record of Performance:

Mature Class—age 5 years at commencement of test.—Flora of Brookside—36, R. of P. G. Bred and owned by D. G. MacKay & Son, Heath Bell, N. S. Total production, 8107 lbs. of milk, 418.257 lbs. butter fat.

Four-year-old Class—Berwick Queen Bud—351, R. of P. No. 8. Bred and owned by John N. Chute, Berwick, N. S. Total production—9195 lbs. milk, 421.163 lbs. of butter fat.

Two year old Class—Heiress Daisy —318—R. of P. No. 10.—Bred and owned by D. G. MacKay & Son, of Heath Bell, N. S. Total production 6318.5 lbs. milk, 282.586 lbs. butter fat.—H. W. Corning, Secy., Canadian Guernsey Association.

BEAVER FLOUR

WHEN IT COMES RIGHT DOWN TO QUALITY BLENDED FLOUR MAKES THE BEST BREAD IN THE WORLD

"BEAVER" FLOUR is made of choicest Ontario Fall Wheat, with enough Manitoba wheat to add "strength" to the dough. This special blend gives the flavor, food value, baking qualities, strength and quantity, as no other one flour can.

When it comes right down to quality and quantity, "Beaver" Flour makes better bread and pastry—and more bread and pastry — than any western wheat flour.

You have only to use "Beaver" Flour once to prove all this to your complete satisfaction.

DEALERS — write us for price on Feed, Coarse Grains and Cereals. 137

THE T. H. TAYLOR CO., Limited, - - - - CHATHAM, Ont.

EWING'S RELIABLE SEEDS

The Germs of Life are Vigorous

in Ewing's Reliable Seeds—and so are the Vegetables, Field Crops and Flowers grown from them.

This is not merely a claim—it is a *proven fact*, which has been demonstrated annually, for for over forty years, by thousands of Canadians.

Don't stake your time, trouble, expense, and the season's use of your land, on an uncertainty. Get Ewing's Reliable Seeds and be *sure* of good crops.

WM. EWING & CO., Seedsmen

McGILL ST., MONTREAL. 27

The Fur Industry of Canada.

Canada has had a fur industry since the beginning of history. The pursuit was born of necessity, but is also natural as well as acquired.

The lure of the chase, of the woods and the wooded wastes; of the mountain and the flood is the birthright of man, having its transmission in the blood of humanity since our forefathers battled for their existence when the cities of our country were the wild places of an earlier century, and man procured his daily rations, by artifice of the hunt, by matching his cunning against the cunning of the bird, beast and water-creature of the forest and the rapid.

The trapping of animals has, however, lost none of its charm since the days of the pioneer, but the incentive of the occupation has changed from necessity to sport.

Yet in the trapping and luring of wild animals, not so much for the food as for the fur, Canadian wilds have, since the white man learned the Indian trapper's act; provided an occupation very lucrative for those who have followed its pursuit, and though the days of the explorer have almost passed away; though he ceases to drive his canoe along streams unknown, dotted here and there by dangerous rapids and falls; ceases to portage through trackless forest, for the fur-bearing animals, which were once so numerous in Canada, there is still in this age of cities and civilization, a profitable living in fur hunting.

FUR ANIMALS PLENTIFUL

Strange as it may seem the catch of furs to-day is greater and of more value than when this country was a wilderness. For whilst the professional trapper has almost disappeared the bulk of furs being caught by the ambitious farmer and his son, in order to add a substantial sum to their income, the means of trapping are now so numerous that the annual catch has become greater to-day than heretofore.

Much has been heard of late concerning the fox farming industry, and doubtless many are ambitious to engage in that pursuit. Breeding stock is, however, very expensive, and only men of means are able to pursue their desires in this respect. The aspirant to trapper's honors or the procuration of furs, can, however, find all he needs in the way of experience around his own neighborhood, and will find that a winter spent in the woods will help him to add handsomely to his finances and provide ample sport in a good season.

DEMAND IN CANADA.

There never was a better outlet for the winter catch than exists in Canada to-day. Demand for all classes of furs was never better. Skunk furs are more popular in Canada than heretofore, and muskrat are finding new uses year by year. This season the highest prices for many years have been procured, despite the fact that there has been an unusually large catch of skunk and muskrat owing to the hard winter of 1911. Every thing was frozen up and this prevented a large catch at that time and allowed of more prolific and extensive breeding, giving a larger crop for the present year.

WHERE TO TRAP.

In reference to trapping Hallam's guide says:

"It is not necessary to wait until the trapping season opens in order to locate places to set the traps, but in passing through the woods look carefully for signs of animals; here you may find a bunch of feathers, mute remains of a woodland tragedy; here an ear of corn or other vegetable partly eaten; here a den tree with its bark scratched by climbing raccoons; here a hole in the ground with tracks in the soil and hair on the side of the entrance, proclaiming the home of the skunk; here trails made by passing animals and their droppings, which proclaim their presence while on sand bars and in the mud along the streams and lakes you find tracks of mink, muskrat, raccoon and other animals, that seek their food in and near the water. All these signs should be carefully observed and their location noted for the purpose of trapping later in the season. They tell their tales to the experienced trapper, and if the amateur is to make a success of trapping, he must be of an observing disposition, study out the cause of these signs, and learn to read the forest, so that he may successfully match his reason against the instinct and natural wariness of the various animals.

If you trap in your neighborhood, you should go over the ground in the late summer and early fall and prepare places to set your traps, so that the animals will become accustomed to the change before the season opens, by placing a log, stump or chunks in a dtich or small stream in such a manner that there is left only a small passageway for the animal at one side, by digging a trench across a neck of land, running into a stream, so that the water will pass through about one inch deep, and covering it over with grass or chunks, and the passing mink cannot resist the temptation to pass through by making cubbies in the woods, and by scattering bait at different places and observing on your next trip whether it has been taken, thus learning what animals, if any, are in that particular locality; in this manner you become thoroughly acquainted with your grounds, and when the season opens for trapping, you know the best places to set your traps.

It is well to remember that few fur-bearing animals travel to any extent in the day-time, and that many a fine mink has been caught in localities where the "oldest inhabitant" has declared he has not seen one for twenty years.

The successful trapper is one who is observing, uses good judgment and is careful to make his set properly, using that set best adapted to the circumstances of the case and the animal he desires to capture, and in this

Make Your Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
IF
GIVEN
A
FAIR
TRIAL

EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT T H WONDRFUL BURN R DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

We do not sell these burners but each subscriber may get two beside one we furnish free by sending 35 cents for each additional one wanted.

anner secures furs which if properly andled brings him a very substan-al return for the time spent besides fording him the pleasure and ex-tement of a life lived in the open."

HINTS TO HUNTERS.

Don't use bright traps, but boil em in water with pine, spruce, hem-ck or balsam boughs or walnut ulls; after boiling half an hour the ap becomes coated with a paint-ke substance. Take the traps out, ang in the sun to dry. The coat-g will get hard, and will keep them om rusting, and kill the smell of on, rust, etc.

Don't commence trapping too early. ne prime skin frequently brings more oney than two or more caught early the season.

From February to March is the ating season for mink. Save every ink sack, squeeze contents into a ottle, with fish oil, as it is a lure to oth sexes; to bait, dip a stick in e bottle and place in the hole be-ond the trap.

An excellent way to kill either a ink or a weasel is to stun with a club, and then ush in the ribs. When this is one there will be no blood clot on e pelt.

When setting traps, do not disturb e surroundings more than is absol-tely necessary, and leave them look-g as natural as possible; while me animals are not suspicious oth-rs are, and if care is used, you will equently catch some other animal your trap than the one expected.

Use gloves smeared with blood or ated with beeswax when handling nd setting your traps, so as to a-oid as much as possible leaving hu-an scent. Gloves used for trapping hould be used for nothing else. Some rappers do not think this necessary, ut the majority advise it, and a lit-le care may materially increase your atch.

Do not spit near your trap, or you ill leave human scent. Never put, eroseoe oil on your traps, as ani-nals will not go near them while the dor remains.

Never take your dog with you on he trap line, as mink and some oth-r animals can scent a dog for days fterwards.

Whenever possible, splash water ver your set and the surroundings, s water washes away human scent.

Before setting your trap, test it to ee that it is in good working order, nd unless you can put it in good or-er, throw it away. Traps are heaper than furs, and it is usually he good pelt that gets away from he defective trap.

To witen traps for snow sets, boil ime in water, and immerse the trap or a short time, and it will come ut perfectly white.

Note.—The writer of this article is ndebted to Mr. John Hallam, fur lealer, of Toronto, for a great deal f the information in this article. At a later date, the different kinds of fur earing animals will be discussed, ith methods peculiarly adapted to he trapping of each breed.

FLORICULTURE.

A Correspondent writes:—Do ordinary house plants, such as Geraniums, Ivies, Rubber Plants, etc., require any plant food after being brought into the house from the garden? What manure should be used on them? The said plants are potted in soil poor in quality. What manure should be used in the garden and should it be applied in the spring?

If Geraniums have been planted in the ground and dug up and potted I do not think they will require any fertilizer until spring. If, however, they have been grown in pots all summer, they would certainly be benefited by the application of liquid cow manure, once a week. The same would apply to Ivies. I cannot understand a Rubber Plant being grown in the garden as I hardly think it would stand out-of-doors. As a general rule, very little fertilizer is required on either Rubber Plants or Palms, at this season of the year, as they are usually inclined to be semi-dormant. However, if a plant is much potbound a little manure water once in a fortnight would probably do no harm; and if plant has been out of doors all summer, it is probably sick from the effects and should not be stimulated until a healthy growth starts again. In regard to fertilizers to be used on the plants, I would say that I have always found that fresh made liquid manure gave good results on every occasion. I have never seen anything that is better adapted for amateur use. About two quarts to a pail of water is a good porportion to use. It should be kept well stirred while using. Many of the prepared plant foods are very good but should be very carefully applied. Well rotted manure should be used in the garden if it can possibly be obtained. The contents of a hot-bed makes excellent material and there is not much danger of weed seeds being contained in it. I always apply all fertilizer to garden in the spring from the standpoint of economy. If the soil be light much of the value is wasted during winter. If the soil is heavy it probably would not make much difference.

Be careful that your tender house plants are not exposed to drafts from open doors or windows. Proximity to a hall door is not a good place for plants at this season of the year, for even if the plant be not actually frozen, yet it would receive a chill that would, possibly, in time, prove fatal.

Prevention of Internal Derangement.

The value of a dose of aperient medicine given in time cannot be sufficiently estimated until it has been tried. Many serious cases of internal stoppage could be entirely avoided—and lives of fowls saved—if this preventive measure was adopted.

Fowls often stand about with their feathers ruffled up round their heads, and if their ailment is neglected they frequently die from the cause of this apparent derangement. Unless fowls derive nokrishment from their food soon after it has been consumed by them, they very soon show signs of weakness following the loss of that nourishment so essential to their well being, and, the first few feeds having been consumed and not assimilated, their intestines become filled with a mass of undigested food, which, unless removed by aperient medicine, causes the bird's death eventually.

One of the secrets of successful poultry-keeping is to feed the birds so that they obtain all the nourishment possible from their food, and this is accomplished by giving them an ample supply of grit, which is really hard and sharp, and crushed (or broken) flints answers both requirements more perfectly than any other material, as it lasts longer and does its work more thoroughly than any other.

A supply of grit should be kept in a trough in the run for the birds to help themselves to, and once a week a teaspoonful for each bird should be added to the soft food. This usually prevents the posibility of internal stoppage, but any slight derangement in this direction should be treated by giving each hen a teaspoonful of warmed castor oil, followed by one of warmed salad oil two hours afterwards, and the male birds should have rather more than these quantities.

The bottles containing the oils should be placed in a basin of hot water after removing the corks, so that the contents may become quite liquid, otherwise there is a risk of choking the birds when administering the castor oil, as this is frequently very thick and apt to cover the wind pipe, and when the bird breathes to pass down the wrong channel, causing suffocation.

Poultry Notes.

A successful poultry man says that he keeps the combs of his poultry brightened by putting corn in a bucket and dampening with water, and then stirring in about a quarter of powered air-slaked lime. He feeds this twice a week as an evening meal.

Fattening poultry on food mixed or moistened with skim milk instead of water, produces whiter flesh and a superior flavor. Skim milk alone is a highly nitrogenouus food; the carbohydrates have been removed in the butter, so that it is not a complete diet for any animal. The fat of the cream, however, can be cheaply substituted with corn or cornmeal.

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SUSSEX, N. B.

AS WE ARE installing a 3000 egg Candee Incubator this season we will take orders for a limited number of Baby Chicks and do some hatching of eggs for our customers.

Charges for hatching eggs $3.50 per 100, no lots under 75 eggs taken. B. P. Rock and White Leghorn baby chicks, April delivery 20c apiece. May and June delivery 15c apeice.

We have several 360 and 250 egg Model and Prairie State Incubators for sale at half catalogue price. Guaranteed in first class condition every way.

FOR SALE

Imported Clydesdale Colt "Spicy Robin" rising three year old, Sire Radium by Hiawatha. For further particulars apply to

J. MEIKLEJOHN,
Cossar Farm, L. Gagetown, N.B.

FOR SALE

Blue Bell View Farm offers for sale; one pure bred Holstein bull, 12 months old, also some nice S. C. Rhode Island Red Cockerels from good laying strain.

Price of bull $80; Cockerels $1.50 each f. o. b.

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One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Scotch collie bitch, 3 years old, grand worker on cattle LESLIE WALKER, Lower Millstream, N. B.

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FOR SALE—Four Ayrshire bulls, five to eleven months old from good producing stock. JOHN F. FROST, Hampton, N. B.

FOR SALE—Clydesdale stallion 3 1-2 years old weighs 1600 lbs. sired by the renowned Charming Lad. PETER FERGUSON, Graham Road, P.E.I.

FOR SALE—Two yearling pure bred Guernsey Bulls from good size stock. T. D. BLAIKIE, Great Village, N. S.

FOR SALE.—A handsome Jersey Bull, 11 mos. old, both sire and dam imported from United States.—R. H. BYERS, Harvey, York Co., N. B

FOR SALE.—One pure bred Shorthorn bull, eighteen months old, color red, good size. Apply to C. H. RIPLEY, Rossendale, Cum. Co., N S.

FOR SALE—One Holstein bull, twenty-one months. Four Ayrshire bulls from nine to fifteen months. JOHN A. HUGHES, Petitcodiac, N B.

CHOICE WHITE ORPINGTON COCKERELS $3.00 to $5.00 each. (Philo Strain direct) May hatched. Capt. C. W. GILLIATT, Freemason's Home, Windsor, N. S.

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JERSEY BULL FOR SALE. Four years old, sire Ferror (Imp.) No. 391, dam Brampton Regan, No. 439. Apply to J. J. CLARK, Sect. Tatamagouche, N. S.

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GUERNSEYS FOR SALE—1 yearling bull, and 4 between the ages of 4 and 10 months, all very fine animals. WILLIAM COX & SON, Canard, N. S.

FOR SALE.—One cream separator, almost new. New milch cows. Two mares, 10 and 12 years old. One colt, six months old.—M. H. McFARLAND. Butternut Ridge, Havelock, Kings Co., N. B.

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WANTED—Ladies to do plain and light sewing at home; whole or spare time; good pay; work sent any distance; charges paid. Send stamps for full particulars. — NATIONAL MANUFACTURING COMPANY, Montreal.

ENGINES for all purposes such as pumping water, spraying, wood sawing, motor boats, etc. Cut out the drudgery and let the engines do the work.—GUARANTEE MOTOR CO., 371 Bay N, Hamilton, Ont.

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25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co,, Queen Street, Montreal.

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FOR SALE—Pure bred and grade Shorthorns of good milking qualities along with good beef type. Males and females all ages. Also extra well bred grade Clydesdale mare six years old bred to foal in June after an extra good pure Clydesdale stallion. Also her seven months old filly sired by same horse which she is in foal after at present. This stock is extra large and perfectly sound. LAURIE M. ANDERSON, Sackville, N. B.

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P. E. Island Prov. Seed Fair, Summerside, P. E. I., March 4, 5 and 6, 1913.

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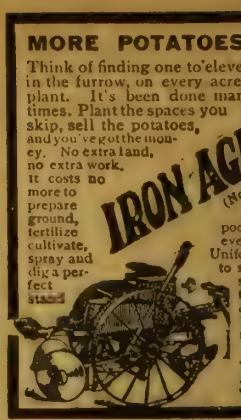

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A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

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Pure Bred Registered Guernseys

1 cow dropped Sept. 30th, 1908 due to freshen in May.
1 heifer dropped Feb. 1st, 1911, bred to freshen in October.
Both the above have both American and Canadian registry papers.
1 heifer dropped Aug. 12, 1911, Canadian registry.
1 bull dropped Aug. 19, 1911, Canadian registry.

All the above good stock bred by a popular Maritime Province breeder—PRICES RIGHT.

W. E. READ & SON, *Bear River. N. S.*

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We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

Price if taken before April 1st, $40.00

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Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd. A few bull calves and yearling heifers for sale.

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IF THE FARMERS IN THE MARITIME PROVINCES

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Black Minorcas, White Orpingtons, White Wyandottes, R. I. Reds, Barred Plymouth Rocks and White Leghorns.

Stock for sale from these Prize birds in Singles, Pairs, Trios and Pens. Write for Large Poultry Supply Catalogue.

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We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

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Jos. R. Taylor, Upper Dorchester, N. B.
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Fred. S. Black, Amherst, N. S.

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The S. H. White Co. Ltd., Forest Glen, N. B.
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Five strong Hereford vigorous bulls between the ages of nine and twelve months, after the famous bull "Rupert of Ingleside" and out of our choicest cows, going at a bargain.

Only two White Wyandotte cockerels left.

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We will in consequence, have 4-360 egg and 5-250 egg Incubators, Model & Prairie State makes, guaranteed in first class condition, for sale at half catalogue prices.

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Again we maintained our prominence as breeders of B. P. Rocks at Maritime Fair by winning Silver Cup for the best display of this variety. In heavy competition won 1st and 6th on hens; 1st, 5th and 6th on pullets; 2nd, 5th and 6th on cockerels; 1st and 2nd Mating pens (pullet); 1st breeding pen, and special for best female. High class stock for sale.

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Winners at Amherst

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We have a special lot of 3 young bulls for sale at a bargain—Two roans dropped December 1911. One, all red, dropped February 1912. Splendidly bred and excellent specimens. Also other pure bred Shorthorns.

Write for particulars.

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We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private individuals.

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Ten cocks and cockerels, 20 pullets and yearling hens in the following varieties: Rose and Single Comb R. I. Reds, Buff Orpingtons and S. C. Brown Leghorns. Write for prices.

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Dropped Jan. 12th, 1913. Bred from a daughter of Barcheskie Kings Own. Come and see him and his dam. Stables near the station.

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We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

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20 to 30 Shropshires.
6 Cheviots.
5 Leinsters.
A few Southdowns, Oxfords and Lincolns.

These sheep are from one to two years old, extra choice, being picked from noted flocks by Mr. R. H. Harding of Mapleview farm, Thorndale, Ont. Write or wire,

F. DeL. CLEMENTS, 9 & 11 Rodney St., St. John, N.B.

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We have now for sale two exceptionally good high grade young cows, one 5 years old, is a show cow and 50 lb. producer, due to calve January 20th sired by Sir Rooker Posch Artis, Sire of 1911 Champion at Amherst and 1912 1st money Holstein cow, also several others forward in calf.

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Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

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We have the type that gives best profit. Write your wants to

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Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

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Champions of Canada. **Champion of World.**

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

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We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

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offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

Sgd. J. D. IRVING,
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We have a number of choice cockerels and pullets of Barred Plymouth Rock. White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Apply to

Walter McMonagle & Sons, Sussex Corner, N. B.

Cattle and Sheep Labels

A cent spent now may be the means of saving you three calves next fall. Send your name and address for free sample of Ear Tag and circular. It is no trouble and you can then judge for yourself. Write to-day

F. G JAMES, - Brownville, Ont.

FOR SALE

A few dandy turkeys left, $10 a trio. Charming Sicillian Buttercups, get a pair and be in the swim, $5.00 a pair.

Sarah E. Moses Smith
Woodward's Cove, Grand Manan, N.B.

Successful Lessons in Poultry Raising

Twenty complete Lessons. The successful Poultry Book a simple and comprehensive treatise in the care and culture of domestic fowls. This book is sent free on request.

OCTAVIEN ROLLAND
Sole Agent for the Des Mones Incubator, P. O. Box 2363, Montreal, P. Q.

"HILLSIDE STOCK FARM"

We have for sale at right prices four Ayrshire bulls from twelve to fifteen mos. old. They are sired by the champion bull of 1911; a son of the renowned Scotch champion "Spicy Sam."

Prescott Blanchard, Truro, N. S.

Free to Stock and Poultry Raisers

We will send absolutely free, for the asking, postpaid, one of our large sixty-four page books, with insert, on the common diseases of stock and poultry. Tells how to feed all kinds of heavy and light horses, colts and mares, milch cows, calves and fattening steers; also, how to keep and feed poultry so that they will lay as well in winter as summer. No farmer should be without it.

NOW is the time to use Royal Purple Stock Specific. At a cost of only two-thirds of a cent per day per animal, it will increase it 25 per cent. in value. It permanently cured Bots, Colic, Worms, Skin Diseases and Debility. Restores run-down animals to plumpness and vigor. It will increase the milk yield three to five pounds per cow per day and make the milk richer.

Royal Purple is not a stock food. There is no filler used in its manufacture, and we import from Europe all the seeds, herbs, barks, etc., and grind them on our own premises. Therefore, we can guarantee it to you as being absolutely pure. We do not use cheap filler to make up a large package. We give you the best condition powder ever put on the market in a concentrated form.

A tablespoon levelled off, once a day, is sufficient for a full-grown animal. It prvents disease, keeps your animals in perfect health, and is absolutely harmless. It makes six-weeks-old calves as large as ordinary calves at ten weeks. You can develop six pigs ready for market in just one month's less time than you can possibly do without it, at a cost of only $1.50, saving you a month's work and food.

A 50c. package will last a horse 70 days. A $1.50 pail or air-tight tin, containing four times as much as a 50c. package, will last an animal 280 days.

If you have never used it, try it on the poorest animal you have on your place, and watch results. If it does not produce better results than anything you have ever used, or give you satisfaction, we will refund your money.

Toledo, Ont., July 1, 1910.
W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—I have used a part of a package of your "Royal Purple Stock Specific." I fed it to one cow according to directions. She gained six pounds of milk while using part of a package. The rest of my herd reduced in milk while this one gained. I consider it has no equal.

T. G. BELLAMY.

Bondhead, Ont., Aug. 31, 1912.
The W. A. Jenkins Mfg. Co., London, Ont.

Gentlemen,—After experimenting with a great many stock foods, I was about convinced that there was very little virtue in any of it, but your dealer insisted on me trying Royal Purple Stock Specific, saying it was different from all others. I have since used a great lot of it, as I keep from ten to twenty horses and about the same of cattle. This Specific, in my opinion, is certainly in a class by itself as a conditioner, and is the best I have ever used.

GEORGE MAPES.

Clear Creek, Ont., Sept. 19, 1912.
W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Your "Royal Purple" Stock Specific is the best stock conditioner I have ever had in my stables, and am never without it. I had a brood sow that had milk fever very bad. Your "Royal Purple" saved her life. Put her on her feet in three days. I had three calves last spring that got scouring very badly. Could not get it stopped until I used "Royal Purple." It did the work O.K.

Yours truly, H. B. MOULTON.

Saskatoon, Sask., Sept. 20th.
The W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—Some months ago we bought some of your Royal Purple Stock Specific from Mr. Vogan here. We have been using it ever since, and we find it the best conditioner for driving horses we have ever tried.

H. F. McCALLUM, "The Palace Livery."

Scott, Sask., May 22nd, 1911.
The W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Do you want a man to represent your Royal Purple goods in this district. I am from Ontario, and have fed your Stock Specific—got it from Mr. J. Corbett, of Brownsville. My cows, while us ng it, made the largest average, and tested five points over average at C.M.P. at Brownsville. I know your goods are the highest class Stock Specific on the market, and take great pleasure in representing you in this district

NORMAN G. CHARLTON.

Royal Purple Poultry Specific

will make your hens lay in winter, as well as summer, and yet a 50c. package will last 25 hens 70 days, or a $1.50 pail or air-tight tin, containing four times as much as a 50c. package, will last 280 days. It prevents poultry from losing flesh at moulting time, cures and prevents all the ordinary diseases, makes their plumage bright, and keeps them in prime condition.

Port Colborne, May 11.
W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—This is to certify that I have used one $1.50 tin of your "Royal Purple" Poultry Specific, and there is nothing that can equal it. I wanted yours again and your agent did not have any, so he gave me another brand, and I can assure you it was not worth carrying home, for my hens layed better without it. I have been from 12 to 15 dozen eggs short every week since I have not used your "Royal Purple."

CHARLES RICHARDSON.

Royal Purple

STOCK AND POULTRY SPECIFICS

A second from Mr. Richardson as follows :—

Port Colbborne, Ont., Aug. 24, 1910.
W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—Please find enclosed express order for $3.00, for which please send me two tins of your "Royal Purple" Poultry Specific.

C. RICHARDSON.

A third letter from Mr. Richardson as follows :—

Port Colborne, Ont., Aug. 29, 1910.
W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—I received two tins of "Royal Purple" Poultry Specific all O.K. I have tried all kinds of specific to make my hens lay, and I find that you are the only ones that manufacture the genuine article. All the rest, I think, is a waste of time and money to bother with. As an egg-producer, I cannot praise your Poultry Specific high enough, for I would not be without it if I had to pay double the money.

C. RICHARDSON.

Sherbrooke, Que., Aug. 1, 1910.
W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—I have used your Specific for one year, and have given it to my birds with good results. See my winnings at the different fairs, which will tell the tale.

MISS GEORGINA CAMIRAUD.

Royal Purple Cough Specific

During the last four years there has been an epidemic cough going through every stable in Canada, which has been a great source of annoyance to horsemen. Our Royal Purple Cough Cure will absolutely cure this cough in four days, will break up and cure distemper in ten days. Absolutely guaranteed. 50c. per tin; by mail, 55c.

Royal Purple Gall Cure

will cure all sorts of open sores on man or beast. Will absolutely dry up and cure scratches in a very few days.

MR. SAM OWEN, coachman for the Hon. Adam Beck, says: "By following directions, I find your Royal Purple Gall Cure will cure scratches and make the scabs peel off perfectly dry in about four or five days." Price, 25c.; by mail, 30c.

Royal Purple Sweat Liniment

will reduce lameness in a very short time. Mr. John M. Daly, coalman in London, says: "We have nine horses constantly teaming coal, and have all kinds of trouble with them being lame at times. I have used your Sweat Liniment for a year back, and have never known it to fail to cure sprained tendons, etc." Price, 50c., 8-ounce bottles; by mail, 60c.

Royal Purple Lice Killer

This is entirely different from any lice killer on the market. In order for you to understand the process of manufacture of this lice killer, you will have to send for one of our booklets, as we give you a full history of it there. It will entirely exterminate lice on fowls or animals with not more than one or two applications. It smothers them. Price 25c.; by mail, 30c.

Royal Purple Disinfectant (Sheep Dip)

In this line we give you the largest value for the money of any disinfectant on the market. A tin containing 1 3-8 qts. Imperial measure will cost you only 50c. Also put up in 25c. tins.

Royal Purple Roup Cure

Mr. Dulmage, the great breeder, of White Rocks, tells us that he has never used a Roup Cure that will give relief so quickly to hens suffering from Roup or kindred diseases. Our book tells you all about it. 25c. per tin; 30c. by mail.

Royal Purple Worm Powders

For animals. 25c. per tin; by mail, 30c.

In using our Stock Specific, we guarantee you better results by using the ordinary food grown on your farm, such as good hay, oats and bran, and so forth, than you can possibly obtain by using any of the many patent foods on the market. In these the percentage of nutrition is usually very small for the amount of money paid for the same. You know exactly what hay, oats, bran, chop or any farm products cost you, and ROYAL PURPLE makes animals digest these foods properly.

What we wish to impress on your mind is that we manufacture nothing but pure, unadulterated goods. Our booklet gives over 300 recommendations for our different lines from people all over Canada. While we give you above the names of a few who have used it, our best recommendation is for you to ask any person who has ever used any line we manufacture. 26

These goods may be obtained from, Halifax Seed Co., Halifax; Amherst Trading Co., Amherst; A. Horne & Co., Charlotte town; Maynes & Riley, St. John.

W. A. JENKINS MANFG. CO., London, Ont.

AN ASSORTED ORDER AMOUNTING TO $5.00 WE WILL PREPAY.

The Maritime Stock Breeders in Annual Session.

The annual meeting of the Maritime Stock Breeders' Association was held in Truro, N. S., on Jan. 15th, 1913. Col. H. Montgomery-Campbell, president of the Association, occupied the chair and about a quarter of a hundred prominent stockbreeders were present.

The Minutes of the last meeting were read and approved.

The President reported that during the year the Association had succeeded in getting their grants increased from $2,500 to $4,000. The Horse Show account showed expenditures amounting to $3225.05, a sum of $150.75 over receipts. By a slight change in the rules governing the prize list this deficit may be avoided in future years. At the recent Winter Fair 90 per cent. of the amount offered for prizes was taken by the exhibitors—$3428.00 went to Nova Scotia, $1374.30 to New Brunswick and $1921.00 to P. E. Island exhibitors.

By unanimous vote it was decided to hold a horse show in the spring of 1913 on dates to be selected by the executiv?. It was decided that the Executive Committee be empowered to debar from showing any horse not shown to a suitable rig. The work of arranging and revising the prize list was left in the hands of the Executive Committee.

The conduct of railway officials in their careless shunting, starting and stopping of live stock trains enroute to and from the exhibitions came up for considerable discussion and a committee cosisting of Messrs. J. B. Daggett, C. A. Archibald and J. F. Roper was appointed to interview the proper authorities with a view to secure mitigation re this matter.

The selection of judges for Maritime exhibitions was also discussed and the feeling was very strongly expressed that the various fair boards should confer in this matter with the Stock Breeders' representatives to the fair boards. A haphaszard system of selecting judges for the live stock classes of the fairs is very unsatisfactory to the breeders, particularly when judges are secured who do not seem to know their business. Stock breeders are no longer willing to trust the reputation of their herds to unqualified judges.

The election of officers resulted as follows:

President — Col. H. Montgomery-Campbell, Sussex, N. B.

Vice-Pres. for Nova Scotia—W. W. Black, Amherst.

Vice-Pres. for New Brunswick— A. E. Trites, Salisbury, N. B.

Vice-Pres. for P. E. Island —Hon. Murdo McKinnon.

Directors for N. S.—H. W. Corning, M. L. A.; W. W. Black, R. S. Starr and S. A. Logan.

Directors for E. B.—R. A. Snowball, B. M. Fawcett, A. E. Trites and M. A. Scovil.

Directors for P. E. I.—W. M. Lea, J. F. Roper, Hon. Murdo McKinnon and Albert Boswall.

Delegates to Fair Boards— Col. H. Montgomery-Campbell, R. A. Snowball, W. M. Lea, J. F. Roper, R. S. Starr, S. A. Logan.

The Best Way to Cleanse Milk.

The best way to cleanse milk is by centrifugal force, as may be observed by examining the interior of the separator bowl immediately after some milk has been separated. The inside of the bawl will be found to be covered with a layer of dirt in the form of a thick slime. Where large quantities of milk have to be cleansed, a centrifugal cleaner is generally employed. In this case the milk is subjected to centrifugal force in a bowl, or drum from which there is only one outlet instead of two as in the case of a cream separator. Milk which has been centrifugally cleansed is absolutely free from all kinds of extraneous matter which cannot be removed from the milk by other means.

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our
SPECIAL
FREE DELIVERY
we will pay charges on shipments amounting to
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NOW IS A GOOD TIME TO BUY GENEROUSLY AND SAVE MONEY IN THE SPENDING

DON'T DELAY ORDERING.---THIS SALE ENDS 28th FEB.

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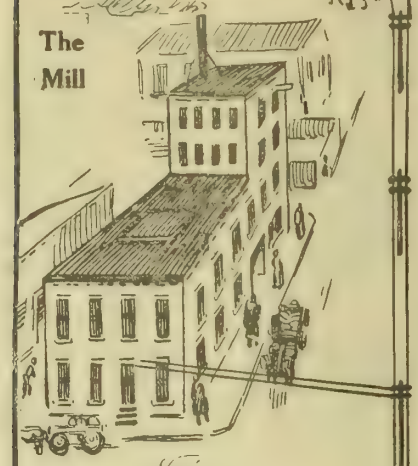
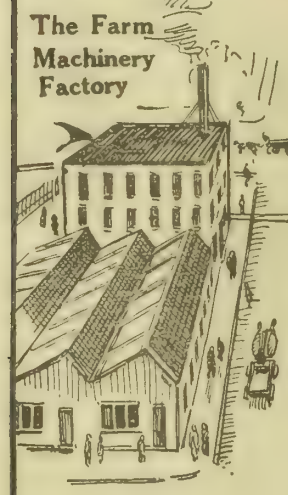


The Farm Machinery Factory



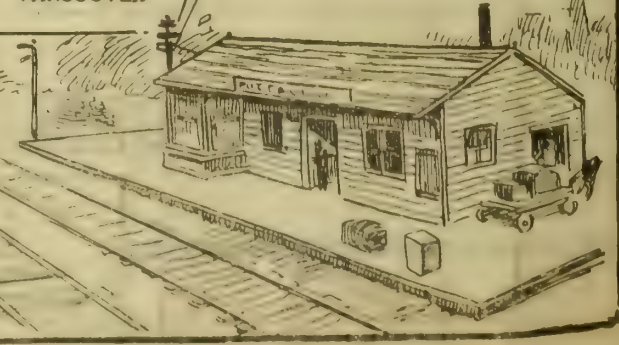
Doctor's House

A Neighbour's House

The Creamery

The Veterinary Surgeon

Railway Station



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To know—when to sell your live stock and produce so as to get the best market prices.

To get the weather reports in *advance* and so avoid damage to your crops.

To order spare parts for broken farm machinery, without having to lose time and drive miles to do it.

To summon medical assistance—instantly—in case of illness or accident.

To talk to your neighbors at *any* time—day or night—or get their help in case of fire.

To get the veterinary *quickly* when sickness strikes your live stock.

You Can Do All This—and Much More When You Have a Telephone

YOU CAN get a Telephone *at a small cost* if you will send us your name and address.

YOU and your neighbors can build, own and operate your own, Self-paying Rural Telephone System at a cost to each of the value of about 20 bushels of wheat.

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IT CONTAINS one hundred pages—profusely illustrated—and makes the construction of a telephone system as easy as building a fence.

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Vol. 18. SUSSEX, N. B., FEBRUARY 25, 1913 No. 10

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In these days of high cost of materials this remarkable new Page Book should find a hearty welcome in every home in the land. It will open your eyes to great savings—savings that can be made in the purchase of things needed every day as equipment on the farm, in the factory, home or office. Don't pay the usual prices—get your copy of this book to-day, and learn how to buy right.

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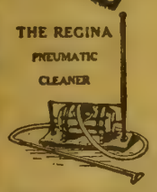
THE REGINA PNEUMATIC CLEANER



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Made by one of the most famous makers on the continent. Rich, pure, lasting tone. A beautiful instrument.

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Many designs, simple or ornate. For any purpose. Any price.

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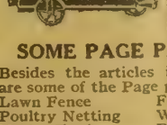
Made by one of the most famous concerns on the continent. Aylmer pumps are known everywhere for their fine construction and perfect work.

KITCHEN CABINETS

Finely built, beautifully finished. Save miles of walking around a hot kitchen. No bending over flour bins, no straining to reach things on high shelves. Protects food from dust, dirt, flies and mice.

PAGE "SPECIAL" POULTRY FENCE

Graduated mesh. Will turn poultry or large stock.



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Concrete Reinforcement	Tile Machines
Wire Partitioning	Paper Balers
Wire Mats	Pulleys
Window Guards	Belting
Tree Guards	Rubbish Burners
Office Fittings	Sleighs
	Grinders

and many more too numerous to list.

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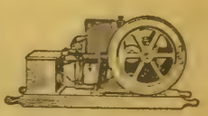
1-1-2 H. P. 4 cycle. For either gasoline or kerosene. Simple, efficient and very difficult to get out of order.



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No bad dreams bakeday eves — the morning batch "flat" instead of "up."

So very exasperating, you know, to get *less* loaves this week than last from the *same* quantities.

FIVE ROSES is the sure flour — *reliable*, you see.

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Disappointment—*never*.

Four times Uniform—Strength, Color, Flavor, too, and Yield.

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Use FIVE ROSES *always*.

10

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Not Bleached Not Blended

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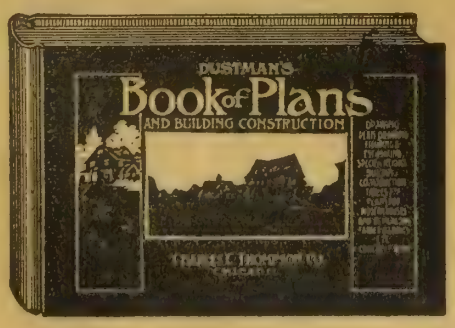

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Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

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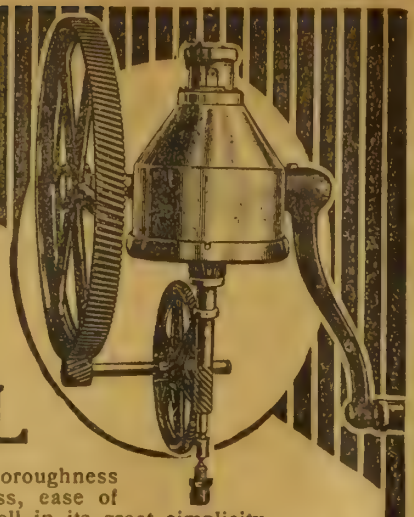
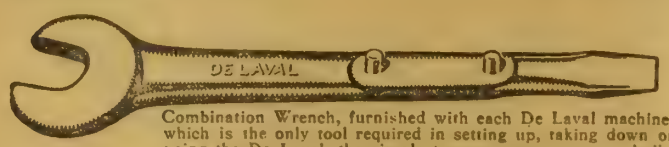
The Simplest CREAM SEPARATOR Ever Built — DE LAVAL



EXCELS ALL OTHERS not only in thoroughness of separation, sanitary cleanliness, ease of running and durability, but as well in its great simplicity.

THERE IS NOTHING ABOUT THE OPERATION, CLEANING, adjustment or repair of a modern De Laval Cream Separator which requires expert knowledge or special tools.

NOR ARE THERE ANY PARTS WHICH REQUIRE FREQUENT adjustment in order to maintain good running or to conform to varying conditions in the every-day use of a cream separator.



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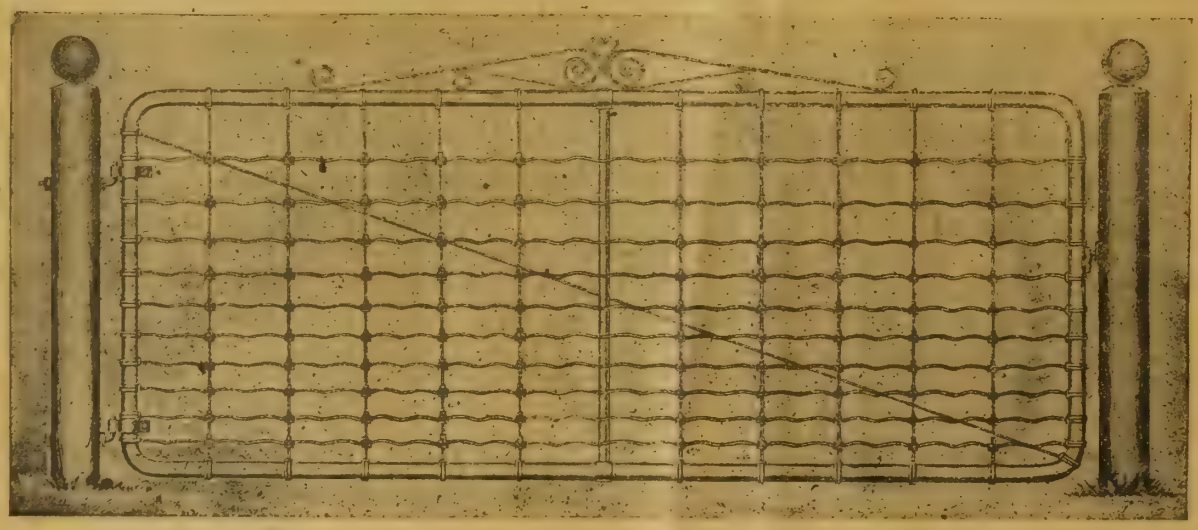

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Volume 18. **SUSSEX, NEW BRUNSWICK, FEBRUARY 25, 1913.** **Number 10.**

Sanitary Remodeling of Dairy Barns

By R. S. Smith, Maine State Dairy Inspector

THE question of building a modern dairy stable on many farms is of course complicated by the fact that already there are one or more barns present in a fairly good state of preservation. These barns were considered good enough twenty to forty years ago, when they were built, but owing to the introduction of modern machinery and better methods of caring for live stock and dairy products, they are now in about the same class as the log cabin or sod house would be for human beings. These barns are often too good to destroy or pull down and must be used in some scheme of reconstruction if economy is to be considered. On the other hand, the farmer must not forget that labor is a constant and continuous charge and that any arrangement or device that saves time or labor is worthy of careful consideration.

Through mistaken ideas of some writers, many or our farmers have developed the idea that to keep cows clean and healthy and to produce sanitary milk they must necessarily have expensive barns and that remodeling of old ones means a great expense to them.

Instead of remodeling the cow stable that may have been in use many years, necessitating nearly a complete reconstruction, many dairymen have built a new tieup as an ell to the main barn and without any overhead portion or cellar. Often this new building can be put and equipped with litter carrier, sanitary stalls and cement floor at a little greater cost than remodeling, but this depends on the judgment of the dairyman, when plans are made and the cost of changes estimated.

The purpose of this article is to point out a few suggestive changes that have been possible, without any great expense, in some of the barns visited in different sections of the State. These suggestions, no doubt, would apply to many not visited, to the end of securing more sanitary surroundings, for the cow and man in their labors of producing that universal, indispensable product,—milk.

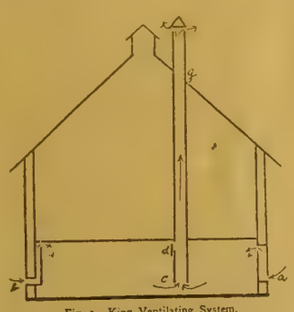

Fig. 1. King Ventilating System.

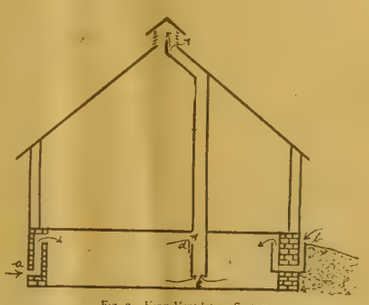

Fig 2 King Ventilating System

STABLE VENTILATION

An abundance of fresh air in the cow stable is very essential to the efficiency of the dairy herd as well as to the quality of the product.

The air of the stable is too frequently close and filled with dust and disagreeable odors. That the milk fat will absorb odors and that dust falling into the milk is extremely dangerous, is a well known fact.

It is a common experience to enter the cow stable in the morning and find the air very close and uncomfortable, a condition which surely could not be the best for the health of the animals that have stayed there all night.

According to the late Prof. King of Wisconsin, a cow in order to supply the amount of oxygen needed in her body, must breath 2804 cubic feet of pure air in 24 hours. The amount of oxygen she consumes from this amount of air is about 11.04 pounds.

The air space in a barn may be large but the abundance of fresh air is of more importance. The smallest stable may have more fresh air than the largest one; it all depends on the ventilating system.

The highly specialized dairy cow demonstrates that fresh air in abundance is necessary. She is closely confined during the winter months and in many cases is kept in ill-ventilated stables which have the additional disadvantage of being poorly lighted. This is contrary to nature and consequently she produces less than when out in the fresh air and with nature's environment.

That these conditions exist and are in a large measure responsible for the presence of disease cannot be doubted.

That conditions must be changed is evident from the following figures showing number of cattle condemned and killed for tuberculosis in this State in six years, taken from the Cattle Commissioners' Report.

1905	625
1906	970
1907	802
1908	925
1909) 1910)	2932
Total	6254

A few dairymen are waking up to the detrimental effects of such conditions on the animal and the amount of the product, and are remedying their defects by remodeling their old stables or building new stables that house the dairy animals only.

From experiments in Scotland on the influence of temperature on the milk yield, the following results were obtained:—If there is any restriction of ventilation sufficient to bring the temperature of a stable up to 60 degrees, there is a degree of atmospheric impurity inconsistent with the conditions of perfect health.

In stables in which the temperatures have been kept down by thorough ventilation in autumn, cows do not suffer either in health or milk yield even from very low temperatures in winter.

Whatever the waste of food may be, in the maintenance of the body heat of cows in colder stables it is more than counteracted by the influence of fresher air, because it is evident that the health of animals is much more likely to be promoted by active digestion than by the mere preservation of body heat. Colder temperature in the autumn causes the cow's hair to grow and she will retain thick coats of winter hair, thus preparing herself for nature's environment, but instead she is shut up in a poorly ventilated stable making a condition detrimental to her health.

A careful attempt should be made to give such a degree and kind of ventilation as will, without creating draughts, keep the temperature of the stable down to 50 degrees.

These are suggestions from Scotland which might well be observed and practiced on our Maine farms.

The mistake of having direct draughts instead of a thorough system of ventilation has been made too often by carpenters in building cow barns. The old idea under which a large percentage of Maine barns were built was to have an opening at the top of the window or door for entrance of the air and the outlet in the cupola.

The builder in many cases failed to get at the bottom principle of ventilation. That is, before you can get fresh, pure air in the room you must first take the foul air out; do this and the desired outside air will come in. The first step must be taken first. In every true system of ventilation two things are absolutely necessary. First, get the foul, used-

(Continued on page 341)

The N. B. Farmers and Dairymen in Annual Session

The Thirty-Seventh Annual Convention of the New Brunswick Farmers and Dairymen's Association was held in the city of Fredericton on the 17th to 21st inst.

At the opening meeting in the Council Chamber about fifty representative farmers were present. This number was augmented to upwards of one hundred and twenty-five at some of the later meetings. L. H. Smith, President of the Association, capably presided at the various sessions.

THE PRESIDENT'S ADDRESS

Gentlemen of the Farmers and Dairymen's Association:

In calling this meeting to order I wish to say that it is a pleasure for me to see delegates present from all parts of the province representing the different branches pertaining to agriculture. This shows that you are interested in the advancement and prosperity of our good province, and are willing to help promote an increased interest in the work of this association.

In looking back over the past year we surely have much to encourage us for the future. Since we last met this province has been placed on an equality with all the other provinces, and has had an Experimental Farm established in a central locality. This will, in the course of but a short time, prove of great value to all who study with interest the successful demonstrations conducted in the growing of different crops.

In New Brunswick one of our greatest needs from an agricultural standpoint, is a school system which will give to the young a practical agricultural education, if they so desire one. Up to the present time we were unable to receive this education unless we went outside the province. It is with much satisfaction we are looking forward to the establishment of two agricultural schools which will be able to impart practical education. The day of thinking that the farmer needs little or no education is gone forever, and today successful farming is a business which calls for one who has given study and thought to the various conditions which surround him.

No better evidence is needed for the demand for agricultural education than the fact that the Federal Government has this year granted the sum of ten million dollars for this purpose.

This amount is to cover a period of ten years. We in New Brunswick will this year receive $44,500, and this will have a yearly increase of $4,900.

Such a generous grant in the province when devoted along the line laid down by the Government will prove of immense value, and give new life to the greatest industry of the land.

Another forward step which is taking place this year is the general interest and demand for an improvement in the highways of the Province. No class of people will receive more direct benefit than the farmers, although in far too many cases they appear indifferent in this most worthy cause. Let us give our sympathy and co-operation in this matter and strive to keep politics out of both agriculture and the management of our highways.

Throughout the whole province there is an increased interest in regard of the future, and we are just beginning to realize as we never did before the opportunities New Brunswick affords.

Great advancement has been made in the fruit industry, while only within the past few years fruit raising received but little attention.

The increase in the value of both city real estate and nearby farming lands is ample proof that both our own people and the outside investors as well, have faith in the future development of our province. If we would but talk of our many advantages instead of dwelling on some of our petty grievances we would be taking a long step in the direction of doing our province justice. Let the people and the press unitedly work for the advancement and prosperity of our country, and make its future great in proportion to its natural advantages and general resources.

THE WELCOME TO THE CITY OF FREDERICTOE.

was extended by his worship Mayor Hooper. He referred to the fact that his first official duty in 1912, when he was installed in office, was to welcome the members of the N. B. F. & D. A. to the city and his second opportunity to repeat the welcome has now come just three weeks before the expiration of his term in office. He made fitting reference to the spirit of optimism that permeates the citizens of his town. The opening up by the Valley Railway of a fertile country, hitherto suffering through lack of transportation facilities was giving the people of these districts a new faith in their country. Mayor Hooper also referred to the very prominent place the subject of advanced agricultural education received in the speech and reply to the speech from the throne at the recent opening of the New Brunswick Legislature.

The Dominion Experimental Farm at Fredericton and the proposed agricultural schools at Sussex and Woodstock all come in for a share of commendation. In closing, Mayor Hooper referred to the Fredericton exhibition, of which he is Secretary-manager, as the biggest little exhibition in the world. He called for the genuine support of the New Brunswick farmers. He asked them to make exhibits and capture a greater proportion of the prize monies. He also offered the farmers the free use of his office while in the city and invited them to offer suggestions re apportioning of prize money.

THE REPLY TO ADDRESS OF WELCOME

was fittingly made by Ashley George, Vice-President of the Association. The association members always came to Fredericton with a feeling that a hearty welcome awaited them. The success attained by the Fredericton exhibition, referred to by Mayor Hooper, was due to skillful management and hearty co-operation of the citizens of the city in which it was held. To make it a bigger exhibition it only required the co-operation of the rural public, who can contribute their mite in the way of making exhibits in as many departments of the fair as they can.

In regard to the high cost of living cry it was noised abroad that farmers were charging exhorbitant prices for their produce; but the person who takes the trouble to figure on the capital invested by the farmer finds that at ruling prices very little is left to pay as dividends after the wage bills and other running expenses are provided for.

Experimental farms and agricultural schools served their purpose, and while farmers, as a rule, admire scientific farm work yet a great many do not understand the underlying principles. He believed that demonstration farms would best serve the farmers by showing them how certain ends were accomplished. Scientific agricu.tural knowledge practically applied was destined to place the farmer on as high a plane, industrially, educationally, socially and otherwise as is the devotee of any other legitimate calling and prepares him for the assembly halls of our country where more farmer representatives ought to be.

In conclusion, Mr. George referred to the good roads agitation. While he was heartily in accord with the objects of the association, he would not support any movement that would have a tendency to take monies that should be spent on roads leading to points of shipment and use them on main trunk lines thus making a road more for the pleasure of the motorist rather than for the practical use of the farmer. Trunk lines paralleled the railroads and it was not customary for farmers to haul goods for very long distances paralleling other routes of transportation. The roads mostly used by the farmers are the roads leading to their nearest villages and principal shipping points and these are the roads that should receive first consideration from the powers that be.

HON. D. V. LANDRY,

Commissioner for Agriculture, referred to the advances which New Brunswick had made agriculturally during the past few years. He asked the delegates to discuss and deal with the various vital questions brought before the meeting with an eye single to the best interests of their profession. In reference to the rapid increase in the number of agricultural societies in the province, the Dr. said his aim was to have an agricultural society organized in every important centre in the province.

He was a firm believer in associations and would like to see the horsemen, cattle breeders, sheep breeders, swine breeders and poultry breeders organize special associations for the fostering and upbuilding of their various industries. He did not approve of spasmodic effort. The effort, in order to be of any value, must be a persistent one.

Dr. Landry also referred to the rapid strides that are being made in horticultural lines and the stimulus that the industry had received since Mr. Turney and his assistant, Mr. Gorham, had been appointed to office. The world was just awakening to the fact that New Brunswick can grow fruit of the highest quality and can hold its own in this respect with any part of the universe. Fruit growers were now procuring their young trees through the association at a greatly reduced cost, and with the assurance that the trees are true to name and not a nondescript lot as was too often the case when trees were indiscriminately purchased in former years.

The farming special train had been well patronized at the various points visited and the cost had not been excessive.

In regard to the dairy industry he said the past year had been the second best year in the history of New Brunswick dairying. The returns were only a few thousand dollars short of the returns of 1903, the banner year. His department purpose getting additional men in the field to further develop this important industry.

The Farm Settlement Board was doing good work in repopulating the abandoned farms of the province. He asked the farmers to co-operate with and facilitate the working of the board by sending them a list of the vacant farms and possibilities in their respective districts, and also by acquiring the spirit of boost and talking of New Brunswick in general and the home district in particular.

In closing Dr. Landry put forth a plea to the young men of the province to attend the agricultural schools and visit the experimental farms and in other ways take advantage of the opportunities which are being provided for them.

SOME GOOD ADVICE

was given by Bishop Richardson, of Fredericton, who is one of the boosters for New Brunswick and one who lives in close touch with its people. He has been instrumental in persuading many young men who had been attacked by the "Lure of the West" to remain in New Brunswick. The "lure of the lumberwoods" was also working havoc amongst the young men of some districts. He thought the majority of them would do better if they remained at home on their farms and grew more live stock.

In regard to keeping boys on the farms, Bishop Richardson said that the solution lay in the hands of the fathers. Make it worth their while to remain and work the farms with you; give them wages and an interest in the farm. Don't practice loose habits. Begin the reform with yourself and put modern conveniences in the farm home . Nature has been lavish with her gifts; make the best use of them. Make up your minds as to what you want and then work towards that end and very soon your aim will be accomplished. You can hav? good roads if you want them. Stop hoarding your money at 3 per cent. and invest it in your farm. Don't allow bankers to grow rich by banking your money with them so that they may lend it to upbuild other lines of industry at big interest rates.

MR. C. N. VROOM,

President of the New Brunswick Fruit Growers' Association said the farmers of Eew Brunswick were all after progress. The only farmer who is not making good is the man who is not looking for progress. He was a firm believer in multiplicity of organization and went on to relate what had been accomplished by the fruit growers since their association had taken on a new lease of life.

He advised every farmer to set out and care for a few trees for a home orchard. He was confident that New Brunswick could excel the world in the production of certain varieties of apples. He predicted that New Brunswick would some day be called the "land of the big red apple" (McIntosh Red). He gave facts and figures re profits that had been made by N. B. fruit growers who had gone forward and cared for their orchards in an up-to-date manner, giving due attention to pruning, cultivating, spraying, etc., and their example should be an incentive for others to go on with more scientific progress.

COUNTRY REPORTS.

Interesting, optimistic reports re crop, weather and other conditions in the various counties were given by the county vice-presidents, several of whom offered some valuable suggestions for the upbuilding of a bigger and better agricultural development.

COMMITTEES APPOINTED.

The appointing of Resolution, Finance and Nominating Committees concluded the first evening's session.

ON TUESDAY FORENOON

the Association met in the exhibition building where Dr. J. Standish, of the N. S. A. C., gave a practical demonstration of the desirable and undesirable features in heavy horses.

A quartette of heavy horses from the New Brunswick experimental farm, were used for demonstration purposes. He demonstrated the various points that should be looked for when purchasing a horse. Questions asked were cheerfully answered and the interest of the audience was well maintained.

PROF. STEVENSON, OF THE N. S. A. C.,

gave a demonstration lecture on hudging dairy cattle during the afternoon session.

Harding Bros. and W. T. Harding, of Welsford, had some of their prize-winning and much admired Holsteins in the ring. W. H. Moore, Scotch Lake also showed a pair of grade cows. His demonstrations were lucid and easily followed. His answers to the numerous questions in cowology were carefully answered and a profitable afternoon session was spent.

ON TUESDAY EVENING

the first number on the programme was "The Breeding and Rearing of Heavy Horses" by Dr. Standish, who explained the principles involved in breeding, weaning, training and rearing of the foal until it comes to the age when it takes its place in the permanent farm team or is sold. His talk involved the care of the feet and how some defects may be remedied by giving them the necessary attention when required.

THE BREEDING AND FEEDING OF DAIRY CATTLE

was the subject of an illustrated lecture by Prof. Stevenson, who emphasized the importance of good feeding. Without proper feed it was impossible to properly develop an animal in bodily growth or in producing qualities. Every effort should be made by farmers to grow the bulk of the feeds consumed on their farms. The best way to fertilize a farm was by feeding the home grown grains, clovers, roots and corn to live stock. Dairy heifers should be developed early in life but he would not advise overfattening them. It was a big mistake to stunt a calf because a stunted calf would never make a profit-producing animal. The lantern slides contrasted the difference of conformation as found in dairy and beef cattle.

THE LEGAL AND MORAL REQUIREMENTS OF UP-TO-DATE FRUIT PACKING

were discussed by S. L. Peters, Fruit Inspector. He gave a clear interpretation of the Fruit Marks Act and how it was enforced. He thought no country under heaven can put more quality into fruit than can New Brunswick. Several samples of apples—Kings from Deer Island, Princess Louise from Upper Sheffield, Bishop Pippin from Gagetown and Merritts from Queenstown shown by Mr. Peters showed the quality that New Brunswick can put in those varieties. In regard to the moral aspect of the question, Mr. Peters said it was incumbent on every fruit grower, if he would have New Brunswick fruit acquire a world-wide reputation, to so pack his fruit that the brand will be a sufficient quarantee to the purchaser. That there was ample room for the extension of the fruit growing industry in New Brunswick was evidenced by the fact that thousands of barrels of apples were yearly imported and even at this early date it was impossible to find new Brunswick grown fruit for sale in Fredericton. He strongly advised feeding No. 3's to live stock rather than putting them on the market.

WEDNESDAY

forenoon was taken up with a discussion on hudging sheep and wool by Andrew Elliott and James A. Telfer, while the afternoon session in the council chamber was a continuance of the discussion on Sheep Raising Problems by the same speakers. Messrs. Telfer and Elliott are both practical sheep men—men who have acquired the knowledge of sheep husbandry by practical experience and as such their addresses were eagerly followed.

THE CONSERVATION OF FARM MANURE

was the subject of an excellent paper prepared and read by M. A. Scovil, of Gagetown. Mr. Scovil was highly complimented by the president, Prof. Grisdale and others on the thought and care he had exercised in presenting a study of his subject to the Association. The paper will be published in full in a later issue of the Farmer.

THE FINANCIAL STATEMENT

showed a cash balance of $96.32.

THE WEDNESDAY EVENING SESSION

was held in the opera house and the attendance was one of the largest of the Convention.

His Honor Lieut. Governor Wood occupied a place on the platform, and being called by the president gave a short address of encouragement.

The meeting was of especial importance in view of the addresses by Dr. C. C. James, special Commissioner for the Dominion Department of Agriculture, and J. H. Grisdale, Director of Experimental Farms.

THE PRINCIPLES AND BEST PRACTICES OF SOIL CULTIVATION

was the theme of an address by Prof. Grisdale. He laid emphasis on the advantages of systematic growing of crops by employing the rotation system and showed that not only will the yield be greater but economy will be effected. Experience has demonstrated that large crops can be raised by means of rotation, a great saving of time and expenditure will follow and only when the farmer realizes the benefits of systematic soil cultivation can he get the best possible returns from his land.

The system of crop rotation, the speaker said, is being tried out on all the experimental farms under the department of agriculture and the results prove it successful. It is merely introducing business methods into land cultivation and supplanting the antiquated idea. By putting the land under rotation, a larger crop is possible, the soil will be improved, and the farmers will reap a greater benefit from the time and labor expended than he is doing by following the present methods.

"The sooner our farmers come to realize the advantages of using crop rotation the better for the country. The solution of the whole problem of agriculture depends to a very great degree on the adoption of the system. The farmers of New Brunswick, I am almost certain, can under the system double their present output in five years."

The speaker then went on to explain the various systems of rotations viz., three, four, five and six year rotations.

The advantages of rotation Prof. Grisdale stated, are first, the lessening of the labor item, a certainty of crop returns greater than where no system is followed in cropping. Moreover, agricultural operations carried on systematically are conducive to the lowering of cost and the rapidity of performances of these operations for the delay will be less than when the operations are carried on over scattered sections. All the land will be working all the time.

After the question of rotation, next in importance is the saving of cost of production in the using of good, up-to-date machinery. He gave facts and figures which showed the lessened cost of production when bigger machines and more and heavier horses are used.

In concluding, Mr. Grisdale said that the statistics gathered from the different experimental farms all over Canada prove the benefit of rotation. Especially from the statistics based on the work at the central farm at Ottawa where conditions are fairly comparable to those of New Brunswick, this is true.

At the experimental farm to be established here at Fredericton crop rotation, soil cultivation and live stock raising will be tried out along the most approved methods, so that the farmers of New Brunswick may see for themselves and obtain all necessary information on the best methods of scientific farming.

He strongly recommended farmers to seed heavily with timothy and clover in order to get the best quality of hay.

THE OLD AND NEW AGRICULTURE.

Dr. C. C. James, who followed Prof. Grisdale, pointed out that the agricultural question is one of national proportions and as such, demands the attention of both residents of the city as well as the farmer.

Never before in the history of the country has there been such an interest in this subject; three times a day it confronts the city man when he sits to the table and realizes the high cost of living.

A bond of sympathy never before known, or rather a relationship between the farmer and the resident of the metropolis has been established through the changed order of things. Np longer are the affairs of the farm confined to the limits of the four walls of the farmhouse; never had the people of the city so much concern as to what the farmer is doing as they have today. It is becoming realized that the great question of agriculture is one that affects both, it has extended to the cities as well as farming communities, and must be solved to a certain extent there. It is a national problem, and the proper solution of it is a matter of prime importance.

At last the populace were beginning to realize that agriculture is Canada's greatest asset, greater than any of our resources and it was our first duty as citizens to see that it is properly developed.

It involves a great many difficulties and for the solution of these the individual effort and support of every farmer and every resident of the city is required. Yet it is a deplorable fact that we find so many of the farmers lacking interest in this question as a national problem.

They are content to let their neighbor solve it, and are blinded by a sophistry which makes them believe that their individual holdings are of insufficient importance. They are content to follow the old order of things, and fail to co-operate in advancing the cause.

That there is such a lack of interest in a question of vital importance is almost inconceivable. How easy in comparison is it to arouse a sufficient degree of interest in the construction of a railway to raise a million dollar capital; yet it is because of agriculture that a railway exists.

The speaker pointed out the need of co-operation with the work of the government and organized effort among the farmers themselves. It is of little value for the government to appropriate sums for the development of agricultural resources unless there is shown on the part of the farmer an interest in what is his own concern, and what is a concern of interest to the whole community. It is an industry which reaches into the towns and cities, both farmer and city man must benefit by the solution of the problems which effect agriculture. And it is for the farmer to look beyond his personal affairs and remember that he can do a share towards aiding in the solution of this national problem by individual effort and co-operation with others in his community.

The appropriations of a government towards agriculture should not be looked upon as a charity; they are giving assistance to the reconstruction or establishing on a business-like basis of a big industry which is to benefit all classes. Those whom this industry affects owe it to themselves and the community to lend their aid to making this industry what it should be; by improving conditions of agriculture we are improving conditions of the whole community.

If the possibilities which this industry present are great to the aggregate they are likewise so for the individual, and individual work is necessary. The problem of agriculture touches the whole nation and it touches each farmer, no matter how insignificant his share in the world's production. If the farming communities of the East will grapple with the problem there will be an added lustre for the agricultural future of the Maritime Provinces.

It is a pleasing fact that during the past year the province of New Brunswick has shown an increased interest in its agricultural possinilities; it is not necessary to go to the West to see a magnificent farming country and if the people here have not awakened to this fact it is about time they did so.

Dr. James' address was followed with great enthusiasm. Replete with optimism regarding the future of the East, the address appealed to all, and his urgent appeal to the farmers present to awaken to the changed order of things and to the necessity of personal interest and interest in helping work out the agricultural questions seemed to strike a responsive chord.

THE NEW BRUNSWICK PROVINCIAL SEED FAIR

was held in the exhibition building on Thursday. There was a goodly number of exhibits in the various sections. S. J. Moore, of the Seed Division and Prof. Boving, of McDonald College placed the awards and also gave demonstration lectures on the judging of seeds and roots which proved highly instructive to their audiences during the forenoon and afternoon sessions. Pcof. Boving replied to a great many questions re the growing of roots, a subject which was seemingly a live one in the minds of the farmers and which is yearly receiving more and more attention in New Brunswick.

A POULTRY SHOW

was also held concurrently with the other good things on the programme, and a very creditable showing was made in every section. S. Jones, Poultry Superintendent, placed the awards which will be published in full in those columns.

THE POULTRY INTERESTS OF CAEADA

was the theme of an address in the council chambers on Thursday afternoon, by W. A. Brown, Dominion Poultry Superintendent. He said:

"A trainload of cars nine miles long would represent the import of eggs into Canada for 1912." All through the Dominion there is an increased consumption of eggs; and the indus-

(Continued on page 346)

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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FEBRUARY 25, 1913.

DATES OF ISSUE.

March 11-25
April 15-29

HAVE YOU PHOTOS OF INTERESTING GARDEN AND ORCHARD SCENES ?

We wish to get photos of Maritime Province orchard and garden scenes. If you have any such photos in your possession or if you know any of special interest in your locality, we would be pleased if you would forward them to us. We will have cuts made for insertion in the columns of the Maritime Farmer and will return photos undamaged. When sending photos please write your name and address and also a short description of scene and on whose farm it was taken, on back of photo.

The Maritime Farmer,
Sussex, N. B.

NOVA SCOTIA FRUIT GROWERS WANT A HIGHER STANDARD FOR NO. 2's

At a recent meeting of the Nova Scotia Fruit Growers' Association, R. J. Messenger, of Bridgetown, introduced a resolution recommending that the Fruit Marks Act Standard for No. 2 apples be raised so that No. 2, as placed on the market, shall include no culls, consist of well-grown specimens of one variety, sound, of not less than ninety per cent. free from scab, wormholes, bruise and other defects and properly packed. The resolution was passed almost unanimously. The best thinking fruit growers of Nova Scotia are determined to have a law that admits of only one interpretation. They recognize that the shipping of a hetrogenous mass of apples branded as No. 2 but in many cases as we have seen them opened up in village stores, a disgrace to the shipper, a disappointment to the buyer and a detriment to the honest packer.

That Nova Scotia fruit growers are honest in their convictions and want to give the consumers a square deal is evidenced by their unanimity in asking for an act that will make a No. 2 practically as clean and good as a No. 1 apple but smaller in size.

We feel that the fruit growers of the other fruit-growing countries will arise to the occasion and voicing the sentiments expressed by the Nova Scotia fruit growers assist in getting the Act amended as herein suggested.

WHERE ARE THE SHOWS LEADING

Each year sees a higher class of dairy cattle led into the show rings of the various fairs and shows. Each season finds the exhibitors devoting more attention to fitting their herds. At the same time there is a growing tendency to use the same herd for show and production purposes. This is a fortunate solution of what at one time seemed to be something of a problem. A man of considerable prominence as a breeder has suggested that greater attention be brought to the combination of type and utility, particularly in connection with the bull. He believes, and the stand is well taken, that the bull who ranks high as a show animal should be equally valuable as a breeder. There have been in various live stock circles sires that were kept purely for the show ring and were almost invincible in their class, yet were almost worthless as breeders. If an animal gets all of his honor and credit from show yard awards his fame will of necessity be rather short lived, for the public is quick to honor and quick to forget when newer individuals come in to claim its attention.

On the other hand, the bull that is a great show animal and at the same time perpetuates his type and individuality along with the capacity to produce profitably is sure to be remembered through his offspring long after his show days have ceased. This same tendency to combine type and productive capacity will improve the breeds by making the record cows attractive in appearance as well as valuable for what they are able to accomplish. This is one of the things that showing dairy cattle is bound to gain.

Another thing that is being realized through the shows is a better knowledge of individuality on the part of the outsider. It is encouraging to see how readily some who have had little experience in judging cattle can point out the weak and the strong points in the individual. It has not been so many years since all cows looked alike to the average man, but the short courses that the fairs and dairy show ringsides afforded have begun to bear fruit and the young men are becoming decidedly more discriminating.

Another thing that is being accomplished by the show is a better knowledge of fitting and handling cattle. Showing is an art in itself and the indifferent, listless man who brings his cattle to the ring depending upon the judge to find their inherent qualities even though the cattle may be shaggy, ill kept and poorly handled, is by no means so common as a few years ago. Such a man cannot expect to capture the prizes and his chances become smaller every year, which is as it should be.

On the whole the dairy cattle shows, both at the state fairs and the national events, are doing much to improve the quality of the cattle of this country and at the same time they are doing a work of equal importance in stimulating an appreciation of better cattle in the minds of those who are not breeders.

COW COMFORT

An Exchange publication says:

"Too many cows are compelled to be out in rough weather while the steer sleeps in a nice warm stall in the barn."

That statement represents the viewpoint too many farmers have of the care and comfort of the cow. Let us carry the thought a little further. The steer is storing up carbon every day in the form of fat. That means heat, internal heat. We have seen fat steers go out and lie in the snow as a measure of relief against the undue sense of heat they felt. Did any one ever see a cow giving a good flow of milk do that? Why? Because the function of milk giving takes the carbon and other elements out of the cow's body. To keep up that function she must be kept warm. Milk giving presupposes at the start a certain relaxed condition of the body. Consequently when cows are turned out in a wintry day, you will see them range up along the sunny side of the barn, out of the cold wind. They instinctively feel the need of a requisite amount of warmth because of the relaxed milk giving condition of the body they are in. Almost every farmer can see these signs of the truth of things if he will but thoughtfully observe.

Many cow owners have observed that they must keep their cows warm if they get a good flow of milk, and then knowing only half of the truth, they shut them up in tight stables and slowly poison them to death with foul air. Just as much as the cow needs warmth does she also need plenty of pure air and oxygen in order that she may manufacture a good supply of milk. The lungs play a mighty important part with the udder and the stomach in making milk. Professor King worked out the problem how to supply a stable of cows constantly with pure air, and keep them warm and comfortable at the same time.

The physiology of milk production is a very deep and complex subject. The more milk we demand of the cow the more wise and careful must we become to supply her, not only with the right kind of parentage whereby she may have both capacity and strong constitution, but we must know the right conditions to surround her with so she can do her best work for our profit. Only in the excerise of this double knowledge can we obtain cows that will yield us a good profit. How foolish and weak then is the position of any dairy farmer who is content to remain in ignorance of these important principles of cowology.

LIFE WORK FOR YOUNG MEN

There need be no alarm because boys select business occupations in preference to farming. All of us have our individual preference in business and in social life. Many boys have no inclination for farming and would fail if they should choose it as their occupation.

The fault is with our educational system that gives so little inspiration to boys and girls for country life and for the beauty and charm of nature. Both rural and urban schools should teach more about objects in every-day life; give more empahsis to manhood and womanhood as the crowning achievements of a useful life; stress the value of tilling the soil, producing the world's food; training flowers, growing fruits, breeding animals and plants.

Boys and girls should have freedom in selecting their life-work. Parents should discuss the various occupations with their children and always emphasize the importance of a useful life, the opportunities for advancing humanity rather than fame or fortune that may be acquired. Before children are advised to choose any occupation their adaptations and personal inclinations should be considered carefully. A mistake in this respect may handicap young people and divert them from channels of usefulness.

Our concern should be more for those who have selected farming as their life-work or have indicated a preference to till the soil, dress the earth and make it a better place for man's abode. These young people should be congratulated and encouraged upon their wise choice, and means should be provided for their education and training. The state is one of the beneficiaries in this choice; another balance wheel has been placed against under-production; society strengthened when another efficient producer is enlisted.

Let us assist those who are willing and anxious to live close to the soil; who wish to learn more of the secrets of nature and transform them into food, clothing and shelter for man, let us give encouragement and consolation and begin the work of rural development.

GETTING READY FOR SPRING

The thoughtful farmer has his season's work all planned out for next season. He knows about how many acres he will put to each crop, how many milk cows he will keep, how many sows he will have to farrow. It is all planned except the details and filling in, which he must do as the work is done.

It is well to have the harness in good repair, the tools put in readiness, the seed corn sorted, tested and graded, the seed oats all fanned and everything in readiness for the busy rush of spring. Much preliminary work can be done of the many small things that in the aggregate are important.

Many springs are wet and unsuitable to do much work, so it stands us in hand to be ready when the opportunity presents itself, and all of this valuable time can be used in getting ready. Go around the fences—do what is necessary to keep the stock right where you put them. Poor fences make breachy stock. Clean the brush out of the way, so it will not bother in the spring. It is good to stop ditches from washing. It is business to haul out and scatter all the manure. By keeping all little jobs done and out of the way as soon as they present themselves, we can easily keep our work up in first-class condition.

It is business to have the best of seed, stock or help. Anything that is poor grade cannot produce good grade of crops or results. In hiring a man get a dependable, intelligent one that does not need to be told everything; one who can take the lead and run the business should you be ill or away.

Sanitary Remodeling of Dairy Barns.

(Continued from page 337)

up air out; second, get pure, fresh air in.

Many farmers are doing the second but not the first, yet if the stable is constructed rightly, made as close and tight as it should be and the foul air taken out, the fresh air from the outside can hardly be prevented from rushing in. It is much better to provide for letting this pure air in, instead of letting it come through cracks; in so doing the warmth of the cow is regulated.

Nearly every farmer has heard of the King system of ventilation but few understand its essential requirements to make it work. Nearly every one knows that a room containing a fire-place is easily ventilated when with double windows the outer window is opened a little at the bottom, and the inner window at the top in winter. The foul air containing gases breathed out settles near the floor while the animal heated air rises. Fresh air let in at the top of a room mixes with the warm air and gradually forces the impure air out at the bottom. In the living room this is done by the way of fireplaces and chimney.

In the cow barn inlets or intakes must be so arranged that the warm air will not pass out instead of cool fresh air coming in. This is done by having the inlet flues begin near the ground on the outside and end near the ceiling on the inside. Inlets should be numerous, well distributed and of small size on all sides of the stable. Usually an inlet 4x12 inches is convenient because it can be built between two 4 inch studs.

Usually about 10 to 12 of these inlets should furnish air enough, if properly situated, for 20 cows. Flues should be well lined with building paper and matched boards to prevent side leaks. Openings to the outside should be screened.

Outlets should be large and open near the floor with extension enough above the barn to cause a good draught upwards. An outlet 2 feet square should be sufficient for about 20 cows. This should be built of wood instead of metal as warm air may condense near the outer end and cause moisture to gather. When more cows are in the stable a flue at each end gives better results. The mistake of not getting the outer end of the flue high enough is often made. To produce a draught and allow oxygen to enter, involves the same principle as exists when large factories and mills build tall chimneys for furnaces.

Figs. 1 and 2 diagrams show some of the adaptations of the King system.

Figure 1 shows two methods of constructing the inlets, between the studding of the wall and entirely inside the stable. a and b are inlet flues through which the fresh air is taken in at the bottom and outside of the building and enters in at the ceiling or top of the stable on the inside. c is where the cold impure air is lifted by the long air shaft or flue that extends to the roof of the barn. d is a damper or opening that can be regulated by opening or closing to let off gases or hot air if the stable should be too warm. g is where the shaft passes through the roof of the barn.

Figure 2 shows the proper method of building the inlet flue through a brick or stone wall in a basement barn. a is the intake flue at the lower part of basement on outside which passes through and between brick wall and enters stable on inside at ceiling, letting in the fresh air. b is the inlet flue that also takes in the fresh air at the ground level and has a drop on the outside of wall and passes through and rises about the same distance as the drop on the outside in order to allow the inlet on inside of wall to be close to the ceiling of stable. c and d as explained for Figure 1 are the out-take flues at floor and damper at ceiling of stable.

LIGHT.

Too much stress cannot be laid on the fact that sunlight is one of the best and perhaps the cheapest of disinfectants.

In the construction of dairy barns one cannot help noticing that there is a decided lack of window space even in the home of noted herds.

Recently a well known dairyman lost nineteen valuable cows from tuberculosis, but no one could wonder at it after visiting the dark, poorly ventilated quarters. The stable was disinfected and the man filled up the vacant places with more cows but failed to even whitewash the place. Doubtless he will have future trouble, whereas if a few windows had been cut in the side of the barn, a proper ventilating system established, and whitewash freely used, trouble would be avoided.

That four square feet of eight per cow should be required is not asking too much.

In many of our present dairy barns

Fig. 3. Dairy Barn Poorly Lighted.

Fig. 4. Dairy Barn, showing a large window space for entrance of light. in contrast with Fig. 4.

where there is insufficient light, the present windows can be made larger and fitted to the sliding type or those hinged at the bottom. Necessarily all windows must be tight to insure an efficient ventilation system.

Often there is some hesitation for fear that too many windows will make the tieup too cold but when the cellar is closed and all doors tight and the ventilating system working properly this is a rare occurrence.

When windows are cut in or enlarged, their length should exceed their width and inside sills be avoided.

Together with more sunlight there should be in every dairy barn a coating of light paint or of whitewash to make the place look more like a milk-producing station and to insure against dirt and bacteria.

In order to have a good coating surface the walls and especially the ceiling should be smooth. Preferably the ceiling should be of matched boards to prevent hayseed or chaff from sifting through on to the animals and into the milk pail.

Whitewash should be applied at least once a year and could be applied more often to good effect.

If ordinary small windows are present in the barn, it is no difficult task to widen them to the next upright joist or to the second one from the present opening. After this, window frames can be adjusted. Windows as large as the ordinary house sashes have been placed lengthwise at intervals in openings cut, and great satisfaction has resulted. The only objection to large areas of glass in the stable is the rapid cooling and condensation on very cold nights, but this can be largely overcome by the use of double glazed windows in winter. As has been stated, instances of too much light in a dairy stable are very rare.

STALLS OR STANCHIONS.

The demand for pure milk produced under sanitary conditions is constantly increasing, and to produce such milk it is necessary to have clean cows kept in sanitary stalls in sanitary barns.

There seems to be a prevailing impression that a sanitary stall or stanchion is an expensive patented arrangement, beyond the reach of the average dairyman, but from what follows it can be seen that any one handy with tools can accomplish excellent results.

Most of the older dairy barns and some of the new ones are so arranged that it is impossible to keep cows clean in them. Many systems of fastening, such as ties, rigid and swinging stanchions, stalls and the open shed are being used but the best are, of course, those which will keep the animal comfortable and from lying in her own filth. In stall construction one should bear in mind:

1. It should keep the cow clean and allow plenty of light.
2. It should make the cow comfortable.
3. It should be convenient for feeding, milking and cleaning.
4. It should hold the animals securely.
5. It should be inexpensive.

The stall shown in Fig. 6 is not provided with any special method of feeding hay, as may be wished for by some. This can be accomplished

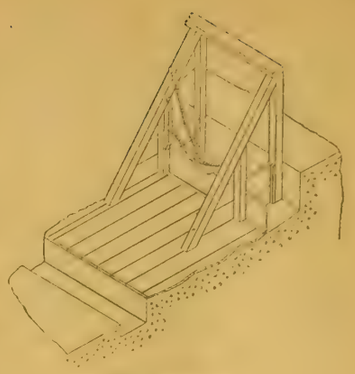


Fig. 6 Sanitary Stall.

by adding a hay and roughage rack, with but little expense. These types have been selected for suggestions because of their simplicity, sanitary features and low cost. The bill of cost for a stall of Fig. 6 type will differ in many sections, but a conservative estimate for ten stalls follows:

Crossbars 36 feet, of 2x6 in. 12 ft. lengths, @ $25 per M	$0.90
Mangers 72 ft, of 2x12 in 12 ft. lengths, @ $34 per M	2.45
Manger and partitions 30 ft. of 1x9 in. 12 and 16 ft. lengehs, @ $35 per M	1.00
Floor mats, 158 feet of 1x12 in., 18 ft. lengths, @ $37 per M	5.85
Uprights and partitions, 224 feet, of 4x4 in. 12 ft. lengths, @ $35 per M	1.00
Chains, 10 @ 35 cents each	3.50
Guide for chains, 10 @ 20 cents	2.00
Bolts for holding partitions in concrete floor, 11 @ 10c	1.10
Nails	2.00
Labor	20.00
Total	$45.97
Cost of single stall, approximately	4.59

Several firms frequently advertise stable fittings in the columns of the Maritime Farmer and readers who contemplate remodelling their stables should write for catalogues and prices.

At present on many of our dairy farms the old form of manger or box crib is in use. It is difficult to clean and when not cleaned its corners become caked and gummed with waste grain from many feedings. To require an animal to eat from such an ill smelling, constantly used, unsanitary feed box is wrong, if the animal is to be healthy and productive. The box manger is gradually being eliminated, or reconstructed to make conditions more sanitary and the manger more durable, and to this end concrete is being used.

Many questions arise as to the type of manger to be used when building or remodelling a barn. Some desire a trough made of plank or of cement curved at the bottom, running the length of the tie-up. This can be flushed with water and cleaned often. Partitions are desirable between animals when one animal is apt to steal some of another's grain.

By using individual drinking pots, by flushing the trough, and by using tanks in the barn the cattle can be watered, but when weather permits it is much better to allow them to exercise in the barnyard and drink from a water tank there. This insures a little needed exercise and eliminates cost of unnecessary stable fixtures. Types of cement mangers in use and giving satisfaction follow.

(Continued on page 368)

HORTICULTURE.

Impressions of the Annual Convention of the Fruit Growers' Association of Nova Scotia Held Last Month in Middleton.

If, as Aristotle asserts, "Agriculture lies at the basis of national prosperity," and, of course, horticulture is the basic agricultural enterprise in the Annapolis Valley,—the projected "Black fox ranch" not excepted, at present,—therefore Pomology, particularly apple-culture, is the keystone in the arch of prosperity in that part of Nova Scotia lying between Windsor and Digby. The biggest thing above ground in this fruit belt, next to humanity, is the apple.

Moreover, one has regard to the fact that the fruit growers themselves are now appreciating the desirability ity, and when marketed, shall not of producing fruit of the finest qualsuffer in comparison with the best of Ontario and other apple-growing districts.

In view of the foregoing facts, it was very natural that Middleton should be for three days last week the Mecca of the Pomologists of N S.

They literally poured into that town from all points of the compass. Every station along the line furnished its quota. The members of the local committee had a big contract on their hands, but they were equal to the occasion, and very soon had all the visitors revelling in that hospitality for which Middleton is famous. Once within the convenient and commodius hall where the Convention convened at 2 o'clock on Tuesday afternoon, one was impressed with the type of men, representative of this "backbone" industry of western Nova Scotia.

Men of all ages, and all sizes were there. After "taking in" the personnel of the Convention, and getting my first impressions, my mind reverted to the primary cause of this splendid gathering—the apple—The king of fruits is the apple. Man the kind of all things created. God the great "First Cause." There flashed across my mind the saying of the poet,

"Thy providence is kind and large,
Both man and beast Thy bounty share;
The whole creation is Thy charge,
But men are Thy peculiar care."

Consider the apple, how it grows, from within, characteristic of the inward growth in grace of men. In some respects men outwardly resemble the trees in their orchards. These trees typify the physical. characteristics of those who live and labor under their shade and shadow. In the midst of my reverie the President proceeded to open the Convention.

As Chairman, Mr. S. C. Parker is the right man in the right place, and in re-electing him President, his brother fruit growers honored themselves in honoring him. His address was timely. In listening to Dr. Matheson speaking on the subject—"The San Jose Scale Situation in Nova Scotia," one could not but feel that in the person of this youthful-looking Entomologist we have secured a man well qualified to lead us in our campaign against the curse of the apple industry, the orchard pests. In view of what Dr. Matheson said, I have come to the conclusion that it will be safer for our apple growers to grow their own nursery stock, rather than import infested stock. And, why not?

By so doing the introduction of dangerous pests will be avoided, scions and buds from trees thoroughly acclimated could be obtained, there will be no injury done the young stock in consequence of long transportation, and the orchardist could have his trees grown from scions from his own favorite trees, I regard this as a very important matter. It is as essential to have good nursery trees as to have good seed.

Prof. Saxby Blair, and Mr. R. S. Eaton, than whom there are no better authorities in the Maritime Provinces, handled the subject of box packing.

We were all impressed with the fact that the box is undoubtedly the ideal package for apples of the finest quality. The advantages certainly counter-balance the disadvantages.

The Canadian Trade commissioner, at Leeds, Eng., reports that one of the important changes which the past season's trade in Canadian apples has brought to light is the greatly improved popularity of box-packed apples. Many merchants now declare themselves to be whole-heartedly in favor of this system of packing apples in bushel boxes. Not only are these boxes, they say, more conveniently stored on the ship, but they are easier to handle in their warehouses, and meet a long felt want in supplying the demands of small retailers who cannot dispose quickly of the larger amount of apples contained in the ordinary barrel.

The box makes it possible for the grower to place his fruit in the hands of the consumer in the original package. In the great majority of instances the barrel is opened by the retailer, and its contents sold in small quantities. However, until our packers become experts in this art it would be, I think, a mistake to compete in this respect with B. C.

The fruit growers of that province certainly have a mortgage on the different styles of pack, as far as Canada is concerned. Mr. J. Elliot Smith suggests that a box packing expert be engaged for the "Short Course" which is held each year at the College in Truro. His suggestion is seasonable. Or, better still, with Messrs. Saxby Blair and J. M. Robinson at Kentville, why not inaugurate a course there to include packing in all its phases? It is conceded that the bushel box is a more attractive package than the barrel, and with the fancy stock suitably wrapped in tissue paper, marked with the name of the grower and the variety of the fruit, our highly colored fruit of uniform size will command prices at least as high as that paid for oranges. I do not know how much of truth there is in the statement which I read some time ago that apples are greater luxuries in New York than oranges. While single oranges of the finest variety can be bought for 5 cents, the best apples are being sold for 12 cents each.

It appears that there is a difference of opinion in regard to the size of the box. The majority however, recommend 20 inches long, by 11 wide, and 10 deep, inside measure. The bushel basket, I understand, is popular in some quarters. It is easily handled and pleases the customers.

This package however is used only in shipping to markets adjacent to the orchard where the fruit is grown, and even there, only to a limited extent.

I noted that the speakers advocated the use of a press, yet there are those who are of the opinion that to press too hard is a mistake, and affirm that the knee will give sufficient pressure. To sum up, just as soon as the demand for boxed fruit becomes general we shall have to adapt our methods to that situation. In the meantime we shall make no mistake in packing our finest apples in boxes. The old adage "The best goods are put up in the smallest packages," or words to that effect, can be made to apply to apple packing; "the better the grade, the smaller the package." Here is a concrete case copied from the "Montreal Witness" of recent date,—

FANCY NO. 1 NORTHERN SPY APPLES IN BUSHEL BOXES.

We have just received another large shipment of extra fine quality No. 1 Northern Spy apples, in bushel boxes, suitable for family use. Each apple is wrapped separately in paper and they will keep for months in a cool place. Price $3.00 per box.

The two masterful addresses by Prof. J. P. Stewart made us his debtors. "Orchard Fertilizers" was a splendid effort. Unless the soil is properly cared for, we shall look in vain for profitable returns. Apples are in greater need of fertilization than many other crops. In judging the value of a fertilizer it is necessary to consider not only the total amount of phosphoric acid, potash, and nitrogen which it contains, but also the proportion of these constituents which the apples and leaves are able to utilize readily.

After all has been said that can be said in favor of commercial fertilizers, barnyard manure is of all fertilizers the most desirable.

In regard to humus, Wolverton "The Canadian Apple Growers' Guide" says that while humus is valuable upon dry soils, helping them to retain moisture, it may be injurious upon wet soils, tending to make them boggy and cold. For example it would not be wise to apply marsh mud to clay soil. To put the whole matter in the proverbial "nut-shell," I would say; the amount of fertilizer to apply depends upon the character of the soil, the age and vigor of the trees, and the quality or quantity o the fruit desired. My motto in this connection is, "Fertilize to make the orchard profitable." The gist of the Prof's teaching was to fertilize, whether you cover crop or not, and though you may reduce your cultivation of the soil to a minimum, it is fundamental to fertilize.

In speaking to us on "Sprays and Spraying" Prof. Stewart proved himself to be master of his subject. I should not be doing the Prof. justice if I were to endeavor to condense an address that might be termed a "classic" on the subject of spraying, into a few sentences. I therefore refrain from an extended allusion to an address that was a veritable mine of information. Our belief, (1) in spraying, (2) in lime-sulphur, and (3) the two important sprayings, to be on no account omitted, (a) before the buds burst, and (b) immediately after the fall of the blossoms, is, in consequence ol this exposition on the above subject, most completely confirmed. If we wish to grow the best apples our orchards can produce let us resolve to make that possible by spraying and thinning. Gossard suggests that "the essentials for success are a good outfit, the applications at the proper time, and thorough work."

If I desire to grow the best commercial apples, can I afford not to spray?

Our honored visitor, after giving us the benefit of his own investigations and experiments, reminded us that the care of both land and trees was a local problem. Each grower for himself must employ the means and methods best adapted to local conditions. And right here is a moral that we had better take to heart, in view of our characteristic proneness to "List" the place, hoping to sell and buy another. Stand by the orchard that you have studied, and know the peculiar nature of the soil and the trees. Although the hour was late we were reluctant to allow the learned speaker to take his seat.

The entire audience, from that veteran apple connoisseur, Mr. R. W. Starr, down to the greenhorn whose privilege it was to sit at the feet of such a Gamaliel, and whose pleasure it is to pen these few lines, was greatly edified.

I regretted the evident haste on the part of some to amend the "Fruit Marks Act." It seems to me that any move in that direction should either be referred to a committee, or a notice of motion given some time prior to the discussion. The authors of the resolution, doubtless did not designedly aim at lowering the present standard, yet, as several speakers remarked, had it passed, it would have exposed us to criticism.

I can quite understand that the law requires "not less than 90 per cent of the fruit free from defect" allowing for inferior apples inadvertantly packed. I think perhaps the most indefinite clause in the Act is the one that says the fruit shall be "properly packed." The term "properly" is not strong enough; is not sufficiently emphatic; allows too wide a margin. However, that is only my opinion.

I refrain from expressing my mind in regard to "The Future of Our Horticultural Exhibition" as I have not given the matter adequate consideration, in view of its importance.

We are all very much gratified with the statements of Messrs. W. W. Moore, and C. W. Baxter, from whom we learned of the marked improvement in packing during the past season. Until this change for the better took place we were gaining an unenviable reputation as apple packers.

It pays to be honest. The old adage, "Honesty is the best policy," certainly applies to fruit growers as it does to all other industries.

Let us guarantee that our apples shall be perfectly graded and packed, and merit a reputation for honesty. With external conditions approaching the ideal, why should not Nova Scotia be second to none as an apple producing country?

I had retired from the Convention before the following subjects came up for discussion: "The Brown Tail and the Gipsy Moth," and "Thinning Apples on a Commercial Basis." I presume, however, as a result of the conference on the latter subject, every member of the Association went home a convert to thinning. I shall close impressions by asserting that the secret of success in growing No. 1's is (1) Fertilize, (2) Spray and (3) Thin. By so doing you will, I am convinced, increase the size, improve the quality, brighten the color of your apples, reduce the cost of harvesting, protect your trees from overbearing, and enhance the value of your crop. In other words, you will have more No. 1 and less No. 2 and 3, to pick and pack.

G. Bryant,
Berwick, E. S. Feb. 3rd, 1913.

Something Doing in the East as Well as in the West.

We have all grown accustomed to looking on the West and westerners as the place and people of progress. This attitude of mind may account for the little notice taken and the small appreciation of what is being done all about us.

Co-operation is now a household word. We cannot take up a paper without reading something of the grain growers of western Canada the fruit exchange of California, the grape growers of Michigan or of some other body of producers that all at once seem to have come to the conclusion that in union there is strength. And we in Nova Scotia, Although we do live in the East, should not forget that in our own co-operative body, "The United Fruit Companies," we have the first organization of its kind in America dealing exclusively in apples.

Even the great and pushing West, only this winter has seen the wisdom of calling representatives of her co-operative fruit companies together to form a central union. This past year has been a bad year for them. The

Bad Blood

is the direct and inevitable result of irregular or constipated bowels and clogged-up kidneys and skin. The undigested food and other waste matter which is allowed to accumulate poisons the blood and the whole system. Dr. Morse's Indian Root Pills act directly on the bowels, regulating them—on the kidneys, giving them ease and strength to properly filter the blood—and on the skin, opening up the pores. For pure blood and good health take

Dr. Morse's "Indian Root Pills

GOOD SEEDS

WORLD'S FINEST STRAINS

63 FIRST PRIZES

were awarded on products grown from our seeds at the Montreal Horticultural Exhibition August 1912.

Send now for our illustrated catalogue replete with choicest strains of vegetable and flower seeds.

DUPUY & FERGUSON, Montreal

FERRY'S

The sower has no second chance. A good beginning is the only safe rule; put your faith in the best seeds you can buy. Ferry's have had the highest reputation for over 50 years. For sale everywhere.

1913 Catalogue free on request.

D. M. FERRY & CO., Windsor, Ont.

SEEDS

Have City Conveniences

REPLACE the pestilent, draughty, dangerous and offensive out-of-doors closet with an in-doors closet which requires no sewer, no plumbing and no flushing system Have city conveniences in your home.

Safeguard Family Health

by installing a

"TWEED CLOSET" SANITARY and ODORLESS

"Tweed" Closets can be installed in the bathroom, cellar, or any other convenient place indoors, merely requiring to be connected by a pipe for ventilation with a chimney hole. "Tweed" Liquid Chemical, used in connection with Tweed Closets, is both a deodorant and a disinfectant. Many hundreds of Tweed Closets have been sold in Canada. Send for illustrated price list. Sold on 30 Days trial.

STEEL TROUGH & MACHINE CO., Ltd.

9 James Street, TWEED, Ont.

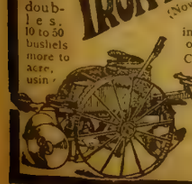
SKIPPED HILLS RAISE NO POTATOES

Every hill you miss in planting means money lost out of your pocket. No machine can plant perfectly unless there is hand correction of misses and doubles. 10 to 50 bushels more to acre, using

IRON AGE (Improved Robbins) Potato Planter

(Now made in Canada)

A seed piece in every space and one only. No pickets used—no injury to seed Perfect placing of seed and uniform spacing Can't you see that it must pay for itself? Write for booklet, "*100 per cent potato planting*." We make full line Potato Machines, Garden Tools, Sprayers, etc.



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Profitable crops every year

HOW?

Farmers nowadays are able to get rid of much uncertainty in growing their crops. Good yields can be secured in spite of weather conditions that once were regarded as hopeless;—one essential aid to a dependable crop is a dependable fertilizer. In a good season it means a big success; in a bad season it prevents failure. Therefore, use

Bowker's Fertilizers

Bowker's Fertilizers are soluble, active, sure. They are backed by forty years of experience, the best materials, the best facilities and prompt service. Suitable for every crop and adapted to every pocketbook.

We want Agents in unoccupied territory. Write today for prices and terms; this may mean a good business for you if you act at once.

Write anyway for our illustrated catalogue and calendar before you buy your spring fertilizer. We want you to know what we can do.

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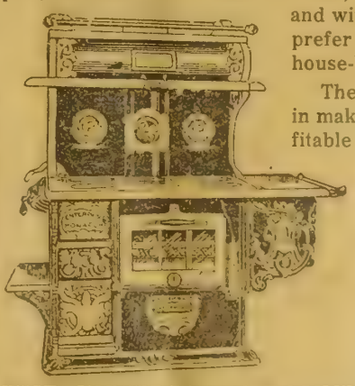
Original and largest manufacturers of special fertilizers.

IF EVERY SUFFRAGETTE IN ENGLAND

HAD A HOME, AND IN IT A STEEL RANGE LIKE THE

ENTERPRISE MONARCH

and could know the delights of cooking delicious bread and cake, crisp pies, meats and fish "done to a turn," without odors from burned food, and with the minimum of labour she would prefer being a house-keeper instead of a house-breaker, every time.



The "MONARCH" leads all competitors in making housekeeping pleasant and profitable and divesting it of much drudgery--BECAUSE it has all the good features of other ranges and some that are distinctly its own.

Then it is backed by our written guarantee as to fit finish and operation.

It will pay you to write us for circular and particulars, if your dealer does not handle this well-known range.

THE ENTERPRISE FOUNDRY CO., Sackville, N. B.

MANUFACTURERS

fierce competition between their small companies with increasing crops, has been the buyers opportunity. Our Nova Scotia companies scented this danger afar off, and did not need to have it forced on their attention by bitter experience. We only have to listen to the wails of some of the apple speculators in the public press, or to hear the arguments advanced by the agents of English Commission Houses against the United Fruit Companies to understand what a good work they are doing. The criticism of high salaries was quite potent for a while to use on the uninformed, but when it was found that all expenses of running the "Central" would be met by small economies effected by organization, it made that cry look rather foolish.

It may interest some to know that a gross sale of thirteen shillings in London now nets the United Fruit Companies two dollars a barrel. Individuals in shipping know that it takes fourteen shillings gross to net them two dollars. There is a clear twenty-five cents a barrel saved to Nova Scotia; and this amounts to the snug sum of $100.000 on 400,000 barrels, the estimated shipments of the Companies this year. This shilling a barrel is clean, legtimate money that could never come to the growers except through organization.

Mr. W. W. Moore, of Ottawa, Chief of the Market Division, addressing the Nova Scotia Fruit Growers' Association at Middleton, was most flattering in his remarks on how co-operative packed apples had been received this year in foreign markets. He read letter after letter from Great Britain, Montreal, and Western Canada speaking in the highest terms of the goods received from the United Fruit Companies.

This testimony was all the more valuable coming as it did from Mr. Moore, who last year speaking before the same body at Wolfville, created quite a furor by roundly scoring Nova Scotia shippers, for sending, that year, apples fraudulently marked and packed to the markets of Western Canada.

Our fruit growers now appreciate that conditions in the apple world are rapidly changing. It is only half the business to produce the supplies. A coal mine would be of no value unless its product could be placed on the market and sold at a profit.

With the production of apples increasing so rapidly the marketing end of the business is assuming even greater importance.

The spread between what the grower gets and what the consumer pays is far too great to encourage either. Early apples retail in Sydney, C. B. at three pounds for a quarter; this is at the rate of ten dollars a barrel. The farmer in the Valley receives $1.50 a barrel for the same apples and out of that pays for the package. This condition of affairs curtails consumption, thus reacting on the producer in limiting his market.

With co-operation new markets can be found and old ones catered to. Certain varieties, as Gravenstein, Wagner, Cox's Orange, etc. could be handled in boxes at greatly increased prices. Only in co-operation can this phase of the business be properly developed. The principles in this movement are as sound as the ten commandments, but the detail must be worked out to suit the peculiar conditions of each locality. Faith and perseverance are bound to succeed.—M. K. E.

DAIRYING.

Milk And Cream Testing

The subject of testing milk and cream implies the separation of butter fat from milk or cream, which the Babcock Test has made possible, by the difference between the specific gravity of butter fat and milk serum by the centrifugal force produced in the tester and by burning the solids not fat with a strong acid.

It is necessary to test milk or cream in order to find out its commercial value. The percentages of the different constituents of milk especially fat and casein will differ considerably in different milks and for this reason we must have some means of knowing the extent of this variation. In the manufacture of cheese, fat and casein are used, and to know the true value of the milk for this purpose we must know the amount of fat and casein which the milk contains. If for butter making, the fat of the milk will be the index of its value for it is the fat alone that is used in the manufacture of butter. It can easily be seen that a rapid, accurate, inexpensive and reliable test would be of great value to dairymen. The Babcock test has proved itself to have the above mentioned qualities.

In testing milk, cream, skimmed milk, buttermilk or whey much the same method is followed and naturally the first step taken is getting a fair sample of what is to be tested. These samples should be taken immediately after the milk or cream has been emptied into the receiving can. The contents of the can should be thoroughly stirred. The simplest and most used method of taking samples is by using a half ounce dipper. This sample taken is put in a pint, or half pint, glass jar and is kept with some preservative for a period of two weeks or a month when it is tested. This kind of samples are called composite samples and are generally used in factories and creameries.

These composite sample bottles should be kept well corked either with a wooden glass, or cork stopper. Open bottles are almost certain to affect the test and in butter the the over run. It is also better to keep these samples in a dark, cool place as heat and direct light tend to evaporation.

When these samples are to be tested, they should be placed in warm water and brought up to a temperature of 105 degrees—110 degrees. If the samples were tested daily, a much lower temperature would be better, say 65 degrees to 75 degrees. For taking a test sample, the pipete is used for milk or thin cream. This will deliver 17.5 c. c. For daily testing use about 17.5 c. c. of Sulphuric Acid for each bottle. This acid should have a strength of 1.82 to 1.83. Do not allow the acid to drop direct into the milk or cream, but rather run down the inside of the bottle. In testing composite samples, less acid is used and heavy cream should be weighed with a scale instead of measuring with a pipete.

As most creameries and factories have 24 bottle machines, it is usual to measure or weigh out the 24 samples before placing in the machine. It is well, now, to place the bottles in cold water for a minute or two so as to bring all to the same temperature. The acid is now added, the case containing the bottles is shaken with a rotary motion to mix the contents. As each bottle is placed in the machine, it should be given another shake. The bottles are now whir,ed in the tester at full speed for five minutes, then enough hot water is added to float the fat up into the neck. The water should have a temperature of 140 degrees to 160 degrees. Whirl two minutes more, now place the bottles in hot water at about 140 degrees, that reaches to the top of the fat and let stand for a few minutes, then read.

In testing cream, add hot water immediately after placing in machine, enough to bring the contents up nearly to the bottom of the neck. Then whirl five minutes, add more hot water, whirl again, place in hot water, same as milk samples and read two or three minutes later.

For reading, a small pair of dividers are used. It will be noticed that in both milk and cream tests, that there is a distinct curve or cresent at the top of the fat column and a less distinct curve at the bottom. For reading milk tests, the reading should be from the lowest extremity to the highest extremity of the fat column. For cream read from the bottom of the fat column to the lowest part of the curve on top.

The tests should be read twice to avoid all danger of mistakes.

While the Babcock test is very simple, great care should be taken that each step is accurately carried out. Unless this is done the test is practically of no use.

A few pointers regarding testing might not be out of place. Be sure your bottles and glassware are thoroughly cleaned. Hot water and some good cleanser, such as Whyandotte, with a small brush is all that is necessary to do this.

Be sure your temperatures are right, also know that your acid is neither too weak nor too strong.

Be sure your tester runs smoothly and does not jar and see that it runs at right speed.

Do not allow samples to become cold before reading.

Soft water is much better to add to the tests than hard water.

REGAL Flour yields the *best quality* and the *utmost quantity* of bread per barrel: white, light loaves, pastry of melting flakiness.

This is simple direct truth.

Unless you find it so, when you try it, your dealer will return your money.

REGAL FLOUR

The DIABOLO
Cream Separator

The factory in Sweden which produces the DIABOLO makes the best separators in the world today, and the Diabolo is at the top of the class for quality. We guarantee it in every respect unexcelled by any other make of machine.

Cleanest Skimming **Lightest Running**
Easiest to Clean **Finest Material and Workmanship**

Patent Self-Balancing Upright Blade Device in Bowl arrangement is superior to all others.

Notwithstanding the high grade of this machine, the enormous output enables it to be placed on the market at prices away below those of any other high grade machine.

Price No. 1, 300 lbs. - **$35.00**
Price No. 2, 550 lbs. - **55.00**

Do not make the mistake of placing your order until investigating the merits of the DIABOLO.

Agents wanted in every locality

The BAILEY-UNDERWOOD CO. Ltd., New Glasgow, N.S.

Talk About Simplicity

Here are all the parts that go to make up the bowl of the

SHARPLES
TUBULAR
CREAM SEPARATOR

and with these three we guarantee Tubulars to skim 50% closer and to continue to skim 50% closer than any other separator made.

This being the case

Why should you have to wash up seven times this many pieces—twice a day?

That is a question that is easier to ask than to answer.

There has never a claim been made for Sharples Tubulars that could not be proven: — there has never a machine left our Factory that was not guaranteed **Forever.**

Mark that—not merely a year, ortwoyears —or even five—but **Forever.**

Look into these features before exchanging your old separator, or at the time you decide that there's money in selling the cream and keeping the skimmed milk on the Farm.

Write for our interesting Catalogue 194 and arrange for a **Free test right under your own roof.** The people who ask questions are the ones who buy Tubulars.

The Sharples Separator Co.
Toronto, Ont.
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MAXWELL'S HIGH SPEED CHAMPION

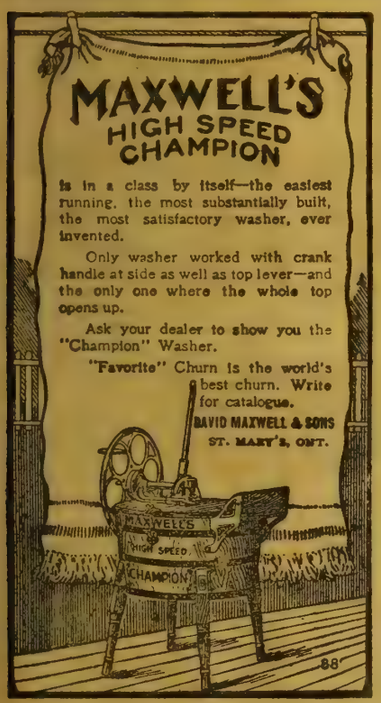
is in a class by itself—the easiest running, the most substantially built, the most satisfactory washer, ever invented.

Only washer worked with crank handle at side as well as top lever—and the only one where the whole top opens up.

Ask your dealer to show you the "Champion" Washer.

"Favorite" Churn is the world's best churn. Write for catalogue.

DAVID MAXWELL & SONS
ST. MARY'S, ONT.



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For large or small orchards, market gardens, potato farms, grain, mustard, tobacco, home and garden work, poultry plants, whitewashing, cleaning, cold water painting, etc From *Bucket, Knapsack* and *Barrel Sprayers* to *Traction* and 50, 100, 150 and 250 gallon *Power Sprayers*— complete or in partto build up. Sprayers already inuse. 40 combinations

$4 to $400
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They have outside pumps, no corrosion. Unit sprayers, so you can build bigger when necessary. Ask your dealer to show them and write for new booklet, "*Spraying Vines, Trees* and *Bushes.*" We also make full line potato machines, garden tools, etc.

IRON AGE

The Bateman-Wilkinson Co Limited
434 Symington Ave., Toronto, Ontario

Farmer Ads Are Business Getters

A few drops of sulphuric acid added to hard water will help very much.—Read before the Nova Scotia Dairymen's Convention, Truro, January 10, 1913, by G. A. MacKenzie, Scotsburn, N. S.

Some of The Advantages of Winter Dairying

In opening up the subject of Winter Dairying, I do not purpose taking up much of your time, but will endeavor to point out some of its advantages.

In doing so, I suppose, it is natural for us to look at it from the standpoint of a Creamery Manager. Winter is the season when creameries have the most difficulty in getting a sufficient supply of milk or cream to keep the factory up to its capacity also causes the loss of a certain and a lessening of the milk supply affects the economical manufacture of butter. It makes it impossible to supply the demand for butter at the season when the price is highest and amount of trade for the summer months when butter is plenty and lower in price.

But is is from the point of view of the farmer that the missionary work needs to be done as I believe the average creamery manager realizes the importance of a good supply of milk in winter as well as summer.

The first advantage I would point out is that by having the cow freshen in the fall she will, with proper care and feeding, produce more milk and butter in a year than by freshening in the spring. If a cow freshens in November or December she can remain in the stable for the winter and she has six or seven months when she can be made to produce more milk than in any other equal period of the year. Extensive experiments conducted along this line by one of the U. S. Experimental Stations shows that cows that freshen in from December to February, give a larger amount of milk in a year than those freshening at any other time and that those along in April gave the smallest amount.

Another advatage is that the farmer has more time to care for the cows in winter. In the summer time the sowing, cultivating, and harvesting of the field crops makes a rush of work when labor is scarce and high. At this time the dairy cow is not likely to get as good care as in winter when help is cheaper and more easily secured.

Winter dairying would help solve the help question as it would even up the work making it less in summer and more in winter and thus enable the farmer to keep his help all the year.

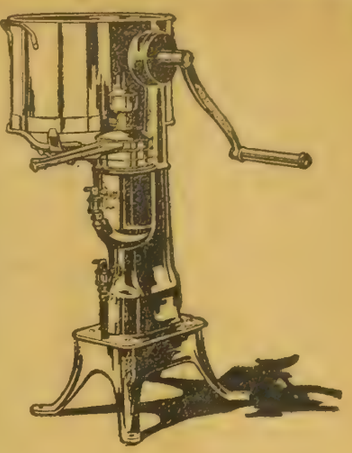
Winter is also the best time for raising calves as the farmer is around the barn more and will notice how the calves are thriving and will give them more attention. By the time the calf is six or seven months, the grass is good and the calf can be turned out to pasture and will be about a year old before it is put on dry hay.

There is also the advantage of the higher prices of milk and milk products in winter and if milk or cream is supplied to a creamery it is not necessary to deliver as often as in summer.

Winter dairying also builds up the farm owing to the larger amount of bran, middlings, corn meal, linseed and oil cake fed to cows. The manure from these cows contains large amounts of valuable fertilizing elements which go out in the fields and mean large crops next year.

For a sprain you will find Chamberlain's liniment excellent. It allays the pain, and soon restores the parts to a healthy condition. 25 and 50 cent bottles for sale by all dealers.

Pay the Price of the Best —No More—No Less



ECONOMY in buying a cream separator does not begin nor end with the price. You may easily pay too little and just as easily pay too much.

Learn the difference between gears that work without back lash and those that have it or develop it soon. Learn the importance of a self-adjusting bowl spindle bearing, and learn to know one when you see it. Discover the difference between brass and phosphor bronze as a material for bearings. Buy a separator with an oiling system that cannot fail you even for a few minutes of a run. When you find the separator that comes up to your specifications—one that with proper care will do good work for a long time—buy it. You will find it marked

I H C Cream Separator Dairymaid or Bluebell

I H C cream separators turn easily and they are easy to run because the working parts are accurately made and the bearings are sufficiently lubricated. The shafts and spindle are the strongest used in any separator. The shaft and spindle bearings are supported by the frame, but have no contact with it. The contact is between the steel spindles and phosphor bronze bushings. The gears are spirally cut so that there is no lost motion between them. They are entirely protected from grit and milk, and at the same time are easily accessible for cleaning.

See the I H C local agent and ask him to give you a demonstration of the efficiency of the machine as a skimmer and to go over with you and explain carefully all of its good, mechanical points. You can get catalogues and full information from him, or, write the nearest branch house.

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International Harvester Company of America
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At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton

Provincial Dairy School

SUSSEX, N. B.

1913 SESSION

MARCH 20th to APRIL 10th

Courses in

Cheese-making
Butter-making
Milk Testing

C. W. McDOUGALL,
Superintendent.

The N. B. Farmers and Dairymen in Annual Session.

(Continued from page 339)

try is not being carried on extensively enough to meet the home demands. Moreover, he said the standard of quality must be improved if we are to sustain our fair reputation as an agricultural country. Not only is there a shortage of supply but a deplorable loss in quality.

It is important for the credit of the Dominion that the present standard on which poultry are judged be changed. If we are to meet the national requirements of the poultry industry as a whole there is need for better eggs and poultry. The poultry division of live stock department is endeavoring in a scheme for the reconstruction of the poultry industry to substitute for the present one, a standard which will be for the betterment of the whole trade.

Never before had the farmer such oppottunities for a profitable sideline as poultry raising offers today. It is peculiar, but true, that the large centres of New Brunswick in the heart of a rich agricultural province not only depend on the outside for their needs, but in more than one instance the supply from the West was instrumental in preventing an egg panic. From 55 per cent. to 60 per cent. of the egg consumption in St. John were imported from outside the province.

While the situation is one to cause serious reflection it is not irremediable. Farmers have as an incentive to more extensive operations in this line, the knowledge that not only do better prices than ever prevail, the opening up of foreign markets, but the fact that eggs and poultry are becoming a more staple article of foodstuff. In Canada 25,000,000 dozen more eggs are consumed now than 10 years ago.

Co-operation work in farming communities will solve the scarcity of supply and raise the standrad of quality. This means the creation of egg circles in every community, co-operation in the purchase of food, thus overcoming the past obstacle to poultry raising, the cost of feeding. Besides, under this scheme of working together they could improve their chances in marketing and by establishing a common incubator of large proportions, would solve successfully another difficulty met with in the past.

He also advised for the benefit of the dressed poultry trade, a modern central killing plant to be established by the poultry men jointly. The killing and dressing having an important bearing on the price, and requiring skill, a central plant in charge of a skilled person would have beneficial results.

New Brunswick has grand openings in the poultry line and carried on according to the approved method, can be made a lucrative industry. The government is giving the matter more serious thought than in the past and providing assistance by instructional work and by means of the personal missionary work of poultry experts sent out by the department.

Provincial Poultry Superintendent Jones led off in the discussion of Prof. Brown's address. He pointed out that too much attention could not be paid to the selection of the male line of poultry mating, as the sire influenced the production of eggs in the pullets of his offspring to a much larger extent that the female line, but to get best results we must pay attention to both lines. He advised great care in the selection of individuals, and said that controlled matings were giving the best results obtained. It was only by the most rigid selection could we retain stamina, health and vigor, that was most needed for heavy egg production.

Prof. Cox, of the U. N. B., gave a most interesting and instructive account of how he managed his flock to get the grand results he has been getting the past two winters. He attributes his success to selection of the earliest and best layers that respond to stimulating foods. Bu selection, good feeding, keeping them in warm, wholesome quarters he increased the egg production of his flock in the two and one-half months' of the year over last year, from 1698 eggs to 2529. He said it certainly paid to use the greatest care in breeding and feeding.

OFFICERS.

President—W. H. Moore, Scotch Lake.

Vice-President—J. A. Bernier, Edmunston.

Receiving Secretary—T. Edwin Carter, Bathurst.

Corresponding Secretary—M. A. Scovil, Gagetown.

Treasurer—H. H. Smith, Hoyt Station.

COUNTY VICE-PRESIDENTS.

Albert—Lewis Smith, Lower Coverdale.

Carleton—Geo. B. Reid, Glassville.

Charlotte—Tilley Reid, Lever.

Gloucester—Armor J. Eddy. Bathurst.

Kent—Henry Barthe, Buctouche.

Kings—Henry Sherwood, Upham.

Madawaska—Dennis D'aig e, St. Basil.

Northumberland —Henry Gordon, Chatham.

Queens—Thomas Harding, Welsford.

Restigouche—John McKinnon, Dundee.

St. John City and County—R. G. Murray, St. John.

Sunbury—M. A. Smith, Hoyt Station.

Victoria—J. W. Stevenson, Upper Kimtore.

Westmorland—R. H. Welling, Shediac.

York—Edward Jarvis, Stanley.

Following are resolutions passed:

WHEREAS, the deamnd of the farmers of the Province of New Brunswick for a better road system is apparent, and

WHEREAS, the amount of money at present expended for road purposes is being in many cases, injudiciously used to meet these demands, and

WHEREAS, the Convention at St. John passed a resolution that a large sum be expended to build three Trunk Lines parallel to the railroad through the aforesaid Province, which resolution was passed in direct opposition to the rural delegates.

THEREFORE RESOLVED, that this Association protest against such a resolution, and recommend that such amounts as granted be expended so as to give equal privileges to the farmers living in remote districts as against those more adjacent to the railroads.

* * * *

WHEREAS, our farmers in order to extend their operations believe that it is necessary to use a considerable amount of commercial fertilizer, and

WHEREAS, the cost of such fertilizers are so high that it is about impossible to use them with profit,

THEREFORE RESOLVED, that in the opinion of this convention of Agriculturists from every County of New Brunswick, that it is desirable that our Government take such steps as are necessary to furnish the farmers with the chemicals for that purpose at first cost.

* * * *

WHEREAS, in order to demonstrate to the masses of farmers of the Province the advantage of Scientific Agricultural Education, and as the Government has taken steps to establish two Agricultural Schools and an Experimental Farm, which we heartily endorse,

THEREFORE RESOLVED, that it is the opinion of this Association that it would very materially further the cause of Agricultural Education by the establishment of Demonstration Farms in all the Parishes throughout the Agricultural Districts of the Province.

AND BE IT FURTHER RESOLVED, that [illegible]ully appreciate and understand the elementary principles involved in such an education, that there be established on the curriculum of the Public Schools of our Province a system of Agricultural training.

* * * *

WHEREAS the present system of under-drainage for farm purposes is carried on by means of manual labor and

WHEREAS, owing to the high cost of labor this practice is both slow and expensive and,

WHEREAS, it is desirable to extend the policy of drainage, and render it more efficient and less costly and,

WHEREAS, machines are manufactured in the United States that will do drainage work efficiently and at greatly reduced cost, and

WHEREAS, there are none of these machines manufactured in Canada,

THEREFORE BE IT RESOLVED, that this Association ask that the Governor-General in Council at Ottawa be requested to cancel the duty on such machines.

* * * *

WHEREAS, the members of the Farmers and Dairymen's Association in Convention at Fredericton regret to learn of the serious illness of Mr. Bliss M. Fawcell who has been an active member for many years.

THEREFORE RESOLVED, that this Association express their sincere

Rich AND Mellow

You'll Like the Flavor

35¢-40¢-50¢ Per Pound

Will You Have This Handy Electric Light on Your Farm?

When you want to find out quick what's causing the row in the stalles, don't waste time over the lantern. Just grab up the little "Nine Lives" Electric Flashlight and run.

When you meet another rig on a pitch dark night, the "Nine Lives" will show you what you are doing. Same thing when anything goes wrong with the harness, or the automobile. Just pull the

"Nine Lives" Electric Flashlight

out of your pocket, press the button and you have a bright light just where you want it. There are hundreds of times when it will more than come in handy.

The wonderful new Tungsten Incandescent Lamp supplied with current from the three Dry Batteries, gives a surprisingly bright light, which is concentrated by the lens into a powerful beam. Batteries hold their strength four times as long as any other dry cells, and can be renewed for a trifle.

Don't be without this modern convenience. Send $1.50 or $2.00 according to style you prefer and we will send it carefully packed and fully prepaid.

Mail your order to-day to

CANADIAN CARBON CO., LIMITED,

94 West King Street, TORONTO

Suffered With Kidney Trouble
For Ten Years.

Those who have never been troubled with kidney trouble do not know the suffering and misery which those afflicted undergo.

Weak, lame or aching back comes from the kidneys, and when the kidneys are out of order the whole system becomes deranged.

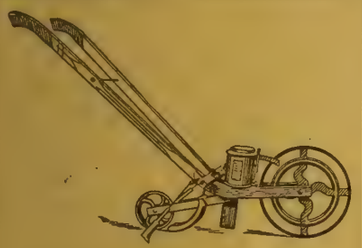
Doan's Kidney Pills go right to the seat of the trouble, and make their action regular and natural.

Miss Mary Daley, Pennfield Ridge, N.B., writes:—"I now take great pleasure in expressing myself for the benefit I have obtained from your wonderful medicine, Doan's Kidney Pills. Having been a sufferer with kidney trouble for the last ten years, and having spent hundreds of dollars in the so-called 'Quack' cures, from which I derived no benefit whatever, and after having been advised to try Doan's Kidney Pills, I at once purchased a box, and from the first obtained relief, and after having taken five boxes am now completely cured."

Doan's Kidney Pills are 50 cents per box, or three boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

When ordering specify "Doan's."

GARDEN SEEDERS



Our **seeder** has years of success behind it and with improvements recently added, makes it without a doubt the best machine of the kind on the market.

The seed discharge of this machine can be exactly regulated by moving the steel plate at the base of the seed cup as per directions on the side of each seed cup. **The flow of seed** can be instantly stopped by a **swinging cut-off** operated by a chain attached to the handle. This prevents any loss of seed at the end of the row.

The marker is held firmly in place and is easily adjusted. **The covering wheel** is attached to a swinging frame and by varying pressure on the handles, the operator can roll lightly or otherwise. **The main wheel** is high with a wide rim which keeps it from sinking into the soft earth.

Each year finds the demand for our garden seeders greatly increased. No better **seeder** can be built for accurate and fast sowing of **turnip, cabbage, sage, carrot, onion, parsnip, spinach, beet, pea, corn** and all other kinds of **garden seed.**

Every machine carries our **absolute guarantee.**

Manufactured by

The Sussex Manufacturing Co., Ltd.

SUSSEX, N. B.

Here is a message of hope and good cheer from Mrs. C. J. Martin, Boone Mill, Va., who is the mother of eighteen children. Mrs. Martin was cured of stomach trouble and constipation by Chamberlain's Tablets after five years of suffering, and now recommends these tablets to the public. Sold by all dealers.

sympathy with Mr. Fawcett and family and hope for his speedy recovery to health again, and

FURTHER RESOLVED, that a copy of this resolution be sent to Mr. Fawcett.

* * * *

WHEREAS, the Provincial Department of Agriculture have shown their interest in the Farmers and Dairymen's Association, by providing judges, speakers and stock for the short course held by the said Association,

THEREFORE RESOLVED, that the sincere thanks of this Association be tendered Hon. Dr. Landry, Commissioner of Agriculture, for the valuable assistance rendered by the Department of Agriculture.

* * * *

DRAINAGE AND ITS EFFECTS

Following the passing of resolutions, Dr. C. J. Lynde, of McDonald College, delivered an instructive address on Drainage and Its Effects, which was well received and which will be published in full in our next issue.

Dr. Lynde is quite conversant with New Brunswick conditions as he spent three weeks in the province last summer on the Farming Special Train and in that capacity he met and conversed with farmers from nearly all sections of the province. Dr. Lynde may rest assured that he will always receive a hearty welcome from New Brunswick farmers wherever he chances to meet them.

PRACTICAL AGRICULTURAL EDUCATION FOR NEW BRUNSWICK.

Mr. Elliott made a practical address on the agricultural education that was most needed by the farmers of New Brunswick. He said that the idea of the whole system of agricultural education had changed within the past ten years, and particularly within the last four years. Forty odd years ago the agricultural colleges began to be established throughout North America as the result of the recognized need for agricultural education. The agricultural college had been seriously misunderstood, it being expected that the students would return to the farms to work them, but rather the college was a school for the education of teachers, in order that they might go out and educate others. It was a notable fact that the students who did return to the land were leaders of educational and social thought.

Shortly after the agriculture colleges had been established, farmers' institutes were looked to for the practical education which was given to the farmer, who did not have the advantage of attending the colleges. That served to accomplish a good deal but lately it had ceased to be the value it was once. On that account there was introduced throughout Canada and the United States What were known as Farmers' Institute Schools as well as short courses in agriculture at the colleges. This was a great advantage, reaching as it did the younger element and assisting materially in having the boys reach a decision and adopt agriculture as an occupation.

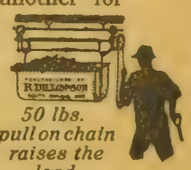
Within the last four years, however, there has been another great movement inaugurated, that of carrying the agricultural college to the farmer on his farm by means of what are usually called, agricultural experts or district representatives. This movement America over is seriously hampered, due to the fact that the right kind of men cannot be obtained for this work. In the State of Nebraska, where Mr. Elliott spent three months last autumn, there were places available for 100 men and sufficient money on hand to pay them, but not a score of competent men could be obtained for the positions. It might be asked what does this agricultural expert or representative do. There were peculiar qualifications necessary for this work. Not only must the representative be scientific, but he must be thoroughly practical and be able to go into the field and show how the work should be done. A sufficient area of country is allotted to his care. He might be called the agricultural doctor, to be called in and consulted in cases of emergency, and also to be on hand to give the direction to prevent emergencies arising. It is found that where those experts have operated the cultivation of the

(Continued on page 362)

Some farmers are like Gladstone. You will remember he got his exercise by chopping down trees.

Some farmers—a good many of them—are getting theirs like the man in the picture above.

Trundling one wheelbarrow-load after another for half a day from stable to yard is exercise all right. And what a "plug" it is to get a well-filled wheelbarrow up the plank gangway on to the manure heap—especially in winter.



50 lbs. pull on chain raises the load.

But have you time for this exercise?

Then why do it?

You wouldn't think of sowing or reaping in the old-fashioned way. Then don't make cleaning out stables the exception.

Load of 800 lbs. runs easily along the smooth track.

DILLON'S LITTER CARRIER lightens the labors of farmer's boy or hired man. It enables him to finish the stables in a fraction of the time before required.

A trim, well-kept barnyard, too, is the result of using a DILLON LITTER CARRIER. The bucket can be run out over the yard and dumped where desired.

A boy can work it. It can be fitted up without difficulty. The cost is the minimum for a first-class equipment. We have no Agents—you deal directly with the factory.

DILLON'S Litter Carrier

Figure it out for yourself.
Get our free book.

Dillon's sell direct to the Farmer. There are no Agents and no Agents' profits. The price is the same to all, and lower than you would expect for such substantial and well-built equipment. DILLON'S BOOK ON CLEAN STABLES gives you an exact idea of what you can accomplish for a small outlay. Write for a free copy. 3

R. DILLON & SON
OSHAWA, ONT.

"Goes Like Sixty"—"Sells Like Sixty"
GILSON ENGINES

for all power purposes. You cannot afford to buy an engine until you investigate the latest improvements incorporated in Gilson Engines, which place them far in the lead. Send for free catalogue.

GILSON MFG. CO. 210 York Street, Guelph, Ont.

Farmer Ads Are Business Getters

THE HORSE.

The Brood Mare

Foaling time is at hand. The mares should be in prime condition as to flesh and health. Sleek coat, bright eye, good spirits indicate thrift. Can't expect much of a colt from a mare that has had to rough it in the stalk fields and straw piles all winter without extra feed. If she had access to a clover or alfalfa stack it will be different.

The foal is nearly a,l muscle, and muscle is made of protein. There's mighty little protein in a straw pile or stalk field. Then as the work season comes on and this run-down mare has to buckle down to hard work her system is drained just that much more of necessary protein that should go to the foal.

The mare is a mother. She deserves decent treatment. If you can't give it then use geldings and let another raise colts. In the first place the mare needs a clean, dry place to stay in nights. She should be out excerising during the day unless stormy. As foaling time approaches keep watch. The teats will wax about three days before foaling. Put her in a box stall where nothing can harm her or the colt. She may drop if standing. Good clean bedding is necessary. If born in filth navel-ill is apt to attack the colt. Take your lantern and go out every night and see that all is well.

The mare should receive a plentiful supply of ground oats, bran and a little oil meal in connection with a little bright hay. Carrots or any green feed will be useful in keeping her cool and open. You have got to build bone and muscle in the foal besides keeping the mare in condition and doing light work. You can't do that on corn stalks and straw.

When the foal comes get it around to the mare's head so she can lick it dry. Disinfect the umbilical cord with a strong solution of formalin, carbolic acid, bichloride or mercury or sheep dip and then tie it with a string about three inches below navel. Don't help the colt on its feet. When it gets strong enough it will get up and take nourishment. It can go two or three hours without food. See that its bowels move in a short time after birth.

If the mare does not clean in a reasonable time have a veterinarian remove the afterbirth.

Keep the pen clean. Feed the mare well and let her fully recover before putting her to work again.

Poisoning Horses By Moldy Food

In a comprehensive treatise in American Veterinary Review, on the late outbreak of the Kansas disease among horses, Dr. C. H. Stange, Dean of the Division of Veterinary Medicine of the Iowa State College has the following to say of the danger of feeding horses moldy food of any sort:

"A considsrable number of outbreaks of mold poisoning have been investigated by the writer in the past five years, and while there is a great similarity between the clinical symptoms of mold poisoning and the recent (Kansas) outbreak, there are nevertheless, some very important differences in reference to the appearance and spread of the disease. In all outbreaks of forage poisoning with which I have had experience and which literature records, we have practically all animals affected that partook of a certain moldy food or of water from one source. This food or water in my experience has always been visibly affected by some fungus. This is notably true of silage; and feeding experiments with horses have substantiated our theory as correct."

From this it would appear that farmers should be very careful how they feed silage to horses and colts. Any mold in the silage or moldy corn is particularly dangerous to the horse tribe. This is shown in the natural care the horse shows in pasture to feed only on such portions of the field where the grass is sweet and free of deleterious substances. The stomach of the horse is much more sensitive to such conditions than the cow, and still moldy silage should never be fed to any animal. The place for it is in the manure heap.

An Act for the Encouragement of Horse Breeding in Nova Scotia.

In reply to several inquiries re the Stallion Enrolment Act in Nova Scotia we publish the Act in full. It reads as follows:

1. In this Act the following words and expressions shall have the meanings in this section assigned to them respectively, unless there is something in the context repugnant to such construction:

"Secretary" means the Secretary for Agriculture for the Province.

"Department" means the Department of Agriculture.

"Owner" includes a part owner.

2. (1) No person, firm or company shall stand, travel or offer for use any stallion in this province unless and until the name, description and pedigree of such stallion shall have been enrolled and a certificate of such enrolment procured as hereinafter provided.

(2) The fee for such enrolment and certificate shall be two dollars.

(3) Upon a transfer of the ownership of any stallion enrolled under this section, the certificate of enrolment may be transferred to the transferee by the Secretary, upon proof to his satisfaction and upon payment of the fee of one dollar.

3. In order to procure the certificate of enrolment herein provided for, the owner of such stallion shall forward to the Secretary the certificate or registry and other necessary papers relating to the breeding and ownership of the said stallion. When it is impossible for the Secretary to personally confirm these papers and statements, the owner of such stallion shall make oath before a notary public or any officer duly authorized to administer oaths, that such paper and statements are, to the best of his knowledge, correct, and shall forward this affidavit, together with the registration and other necessary papers relating to his breeding and ownership, to the Secretary.

Horsemen Attention ! !

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevents the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for alland every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR :--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly rccommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it. Very truly,
RODERICK McKENZIE.

DEAR SIR :--I have used Dr. J Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.
W. A. C. RANDALL, M. D.
Hillsboro, N. S.

MESSRS FRASIER THORNTON & CO., Cookshire, Que.

GENTLEMEN :—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable
(Signed) WALTER SLATER, "Cash Livery."

FRASIER THORNTON & CO., Cookshire, Que.

DEAR SIRS :—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.
(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
March 28th, 1911.

FOR SALE BY ALL DEALERS

Manufacturers: FRASIER THORNTON & CO. LIMITED, Cookshire Que.

One certificate of thousands showing that

VIGORA

is the best remedy to cure horses.

"I had a valuable horse which was troubled with a cough for more than four months. I tried everything possible to cure it but it was not until I used VIGORA that I received the satisfaction of seeing the horse regain its strength." ADOLPHE CONTANT, St. Cyrille.

FOR SALE BY ALL GOOD DRUGGISTS AND GROCERS

J. B. MORIN, Manufacturer, 318 St. Joseph St., Quebec

Before After

ABSORBINE

Cures Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Sores, Wire Cuts, Bruises, Swellings, Lameness, and allays Pain quickly without Blistering, removing the hair, or laying the horse up. Pleasant to use. $2.00 per bottle, delivered. Describe your case for special instructions and Book 5 E free.

ABSORBINE, JR., liniment for mankind. For Strains, Painful, Knotted, Swollen Veins, Milk Leg, Gout. Price $1.00 per bottle at dealers or delivered.

W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.
DR. BELL, V. S.
Kingston, Ont.

Fullline of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

Say I Saw It in The FARMER

4. All certificates of enrolment shall be renewed annually upon payment of the fee of one dollar.

5. The owner of any stallion used for public service in this province, shall post and keep affixed during the entire breeding season, copies of the certificate of such stallion, issued under the provisions of this Act, in a conspicuous place, both within and upon the outside of every stable or building where the stallion is used for public service.

6. The certificate issued for a stallion whose sire and dam are of pure breeding and which is registered in a book approved by the Department, shall be in Form A in the schedule hereto.

7. The certificate issued for a stallion whose sire is of pure breeding, and which is registered in a book approved by the Department, but whose dam is not of pure breeding, shall be in Form B in the schedule hereto.

8. The certificate issued for a stallion whose sire and dam are pure bred, but not of the same breed, or whose sire and dam are neither of them pure breed, shall be in Form C in the schedule hereto.

9. Registration in a Canadian National Record for a breed will be considered evidence of the pure breeding of any stallion so registered. Where a stallion is pure bred of some breed for which there is no record under the Canadian National Records, before being enrolled in form A or B, proof of pure breeding satisfactory to the Secretary shall be supplied.

10. Each bill and poster issued by the owner of any stallion under this Act, or used by him as agent for advertising such stallion, shall contain a copy of the stallion's certificate of enrolment, printed in bold face type, not smaller than long primer, on said bill or poster, and the first mention thereon of the name of the stallion shall be preceded by the words "pure bred," "grade" or "cross bred," in accordance with the wording of the certificate of enrolment; and it shall be illegal to print upon the poster any misleading reference to the breeding of the stallion, his sire or his dam, or to use upon such bill or poster the portrait of a stallion in a misleading way; and each newspaper advertisement, printed to advertise any stallion for public service, shall show the enrolment certificate number and state whether it reads "pure "pure bred," "grade" or "cross bred."

11. The production of any bill, poster or other printed or written matter, advertising any stallion for public service shall be prima facie evidence that such bill, poster or other advertising material was used to advertise the stallion named and described therein by or with the consent of the owner or owners of the said stallion.

12. Where no posters are used to advertise a stallion, the owner of the stallion shall exhibit to the owner of each mare at the time of service, if demanded, the original enrolment certificate issued for such stallion.

13. The fees received by the Secretary under this Act shall be paid to the Provincial Treasury of Nova Scotia for the use of the Province.

14. The Lieutenant-Governor-in-Council may make such regulations as may be deemed proper and necessary for the better carrying out of the provisions of this Act.

15. Every person who is guilty of contravention of any of the provisions of this Act shall incur a penalty of not more than one hundred dollars or less than twenty-five dollars, recoverable under the Nova Scotia Summary Convictions Act.

16. This Act shall come into force on the first day of January, 1913.

SCHEDULE.

Form A—Pure Bred.

PROVINCE OF NOVA SCOTIA,
Department of Agriculture.

Certificate of Pure Bred Stallion No ..... described as follows;
(color)
foaled in the year ....., has been examined in the Department, and I hereby certify that the said stallion is of pure breeding and is registered in a book recognized by the Department.

.....
Secretary for Agriculture.

Form B—Grade.

PROVINCE OF NOVA SCOTIA,
Department of Agriculture.

Certificate of Grade Stallion No.....
The pedigree of the stallion (name) described as follows;
(color)
foaled in the year ....., has been examined in the Department and it is found that the said stallion is not of pure breeding and is enrolled as a Grade.

.....
Secretary for Agriculture.

Form C—Cross Bred.

PROVINCE OF NOVA SCOTIA,
Department of Agriculture.

Certificate of Cross Bred stallion, No ....
The pedigree of stallion (name).....
described as follows:
(color)
foaled in the year....., has been examined in the Department and it is found that his sire is registered in the .....and his dam in the.....Such being the case, the said stallion is not a pure bred, and is enrolled as a cross bred

....
Secretary for Agriculture.

Gombault's Caustic Balsam

The Worlds Greatest and Surest Veterinary Remedy

HAS IMITATORS BUT NO COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for

FOUNDER,
WIND PUFFS,
THRUSH,
DIPHTHERIA,
SKIN DISEASES,
RINGBONE,
PINK EYE,
SWEENY,
BONY TUMORS,
LAMENESS FROM SPAVIN,
QUARTER CRACKS,
SCRATCHES,
POLL EVIL,
PARASITES.

REMOVES

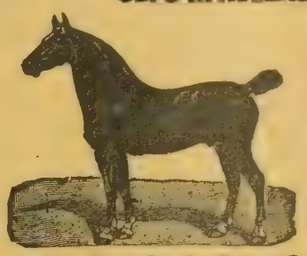
BUNCHES or BLEMISHES,
SPLINTS,
CAPPED HOCK,
STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made Every bottle sold is warranted to give satisfaction Write for testimonials showing what the most prominent horsemen say of it. Price, $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINANY REMEDY

Always Reliable. Sure In Results.



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Sole Importers & Proprietors for the U.S.& CANADAS. CLEVELAND.O

Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

anadians Appreciate Caustic Balsam

I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

Sole Agents for the United States and Canada.

The Lawrence-Williams Co.

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The old-time remedy for keeping horses free from sores. Don't lose the services of your high-priced horses. Bickmore's Gall Cure cures Galls and Sore Shoulders while the horse works. Approved remedy for Cuts, Wounds, Scratches, etc. Money back if it fails. Be sure to ask at the store for Bickmore's Gall Cure. Gray Horse trade mark on every box. Sample and 84-page horse book sent on receipt of a stamp for postage.

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HORSE POSTERS

ORDER your horse posters from us. We carry the largest assortment of Pictures to choose from of any office in the Maritime Provinces. Our prices are right and our work is guaranteed to satisfy you.

The Maritime Farmer
SUSSEX, N. B.

STALLION INSURANCE

OUR Stallion Policies, covering against loss by **Death through Accident or Disease,** are more liberal and afford more protection to owners than any issued by Competing Company. They contain no vexatious clauses, having been drafted to cover **the special conditions** met with in this Country. They cover the horse no matter **where he might be** and not merely **in his own stable,** as certain Companies do. This is very important during the Breeding Season as the horse might die while being on the road. Do not **take any chances** by insuring with others, **insure with us;** The insurance premium represents only a small proportion of the service fees earned. Better risk the **loss of the premium** than the **purchase price** of your beast if it dies without insurance.

Better have and not need than need and not have.

All kinds of live stock insurance transacted. *Write for particulars and address of nearest agent.*

THE GENERAL ANIMALS INSURANCE CO. OF CANADA, Head Office: 71a ST. JAMES STREET, MONTREAL, Que.

POULTRY.

Pointers on Marketing Eggs.

Even though the egg crop is large, if that crop is not properly marketed there will be only ordinary profit. It is admitted that a good retail trade is the best market, but the farm is not always so situated that this can be obtained.

It is important, then, that a good wholesale custom be secured, and this makes it necessary that the goods be in such a condition that they will be sought after.

An ingenious method to advertise the eggs is to have a rubber stamp made with the wording of the farm on it, something like this:

GUARANTEED FRESH,
PUREBRED POULTRY FARM,
SUSSEX, N. B.

This stamped on each egg would at once attract attention, and if those eggs are found to be true to representation, there would be no trouble to hold that customer.

The question arises: "When does an egg cease to be fresh?"

Investigation has proved that an egg remains in a fresh state for three days. Some farms ship eggs when a day old, to allow two days' time for carriage and for the sale. This is a safe plan. As a rule, however, guaranteed fresh eggs are purchased the day they are placed on sale. Such eggs are for the "fancy, up-town grocery trade" of cities.

What is known as "Prime" eggs in the city trade are eggs of which the age is not unknown—they being from one to three weeks of age in cool weather.

"Fresh case" eggs are a class out of which it may be expected to secure six good ones, three fair ones, and three of a "demoralized" order, in each dozen.

It seems that the market is always ready for good, bad and indifferent eggs. Of course, it goes without saying, that the stamped eggs are sold first, and at an advanced figure, as there is a special demand for them.

In nearly all the large cities there are grocers who cater to a fancy trade, and these are only too glad to arrange with some farm having a reputation for furnishing eggs that are strictly fresh.

Eggs should be gathered at least once a day, and even twice or three times daily is better. They should be placed in a cool, clean cellar, away from any impure odors, for an egg will quickly absorb any impurity that might be near it.

Eggs should not be marketed that are not regularly found in the nest, eggs from hidden nests, or picked up in the run, are risks, and should be used at home. Great care must be taken in this particular. All stains and dirt should be wiped with a moist cloth and then allowed to dry. A little vinegar will often remove the most obstinate stain.

Those who become discouraged by mistakes are not very progressive. Instead of being stumbling blocks, mistakes are object lessons that arouse one to a sense of closer observation and point out facts. However, the man who makes the same mistake twice is not a very observing person.

The older the egg the less is that sweet, rich flavor noticeable.

It is more important to know the work of the individual hen than the average of the flock.

There is no foundation for the assertion that the "sweet, rich flavor" of the egg belongs to the breed. That condition can only be brought about by the quality of the food.

There is a decided difference in the weight of eggs from pullets and hens, and of those laid by different breeds. These figures are approximately correct: Single comb Brown Leghorn pullets, 17½ ounces per dozen; hens, 21½ ounces. Light Brahma pullets, 23½ ounces; hens, 23 ounces. Black Langshan pullets, 24 ounces; hens, 26½ ounces. Pekin ducks 35½ ounces.

The question of feeding flavor into eggs, was practically settled some years ago by Professor F. E. Emery, of the North Carolina Experiment Station, who tried feeding onions to hens, with the result that the eggs of all those which ate the onions showed a more or less distinct flavor. Therefore it appears that to get fine flavored eggs it is necessary to restrict runs enough so that no considerable amount of the food can be of such a character as to yield ill-flavored eggs.

The large breeds are best for caponizing. A few months old capon is no better than a cockerel. A capon will more readily put on fat and get large and prime after maturity. The object in caponizing is to secure quality and size, but quality is the most important. Age does not impair a capon as it does a cockerel, provided the bird is not kept longer than a year and a half. Capons will have to mature before they can get much finish, and for that reason they cannot be sold while young.

No poultry meat excels, if any equals, a half-grown Guinea, split down the back, broiled and buttered. It is meaty, tender and of splendid flavor.

Feeding skim milk has a tendency to whiten the flesh.

Remember "good condition" does not mean overfat.

It must not be forgotten that food flavors the flesh as well as the egg.

Our American breeds fatten very readily, making them ideal market poultry.

The yolk of an egg spoils much quicker than the white.

The first one or two litters of eggs laid by pullets are not so serviceable, so sure or profitable for hatching as is their later product, for the reason that they were first formed at a time when the pullet was growing and the organs not fully developed.

An authority says that if the egg is placed on the side or large end the heavy yolk will settle to the bottom and come in contact with the shell which admits the air. If it is placed on the small end, it will always have a layer of white between it and the shell.

Colonel Roessle once said there ma not be any very large fortune to be made in poultry raising, but there is a handsome living for any one who has the love for the pursuit, the ability to raise and care for the stock, and a small capital to start with. These three things must go hand in hand; separately they cannot bring success.

Bad cases of feather eating have been cured by painting around the bare places on hens that have had their feathers plucked, with a preparation made of powered aloes dissolved in alcohol. Hens do not like the bitter taste.

A French naturalist asserts that the use of pounded garlic with the usual food has been made to completely eradicate the gapes among pheasants in Europe.

The beginner finds many stumbling blocks in the artificial methods, but experience soon shows the trick of how to easily step over them.

Over-feeding of green cut bone is apt to cause leg troubles, diarrhoea, bowel complaints and worms.

A poultry keeper living some distance from the city says he found it difficult to secure animal food for his fowls, so he experimented with beans, peas, nuts, sunflower seed and peanuts with as good results as obtained from animal food.

It is claimed by one authority that

Don't Buy Fence, Posts or Gates Until

you have seen our catalogue, It is the most useful fence catalogue ever sent to farmers. It tells how to build fence, how to measure up what you require, and how to save money when ordering.

You can't afford to be without it. Write for a copy now before you forget it. A post card will do. Address

Standard Tube & Fence Company, Limited
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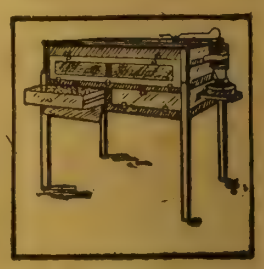
Live Agents wanted for Standard Fence, Posts and Gates.
Write for Special terms to-day.

THE TIE THAT BINDS

STANDARD FENCE

$5,000,000.00
FOR PEERLESS WAY POULTRYMEN



Into the pockets of the users of The Peerless Way last year went five million dollars made from the poultry these people raised. Yet chickens are scarce in Canada and eggs are the scarcest of all food commodities. That is positively the fact.

To-day there are not enough Canadian CHICKENS or EGGS to go around. Thousands of chickens and hundreds of thousands of dozens of eggs are being shipped into Canada from the United States and other countries to help meet the demand.

Yet there is a shortage! Eggs are commanding a tremendous price—chickens are worth dollars.

Now is the time to take advantage of this situation and make money out of it yourself. You can raise and sell 600 chickens this next year, and you will find a quick and sure market for every one of them. You can get the top notch price for all the hundreds of dozens of eggs that your poultry lay.

Let us tell you how!

Poultry raising is the best business for any farmer, any farmer's wife or farmer's child. The poultry crop is the one crop that never fails. It pays better for the time and money invested; the profit is surest; it isn't overcrowded and never will be.

Our book "When Poultry Pays," will show you. Let us send it to you. It is interesting; it is instructive, and it contains the proof.

You need this book. It will be mailed free. A post card will bring it.

300

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JOHNSON'S ANODYNE LINIMENT
Used 102 Years for Internal and External Ills

Are you prepared to relieve sudden cramps and pains that may come any time?

Johnson's Anodyne Liniment responds quickly in relieving coughs, colds, bowel troubles, burns, cuts, chaps, etc.

25c and 50c everywhere

I. S. JOHNSON & CO. Boston, Mass.

Parsons' Pills Help The Liver

Advertise in The Maritime Farmer.

NEVER NEGLECT A HEADACHE.

Headache is not a disease in itself, but is often a source of great suffering, and its presence is likely symptomatic of some disease lurking in the system.

To get rid of the headache, and thus prevent more serious troubles, it is absolutely necessary to cleanse the system of all waste and poisonous matter, and keep the bowels well open, the clogging of the bowels being one of the principle causes of headache. Burdock Blood Bitters regulates the bowels, and makes their movement free and natural. A cure for headache; a medicine that cures where others fail.

Mrs. L. Banks, Mt. Hanley, N.S., writes:—"Several years ago I was a constant sufferer from headache. I was all run down, and nothing seemed to do me any good. I read of Burdock Blood Bitters, and decided to give it a trial. The result was marvellous, the headache stopped entirely, and I feel better in every way. I can safely recommend B.B.B."

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

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The installation of a GOOD HEALTH CHEMICAL CLOSET in your home means health--convenience--comfort--for the whole family. Not a luxury but a necessity. A postal will bring you full particulars. Address

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Write us about our co-operative scheme.

We can save you just half of the money you pay now and remember we sell nothing but Pure Parchment.

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$13.40 ALBERTA 125 METAL COVERED EGG

POULTRY PAYS WELL by using our improved, safe, sure, simple, durable hatcher of 19 years experience by a Canadian. OUR FACTORY PRICES SAVES YOU HALF. Special adapted for Canada—heavy lumber case covered with felt, asbestos, galv-iron, copper tank, self-regulator nursery, ready to use. Guarantee — 2 Hatch Trial. Fine Catalog. Write now! Brooders too. ALBERTA INCUBATOR CO., BOX 195

WE SHIP QUICK FROM TORONTO OR WINNIPEG DUTY PAID 250 EGG $17.95 MANKATO, MINN.

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. Dr. de Van's are sold at $5 a box, or three for $10. Mailed to any address. The Scobell Drug Co., St. Catharines, Ont.

one hundred pounds of clover meal contains enough lime for the shells of 17½ dozens of eggs. Clover is very rich in protein and contains potash, soda, phosphoric acid, and other ingredients that make it one of the best feeds for fowls that can be named. It contains all the essentials in well balanced proportion, and is palatable to the fowls as well as healthful.

Some years ago Professor James Dryden delivered an address before the Utah Farmers' Institute, from which this extract is worthy of reproduction: A short study of the composition of wheat and of eggs will explain why a profitable egg yield cannot be expected from wheat alone. Supposing you fed a hen which weighs 3.5 pounds, 3.25 ounces of wheat a day. Of course a hen of that weight would not long consume that weight of wheat alone. Supposing, further, that the hen uses 2.75 ounces of that for the maintainance of the body; that leaves half an ounce to be conveyed into eggs, assuming that all the food is digested, which of course is not the case. In half an ounce of wheat there is about .06 of an ounce of protein. So that, assuming that the hen consumes and digests 3.25 ounces of wheat per day, and that she uses 2.75 ounces of that for maintainance of the body, there is available each day just one-fourth enough protein for an egg. In other words it will take four days to get the necessary amount of protein for one egg. But the egg has other constituents; so has wheat. The half ounce of wheat contains about one and one-half times as much carbohydrates and fat as one egg contains. The hen fed on wheat alone has a surplus of one material and a deficiency of another. In other words, she has enough carbohydrates and fat to make an egg and a half a day, but she has only protein enough to make one egg in six days. You place the hen in an awkward position by feeding her wheat alone. Wheat does not contain the egg making materials in proper portion. Corn is even worse than wheat in this respect.

What Bumble Foot is.

Bumble foot is really little more than a festered corn or a callus on the bottom of the foot. It is a well known fact that people who are not on their feet very much have little or no foot trouble and that people who are standing or working on their feet constantly have more or less foot trouble. That is just the way it is with hens. The busiest hen is most likely the one to be troubled with bumble foot.

Bumble foot is more prevalent in houses where the roost and nests are placed more than two feet above the floor and since it is necessary for convenience to have the roosts and nests higher than this it naturally follows that many of the hens will have corns.

Even in the most severe cases bumble foot is not a serious trouble and there are only rare instances where it is necessary to give it much attention, aside of course, from keeping the floor covered with straw. When it is necessary to apply treatment only two things need be kept in mind. First to lance so that the pus can be allowed to escape, and second to disinfect the wound and protect it from outside infection and from being picked by the other hens. When it is thought necessary to lance, thoroughly cleanse the foot before and dip in 5 per cent. alum water, then apply axle grease liberally and sew up in a clean cloth. When the cloth wears off, the foot will be well.

Natural Finish California Redwood (12c)

125-Egg Incubator and Brooder Both For $13.75

If ordered together we send both machines for only $13.75 and we pay all freight and duty charges to any R. R. station in Canada. We have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. R. station. Hot water, double walls, dead-air space between, double glass doors, copper tanks and boilers, self-regulating, Nursery under egg tray. Especially adapted to Canadian climate. Incubator and Brooder shipped complete with thermometers, lamps, egg testers—ready to use when you get them. Five year guarantee—30 days trial. Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others, we feel sure of your order. Don't buy until you do this—you'll save money—it pays to investigate before you buy. Remember our price of $13.75 is for both Incubator and Brooder and covers freight and duty charges. Send for FREE catalog today, or send in your order and save time.

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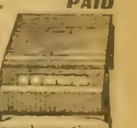

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HAMILTON, CANADA

BRUCE'S SEEDS SATISFY

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Write at once for our 112-page handsomely illustrated Catalogue of Seeds, Plants, Bulbs, Implements, and Poultry Supplies, etc.

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Maple Syrup Makers Enter This Contest

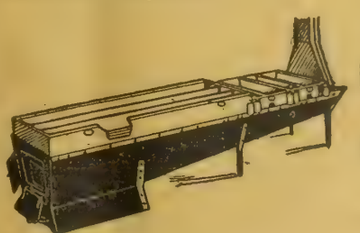
$500 IN GOLD CASH PRIZES

Cut Out This Coupon

WHY not be a WINNER in this contest? We are giving away $500 in Gold Cash Prizes to users of the Grimm "Champion" Evaporator.

Full particulars will be mailed on receipt of above coupon.

The competition will take place during the last two weeks of April and the samples of syrup and sugar received will be placed on exhibit in the show windows of the "Montreal Star." Every purchaser and user of the Grimm "Champion" Evaporator may take part in this contest. ***Now is the time to properly equip yourself*** to make high grade syrup and sugar—high priced and therefore profitable. Do it now before the sap runs. State the number of trees you will tap and we will give you prices on a suitably sized outfit. Address all enquiries:



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7% GUARANTEED 7%

Business established 26 years. World-wide trade connection. Plants the largest of their kind in existence.

The Company do their own financing, pay interest twice a year at above rate and share all profits which are expected to reach 12 p. c. and 15 p. c. Money may be withdrawn any time after one year. Write for full particulars.

NATIONAL SECURITIES CORPORATION LIMITED

Confederation Life Bldg., Toronto, Canada.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

I should think there never can have been a man who enjoyed his profession more than Mr. Creakle did. He had a delight in cutting at the boys, which was like the satisfaction of a craving appetite. I am confident that he couldn't resist a chubby boy, especially; that there was facination in such a subject, which made him restless in his mind, until he had scored and marked him for the day. I was chubby myself, and ought to know. I am sure when I think of the fellow now, my blood rises against him with the disinterested indignation I should feel if I could have known all about him without ever having been in his power; but it rises hotly, because I know him to have been an incapable brute, who had no more right to be possessed of the great trust he held, than to be Lord High Admiral, or Commander-in-chief—in either of which capacities, it is probable, that he would have done infinitely less mischief.

Miserable little propitiators of a remorseless Idol, how abject we were to him! What a launch in life I think it now, on looking back, to be so mean and servile to a man of such parts, and pretensions.

Here I sit at the desk again, watching his eye—humbly watching his eye, as he rules a ciphering book for another victim whose hands have just been flattened by that identical ruler, and who is trying to wipe the sting out with a pocket-handkercheif. I have plenty to do. I don't watch his eye in idleness, but because I am morbidly attracted to it, in a dread desire to know what he will do next, and whether it will be my turn to suffer, or somebody's else's A lane of small boys beyond me, with the same interest in his eye, watch it too. I think he knows it, though he pretends he don't. He makes dreadful mouths as he rules the ciphering book; and now he throws his eye sideways down our lane, and we all droop over our books and tremble. A moment afterwards we are again eyeing him. An unhappy culprit, found guilty of imperfect exercise, approaches at his command. The culprit falters excuses, and professes a determination to do better to-morrow.

Mr. Creakle cuts a joke before he beats him, and we laugh at it—miserable little dogs, we laugh, with our visages as white as ashes, and our hearts sinking into our boots.

Here I sit at the desk again, on a drowsy summer afternoon. A buzz and hum go up around me, as if the boys were so many blue-bottles. A cloggy sensation of the lukewarm fat is upon me (we dined an hour or two ago), and my head is as heavy as so much lead. I would give the world to go asleep. I sit with my eye on Mr. Creakle, blinking at him like a young owl; when sleep overpowers me for a minute, he still looms through my slumber, ruling those ciphering books, until he softly comes behind me and wakes me to plainer perception of him, with a red ridge across my back.

Here I am in the playground, with my eye still fascinated by him, though I can't see him. The window at a little distance from which I know he is having his dinner, stands for him, and I eye that instead. If he shows his face near it, mine assumes an imploring and submissive expression. If he looks out through the glass, the boldest boy (Steerforth excepted) stops in the middle of a shout or yell, and becomes comtemplative. One day, Traddles (the most unfortunate boy in the world) breaks that window accidentally with a ball. I shudder at this moment with the tremendous sensation of seeing it done, and feeling that the ball has bounded on to Mr. Creakle's sacred head.

Poor Traddles! In a tight sky-blue suit that made his arms and legs like German sausages, or roly-poly puddings, he was the merriest and most miserable of all the boys. He was always being caned—I think he was caned every day that half-year, except one holiday Monday when he was only ruler'd on both hands—and was always going to write to his uncle about it, and never did. After laying his head on the desk for a little while, he would cheer up somehow, begin to laugh again, and draw skeletons all over his slate, before his eyes were dry. I used at first to wonder what comfort Traddles found in drawing skeletons; and for some time looked upon him as a sort of hermit, who reminded himself by those symbols of mortality that caning couldn't last for ever. But I believe he only did it because they were easy, and didn't want any features.

He was very honourable, Traddles was, and held it as a solemn duty in the boys to stand by one another. He suffered for this on several occasions; and particularly once, when Steerforth laughed in church, and the Beadle thought it was Traddles, and took him out. I see him now, going away in custody, despised by the congregation. He never said who was the real offender, though he smarted for it next day, and was imprisoned so many hours that he came forth with a whole churchyard of skeletons swarming all over his Latin Dictionary. But he had his reward. Steerforth said there was nothing of the sneak in Traddles, and we all felt that to be the highest praise. For my part, I could have gone through a good deal (though I was much less brave than Traddles, and nothing like so old) to have won such a recompense.

To see Steerforth walk to church before us, arm-in-arm with Miss Creakle, was one of the great sights of my life. I didn't think Miss Creakle equal to little Em'ly in point of beauty, and I didn't love her, (I didn't dare); but I thought her a young lady of extraordinary attractions, and in point of gentility not to be surpassed. When Steerforth, in white trousers, carried her parasol for her, I felt proud to know him; and believe that she could not choose but adore him with all her heart. Mr. Sharp and Mr. Mell were both notable personages in my eyes; but Steerforth was to them what the sun was to two stars.

Steerforth continued his protection of me, and proved a very useful friend, since nobody dared to annoy one whom he honored with his countenance. He couldn't —or at all events he didn't—defend me from Mr. Creakle, who was very severe with me; but whenever I had been treated worse than usual, he always told me that I wanted a little of his pluck, and that he wouldn't have stood it himself; which I felt he intended for encouragement, and considered to be very kind of him. There was one advantage, and only one that I know of, in Mr. Creakle's severity. He found my placard in his way when he came down behind the form on which I sat, and wanted to make a cut at me in passing; for this reason it was soon taken off, and I saw it no more.

An accidental circumstance cemented the intimacy between Steerforth and me, in a manner that inspired me with great pride and satisfaction, though it sometimes led to inconvenience. It happened on one occasion, when he was doing me the honor of talking to me in the playground, that I hazarded the observation that something or somebody— I forget what now—was like something or somebody in Peregrine Pickle. He said nothing at the time; but when I was going to bed at night, asked me if I had got that book?

I told him no, and explained how it was that I had read it, and all those other books of which I have made mention.

"And do you recollect them?" Steerforth said.

Oh yes, I replied: I have a good memory, and I believed I recollected them very well.

"Then I tell you what, young Copperfield," said Steerforth, "you shall tell 'em to me. I can't get to sleep very early at night, and I generally wake rather early in the morning. We'll go over 'em one after another. We'll make some regular Arabian Nights of it."

I felt extremely flattered by this arrangement, and we commenced carrying it into execution that very evening. What ravages I committed on my favorite authors in the course of my interpretation of them. I am not in a condition to say, and should be very unwilling to know; but I had a profound faith in them, and I had, to the best of my belief, a simple earnest manner of narrating what I did narrate; and these qualities went a long way.

The drawback was, that I was often sleepy at night, or out of spirits and indisposed to resume the story, and then it was rather hard work, and it must be done; for to disappoint or to displease Steerforth was of course out of the question. In the morning too, when I felt weary, and should have enjoyed another hour's repose very much, it was a tiresome thing to be roused, like the Sultana Scheherazade, and forced into a long story before the getting-up bell rang; but Steerforth was resolute; and as he explained to me, in return, my sums and exercises, and anthing in my tasks that was too hard for me, I was no loser by the transaction. Let me do myself justice, however. I was moved by no interest or selfish motive, nor was I moved by fear of him. I admired and loved him, and his approval was reward enough. It was so precious to me, that I look back on these trifles, now, with an aching heart.

Steerforth was considerate too, and showed his consideration in one particular instance, in an unflinching manner, that was a little tantalising, I suspect, to poor Traddles and the rest. Peggotty's promised letter — what a comfortable letter it was!— arrived before "the half" was many weeks old, and with it a cake in a perfect nest of oranges, and two bottles of cowslip wine. This treasure, as in duty bound, I laid at the feet of Steerforth, and begged him to dispense.

"Now, I tell you what, young Copperfield," said he: "the wine shall be kept to wet your whistle when you are story-telling."

I blushed at the idea, and begged him, in my modesty, not to think of it. But he said he had observed I was sometimes hoarse—a little roopy was his exact expression— and it should be, every drop, devoted to the purpose he had mentioned. Accordingly, it was locked up in his box, and drawn off by himself in a phial, and administered to me through a piece of quill in the cork, when I was supposed to be in want of a restorative. Sometimes, to make it a more sovereign specific, he was so kind as to squeeze orange juice into it, or to stir it up with ginger, or dissolve a peppermint drop in it; and although I cannot assert that the flavor was improved by these experiments, or that it was exactly the compound one would have chosen for a stomachic, the last thing at night and the first thing in the morning, I drank it gratefully, and was very sensible of his attention.

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

MOTHER OF LARGE FAMILY

Tells How She Keeps Her Health — Happiness For Those Who Take Her Advice.

Scottville, Mich.—"I want to tell you how much good Lydia E. Pinkham's Vegetable Compound and Sanative Wash have done me. I live on a farm and have worked very hard. I am forty-five years old, and am the mother of thirteen children. Many people think it strange that I am not broken down with hard work and the care of my family, but I tell them of my good friend, Lydia E. Pinkham's Vegetable Compound, and that there will be no backache and bearing down pains for them if they will take it as I have. I am scarcely ever without it in the house.

"I will say also that I think there is no better medicine to be found for young girls. My eldest daughter has taken Lydia E. Pinkham's Vegetable Compound for painful periods and irregularity, and it has helped her.

"I am always ready and willing to speak a good word for Lydia E. Pinkham's Vegetable Compound. I tell every one I meet that I owe my health and happiness to your wonderful medicine." —Mrs. J. G. JOHNSON, Scottville, Mich., R F D. 3.

Lydia E. Pinkham's Vegetable Compound, made from native roots and herbs, contains no narcotics or harmful drugs, and today holds the record of being the most successful remedy for woman's ills known.

THE BUTTER-BUYER said—"Your two lots of butter taste all right—but will they keep? What kind of salt did you use?"

THE FIRST FARMER said—"I don't know—the storekeeper gave me what he had".

THE SECOND FARMER said—"I used Windsor Dairy Salt".

THE BUTTER-BUYER said—"I want your butter. I know all about Windsor Dairy Salt—and the man who is particular enough to always use Windsor Dairy Salt is pretty sure to be particular to make good butter.

I'll take all you make—as long as you use

WINDSOR DAIRY SALT

69D

45 YEARS OLD AND THE LAST YEAR THE BEST OF THE 45

The same enterprise, earnestness, ability and devotion to students' interests which have given this college its present standing, will be continued and every effort made to be worthy of the generous patronage enjoyed.

Next term will begin Thursday, January 2nd. Send for Catalogue.

THE St. JOHN Business COLLEGE

S. KERR Principal.

The Nova Scotia "Lumber King" says:

"I consider MINARD'S LINIMENT the BEST liniment in use.

I got my foot badly jammed lately. I bathed it well with MINARD'S LINIWENT and it was as well as ever next day.

Yours very truly,
T. G. McMULLEN.

PUPIL NURSES

A 56 bed new Hospital with modern equipment, and new Nurses' Home can accommodate a few pupil nurses. Course two years and three months. Allowance towards uniforms, books, etc. Prospectus sent on application.

FRANKLIN CO. HOSPITAL,
Greenfield, Mass.

We seem, to me, to have been months over Peregrine, and months more over the other stories. The institution never flagged for want of a story, I am certain, and the wine lasted out almost as well as the matter. Poor Traddles—I never think of that boy but with a strange disposition to laugh, and with tears in my eyes—was a sort of chorus, in general and affected to be convulsed with mirth at the comic parts, and to be overcome with fear when there was any passage of an alarming character in the narrative. This rather put me kut, vesy often. It was a great jest of his, I recollect, to pretend that he couldn't keep his teeth from chattering, whenever mention was made of an Alguazil in connection with the adventutes of Gil Blas; and I remember that when Gil Blas met the captain of the robbers in Madrid, this unlucky joker counterfeited such an ague of terror, that he was overheard by Mr. Creakle, who was prowling about the passage and handsomely flogged for disorderly conduct in the bedroom.

Whatever I had in me that was romantic and dreamy, was encouraged by so much story-telling in the dark; and in that respect the pursuit may not have been very profitable to me. But the being cherished as a kind of plaything in my room, and the consciousness that this accomplishment of mine was bruited about among the boys, and attracted a good deal of notice to me though I was the youngest there, stimulated me to exertion. In a school carried on by sheer cruelty, whether it is presided over by a dunce or not there is not likely to be much learnt. I believe our boys were, generally, as ignorant a set as any schoolboys in existence; they were too much troubled and knocked about to learn; they could no more do that to advantage, than any one can do anything to advantage in a life of constant misfortune, torment and worry. But my litttle vanity, and Steerforth's help, urged me on somehow; and without saving me from much, if anything, in the way of punishment, made me, for the time I was there, an exception to the general body, insomuch that I did steadily pick up some crumbs of knowledge.

In this I was much assisted by Mr. Mell, who had a liking for me that I am grateful to remember. It always gave me pain to observe that Steerforth treated him with systematic disparagment, and seldom lost an occasion of wounding his feelings, or inducing others to do so. This troubled me the more for a long time, because I had soon told Steerforth, from whom I could no more keep such a secret than I could keep a cake or any other tangible possession, about the two old women Mr. Mell had taken me to see; and I was always afraid that Steerforth would let it out, and twit him with it.

We little thought, any of us, I dare say, when I ate my breakfast that first morning, and went to sleep under the shadows of the peacock's feathers to the sound of the flute, what consequences would come of the introduction into these almshouses of my insignificant person. But the visit had its unforseen consequences; and of a serious sort, too, in their way.

One day when Mr. Creakle kept the house from indisposition, which naturally diffused a lively joy through the school, there was a great deal of noise in the course of the morning's work. The great relief and satisfaction experienced by the boys made them difficult to manage; and though the dreaded Tungay brought his wooden leg in twice or thrice, and took notes of the principal offenders' names, no great impression was made by it, as they were pretty sure of getting into trouble tomorrow, do what they would, and thought it wise, no doubt, to enjoy themselves

BABY'S OWN SOAP

Best for Baby *Best for You*

THE particles of pure vegetable oil which are rubbed into the open pores of the skin with the creamy fragrant lather of Baby's Own Soap renew the life of the skin—help nature along. It assures a soft, white, healthy skin and its use delights both young and old. Baby's Own is for sale almost everywhere.

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ALBERT SOAPS LIMITED, MFRS., MONTREAL.

Eddy's Matches

MADE ON HONOUR,
SOLD ON MERIT,

AT ATTRACTIVE PRICES
AND FULL COUNT.

ALWAYS EVERYWHERE IN
CANADA, ASK FOR EDDY'S.

MADE IN THE BRITISH EMPIRE
MADE IN CANADA
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NEW COAL OIL LIGHT **Beats Electric or Gasoline**

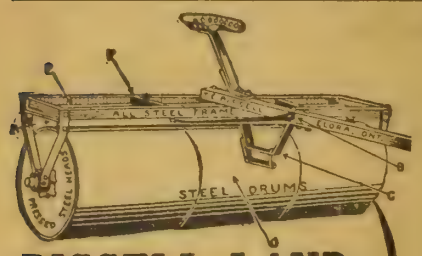
ONE FREE To Use On Your Old Lamp!

Our special introductory offer entitles one person in each locality to one free. Powerful white incandescent mantle light. Replacing common oil lamps everywhere. Burns 70 hours on one gallon of coal oil (kerosene). No odor or noise, simple, clean. Brightest and cheapest light for the home, office or store. Better light than gas or electric. Send postal for FREE OFFER and agents' wholesale prices.

AGENTS WANTED Experience Unnecessary. Make Money Evenings or Spare Time. Write Quick.

MANTLE LAMP CO., 282 Aladdin Bldg., Montreal and Winnipeg, Can.

GILSON MFG. CO., 80 York St., GUELPH, ONT.



BISSELL LAND ROLLERS

are all steel except the Pole. They are braced and stayed to stand all kinds of hard work and wear well. The entire frame, bottom and all, is built of steel. The (18) anti-friction Roller Bearings make light draught.

The Draw Bracket and low hitch do away with neck weight.

The Axle revolves with the drums and there is no squeaking or grinding.

The Cages holding the anti-friction rollers are the best yet; they're MADE OF MALLEABLE ALL IN ONE PIECE—no twisting or binding of the bearings on the axle of the "Bissell" Roller. The Seat Spring is reinforced and is DOUBLED AT THE HEEL. These good features are not all of the advantages of the "Bissell" Roller. Many more good points are built into them, making a Land Roller that is "built for business," that stands up against lots of hard work.

Ask Dept M for free catalogue. 75

T. E. BISSELL CO. LTD.
ELORA, ONT.

HIGH CLASS
JEWELRY

18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....68 cents

18k Rolled Pendants, worth $3.00, our price..... ....99 cents

Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....$1.36

Boys Watch..... .....69 cents nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
Box D.
Sussex, New Brunswick.

today.

It was, properly, a half-holiday; being Saturday. But as the noise in the play-ground would have disturbed Mr. Creakle, and the weather was not favorable for going out walking, we were ordered into school in the afternoon, and set some lighter tasks than usual, which were made for the occasion. It was the day of the week on which Mr. Sharp went out to get his wig curled; so Mr. Mell, who always did the drudgery, whatever it was, kept school by himself.

If I could associate the idea of a bull or a bear with any one so mild as Mr. Mell, I should think of him, in connection with that afternoon when the uproar was at its height, as one of those animals, baited by a thousand dogs. I recall him bending his aching head, supported by his bony hand, over the book on his desk, and wretchedly endeavoring to get on with his tiresome work, amidst an uproar that might have made the speaker of the House of Commons giddy. Boys started in and out of their places, playing at puss-in-the-corner with other boys; there were laughing boys, singing boys, talking boys, dancing boys, howling boys; boys shuffled with their feet, boys whirled about him, grinning, making faces, mimicking him behind his back and before his eyes; mimicking his poverty, his qoots, his coat, his mother, everything belonging to him that they should have had consideration for.

"Silence!" cried Mr. Mell, suddenlv rising up, and striking his desk with the book. "What does this mean? Its impossible to bear it. Its maddening. How can you do it to me, boys?"

It was my book that he struck the desk with; and as I stood beside him, following his eye as it glanced round the room, I saw the boys all stop, some suddenly surprised, some half afraid and some sorry perhaps.

Steerforth's place was at the bottom of the school, at the opposite end of the long room. He was lounging with his back against the wall, and his hands in his pockets, and looked at Mr. Mell with his mouth shut up as if he were whistling when Mr. Mell looked at him.

"Silence, Mr. Steerforth!" said Mr. Mell.

"Silence yourself," said Steerforth, turning red. "Whom are you talking to!"

"Sit down," said Mr. Mell.

"Sit down yourself," said Steerforth, "and mind your own business."

There was a titter, and some applause; but Mr. Mell was so white, that silence immediately succeeded: and one boy who had darted out behind him to imitate his mother again changed his mind, and pretended to want a pen mended.

"If you think, Steerforth," said Mr. Mell, "that I am not acquainted with the power you can establish over any mind here—" he laid his hand, without considering what he did (as I supposed), upon my head—"or that I have not observed you within a few minutes, urging your juniors on to every sort of outrage against me, you are mistaken."

"I don't give myself the trouble of thinking at all about you," said Steerforth, coolly; "so Iam not mistaken, as it happens."

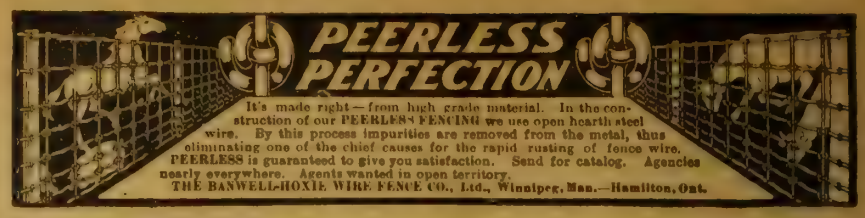
"And when you make use of your position of favoritism, sir," pursued Mr. Mell, with his lip trembling very much, "to insult a gentleman—"

"A what?—where is he?" said Steerforth.

(Continued in next issue.)

The Medicinal Uses of Turpentine.

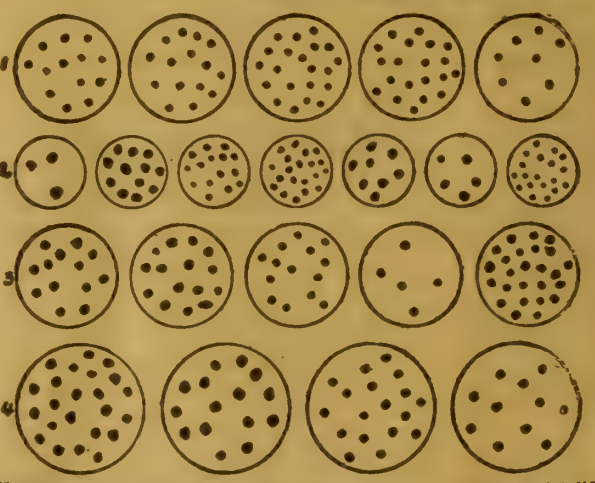
Turpentine, in which is dissolved as much camphor as it will take up, is pre- eminently the dressing for lacer-



FREE $300.00 IN PRIZES

IN THE GREAT DOT PUZZLE CONTEST
A Genuine Contest for WISE HEADS!

SOLVE THIS PUZZLE



The above 4 lines of circles containing dots represent the name of 4 different things described after each line. What are they?

HOW TO SOLVE THIS GREAT PUZZLE

Each circle of dots represents 1 letter of the word and the number of dots in each circle determine the letter in its relation to the alphabet. For instance: A is represented by 1 dot because it is the first letter in the alphabet, B is represented by 2 dots because it is the 2nd letter in the alphabet, C is represented by 3 dots because it is the 3rd letter in the alphabet. Now, with these simple instructions and a little patience you can soon have the puzzle solved. To give you a little assistance the 1st letter of the first word is M, because the circle contains 13 dots and M is the 13th letter of the alphabet.

After you have found the solution write your answer neatly on a piece of paper with your name and address and anything else you wish to say about the contest and send it in to us.

Those who send in the Correct or the Nearest Correct Answers; whose answers are the neatest and who live up to the condition of the contest (read rules of contest below), will win the following grand prizes:—

1st Prize, $125.00 in cash.
2nd " 50.00 "
3rd " 25.00 "
4th " 15.00 "
5th " Gent's Watch. Value $10.00.
6th " Ladies' Ring. Value $10.00.
7th " Fine Clock. Value $10.00.
8th " 44-Piece Dinner Set. Value $10.00.
9th Prize, Mission Upholstered Rocker Value $10.00.
10th Prize, Violin. Value $10.00.
11th Prize, Gillette Safety Razor. Value $5.00.
12th Prize, Waterman Fountain Pen Value $5.00.
13th Prize, Glass Water Set. Value $5.00.
14th Prize, Large French Doll. Value $5.00.
15th Prize, Silverware Set. Value $5.00.

READ THE SIMPLE RULES OF THIS CONTEST

1. Contestants may send in as many answers as they wish, but only one answer can win a prize. (2) Only 1 person in each family will be allowed to compete. (3) No employees of ours or any relation of any employee will be allowed to compete. (4) Children under 12 years of age will not be permitted to compete. (5) Write only on one side of the paper. (6) All letters must be fully prepaid in postage. We will not accept answers upon which we will have to pay postage. (7) The decision of the judges must be accepted as final. The judging will be in the hands of 3 gentlemen of integrity who are absolutely disinterested. (8) This contest is absolutely free. You are not asked to spend one cent of your money or buy anything to enter. As soon as we receive your answer we will immediately tell you if you are right, and how the prizes will be distributed. We guarantee the awarding of the prizes described above according to decision of the judges.

Address all answers to **Contest Department. 220**

NEW LIFE REMEDY COMPANY, TORONTO, ONT.

NEW CENTURY LEADERSHIP

A railroad navvy may be an honest soul and a worthy citizen, but that does not equip him for the position of general manager of the system.
It is the same with washing machines. Others may be honestly constructed, but the New Century maintains its paramount position by honesty PLUS.
The "plus" means patented and exclusive features found only in the New Century. It represents experience and brains applied to washing machine problems, and assures convenience and economy to New Century owners.

Your dealer can tell you the reasons for New Century leadership or we will send full information direct.
Cummer-Dowswell Ltd., Hamilton, Ontario 108

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

FITS CURED

Send for Free Book giving full particulars of Trench's Remedy, the world-famous cure for Epilepsy and Fits Simple home treatment. 25 years success. Testimonials from all parts of the world; 1,000 in one year.

Trench's Remedies, LTD., 434 St James' Chambers TORONTO

There is no better medicine made for colds than Chamberlain's Cough Remedy. It acts on nature's plan, relieves the lungs, opens the secretions, aids expectoration; and restores the system to a healthy condition. For sale by all dealers.

ations, bruises, and cuts. Its antiseptic action is equal to that of carbolic acid; it speedily stops the bleeding (Hunter says, "It is the best, if not the only true styptic") allays the pain, and hastens the process of healing. Few, if any, ulcers long resist its continued application.

As a liniment, turpentine, with equal parts of laudanum, camphor, and chloroform, is unsurpassed. Sprains, rheumatic pains, bruises, and sometimes neuralgia yield to its magic influence.

As an inhalation, turpentine has proved of great service in bronchitis, pneumonia, pleurisy, and other throat and lung affections. If you have a cough, sprinkle a little on a handerchief and hold it to your mouth and nose for a few minutes, breathing the vapour, and note the relief.

Internally, turpentine has enjoyed for a century the reputation of being a specific for sciatica. Its mode of operation is unknown, but that it cures stands as a proof of its virtue. Ten drops three times a day in sweetened water is the dose.

As a remedy for that bane of childhood, worms, it is well known. A teaspoonful given in a half a glassful of milk, followed in an hour or so by a full glassful of castor oil, seldom fails. The practice of our grandmothers of giving it to us on sugar for coughs and sore throats was based on common sence.

A bath in half a pint of turpentine and two ounces of sal-soda in an ordinary bathtub, three quarters full of water, at 100 degs. Fahr., will cure pediculosis when other remedies fail. Three or four baths, one daily, are usually sufficient. Cottonwool soaked in olive oil and turpentine and put in the ear often stops ear ache of the most painful kind. In the hands of the physician turpentine is of great value in typhoid fever. Keep turpentine in the house.

The Art of Walking.

It is astonishing how few women have mastered the art of walking, which, after all, is one of tae best exercises in the world, and the foundation of all others. True all who are not absolutely cripples can "proceed by means of the feet," but that is not walking. The body should be held erect, shoulders down, chest extended, and the leg moving from the hip; the whole figure immovabfe above this point. The movement from the knee is the secret of nearly all bad walking, combined by the uncertain tread induced by tight boots with high heels, which render gait uneven, and twist the figure in a most ungrateful manner. A good brisk walk should be taken every morning, wet or fine. Walking, like all other exercises, should never be carried to extremes; a brisk spin will be more beneficial than a tramp of many miles, resulting in utter weariness.

Preserving Home-Produced Meat for Future Consumption.

Home production of meat is one of the greatest household economies that can be praticed on the farm, the great drawback which has always confronted the farmer being that the season when meat in the quantity can be kept successfully is generally the season when it is least needed by the majority of farm families.

In the greater number of cases the farmer pursues one of two courses—either he sells his surplus fresh meat in the fall and then pays more than double the price the following summer, or he subsists during the summer months on a diet of bacon and salt pork, which is as monotonous as it is unhealthful. So-called "meat clubs" have been successfully operat-

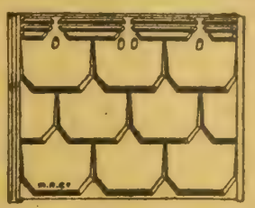
Eastlake Metallic Shingles

The Originators of Steel Shingles in Canada.

The Metallic Roofing Co., of Toronto and Winnipeg, are the originators of the steel shingle business in Canada, and were manufacturing years before any other manufacturers commenced making them.

We did not start manufacturing until we had spent thousands of dollars in experimenting, and produced what we thought to be, and has proved to be, a *perfect* shingle.

This shingle was named 'EASTLAKE,' and was put on the market over a quarter of a century ago.



"EASTLAKE" Metallic Shingles were laid on roofs over a quarter of a century ago, and are on those same roofs to-day as good as new, with practically no cost for repairs.

The "EASTLAKE" SHINGLE of then, is the "EASTLAKE" SHINGLE of to-day, and will serve *you* as well as it has served these customers for over twenty-five years.

We can honestly claim by actual proof and test of service that no other shingles have been introduced that will equal "EASTLAKE."

Let us know your roofing problem and we will help you find a solution. It will cost you nothing and it will be a pleasure to us.

Investigation is worth while. It pays to know.

Write for our free booklet to-day.

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THE METALLIC ROOFING CO. LIMITED
MANUFACTURERS TORONTO & WINNIPEG

SEED OATS!

If the farmers of the Maritime Provinces, Quebec and Ontario want to make sure of getting the highest possible grade of seed oats for the Spring of 1913 apply to us at once. To prevent a repetition of the disaster that befell so many farmers last year by sowing devitalized grain, we have stored at Point Du Chene and Pictou 50,000 bushels of **large, selected, separated White Seed Oats, true to name and free from noxious weed seeds.** It will be the farmers own fault if they do not procure good seed as the extra yield of these oats pays twice over cost of the seed.

Our firm name is stencilled on every bag. Do not allow the dealers to give you other than Read's oats for seed.

JOSEPH READ & CO., LTD., Summerside, P. E. I.

FREE TO BOYS AND GIRLS

This beautiful Gold Finished Watch in **Gents'** and **Ladies'** size hunting case, stem wind and set, the case is engraved in a large variety of designs. The Locket is complete with chain and strong clasp, correct length and suitable for photographs. Your choice of these three articles is given **Free** for selling 35 sets of our embossed post cards at 10c. per set (6 cards in a set). These are fast selling cards—not trash, and are composed of Easter, St Patrick, Valentine, Views, Comics and Birthday, etc. Send us only your name and address and we will send the cards; when sold return the $3.50 and your premium will be sent at once post paid.

MONARCH NOVELTY CO. Dept. 26 - - Toronto, Ont.

NO MORE WET OR COLD FEET!!

With Health Brand Clogs on, the man or woman who works in the wettest, coldest places always has warm, dry and comfortable feet. Try a pair yourself this winter.

Felt-lined CLOGS
(As illustrated)
Fine leather tops, hardwood sole and heel, cosily lined with warm felt. All sizes for men and women, delivered, all charges paid, ONLY
$1.75

Higher 3 buckles $2.25
High-legged Wellingtons ....$2.75 and 3.25
Children's lace, 7's to 2's 1.25
Or if you wish to learn more about these wonderful Clogs before ordering, write to us for catalogue booklet, telling how Health Brand Clogs are made, etc., etc. Dealers, write for proposition.

CANADIAN FELT-LINED CLOG CO.,
Dept. N, 363 Spadina Ave., Toronto, Canada

ed in some instances; in other neighborhoods they are a failure.

Probly the most satisfactory solution of the meat problem lies in the home preservation of meat when it is most plentiful. There are many reasons in favor of this method. It is not so difficult to do successfully as most people who have never given it a trial imagine. The work of preserving generally comes in the late fall or winter, when the country housewife has the most leisure. And, best of all, this preserved meat is so easily prepared for the table that it lightens the work during the summer months just when it is most appreciated.

The proper time to preserve meat is when it is perfectly fresh. The aversion so many people have for home-preserved meats arises from the fact that they preserve it as a last resort after it has been kept to the very verge of spoiling.

Canning Meat—The same rules hold good in canning meats as in vegetables or fruits. Sterilize the cans and pack closely with the meat cut into suitable pieces; and a teaspoonful of salt to a quart can, fill with cold water and put on the cover, omitting the rubber. Have a rack of wooden slats made to fit the bottom of the boiler, or cloths may be used; never allow the cans to stand directly on the bottom. Seperate the cans with cloths or papers to prevent there jarring together and cracking the glass. After arranging them in the boiler pour in cold water until it reaches about two-thirds the height of the cans and cover closely. Bring to the boiling point and boil steadily, but not violently, for two and one-half hours.

When the boiling is completed draw the boiler to the back of the stove; remove the top from each can, fill with a little hot water if the contents have shrunk, and seal. Return the cover to the boiler and let the cans remain in the water until cool enough to handle comfortably.

Canned Beef—Cut the beef into two inch cubes and add some finely chopped suet when packing it into the cans. When cold the suet rises to the top of the can, forming a rich cake.

This beef may be served in any way that freshly boiled beef is used. It is excellent cold, cut in thin slices. It may be heated throughly and served with brown gravy, or is good served hot with dumplings.

Canned Pork—Lean portions of the fresh pork are most delicious canned. Prepare the same as beef. The meat may be eaten cold, served hot, or will form the foundation for the finest of sandwiches.

Canned Chicken—A few cans of chicken are extremely convenient for serving on emergency occasions. This work, however, generally comes during a busy season, when the young cockerels are just right for serving. For ordinary purposes leave the meat on the bones If desired for salads or sandwiches, the meat may be removed from the bones before canning, as it is then requires less space.

Canned Ham—After the ham has been cured in the usual way cut it in slices, remove the rind and pack in cans. Can exactly like other meat. This is excellent for sandwiches or to eat cold.

Fried Ham—Cut the cured ham into desirable slices and remove the rind; have ready a good jar; place the ham in a frying pan over a quick fire and fry until it is heated through and slightly browned; pack the slices in the jar, pouring over it the fat from the pan. When the jar is filled take a plate that will fit inside the jar, invert it over the meat and plare on it a weight so that the fat covers the meat.

To serve, reheat in the frying pan. This will keep well if kept in a cool dark place. After opening it to use, if desired to be set aside for awhile, pour over the top a little fresh melted lard.

Sliced Ham—Prepare the ham as for frying, but pack without cooking in a stone jar, taking care to pack evenly and closely. Pour over it melted lard until the fat rises round a weighted plate inverted over it. If packed in this way it is advisiable to use very small jars, so that only a small amount need be opened at once. If left longer than a day or two after being opened re-cover with lard.

Baked Sausage—After mixing the new sausage, pack as much as desired preserved at once in small jars, leaving a couple inches space at the top; cover the jars and place in a moderately hot oven. Bake for two hours, when the fat from the meat will have risen to the top, forming a thick covering for the meat when cold. Set away in a cool, dry place and it will keep well all through the succeeding warm months. To serve, cut in slices and fry as with fresh sausage. This will not keep long after being opened unless covered each time with fresh lard.

Any of these preserved meats will keep admirably through the summer months and will help quite wonderfully toward lessening the housewife's work during a hurried season, furnishing a pleasant variety for the table and lowering the annual meat bill.

HOW TO CONQUER RHEUMATISM AT YOUR OWN HOME

If you or any of your friends suffer from rheumatism, kidney disorders or excess of uric acid, causing lameness, backache, muscular pains; stiff, painful, swollen joints, pain in the limbs and feet; dimness of sight, itching skin or frequent neuralgic pains, I invite you to send for a generous Free Trial Treatment of my well-known, reliable Chronicure, with references and full particulars by mail. (This is no C. O. D. scheme.) No matter how many may have failed in your case, let me prove to you, free of cost, that rheumatism can be conquered. Chronicure succeeds where all else fails. Chronicure cleanses the blood and removes the cause. Also for a weakened, run-down condition of the system, you will find Chronicure a most satisfactory general tonic that makes you feel that life is worth living. Please tell your friends of this liberal offer, and send today for large free package, to MRS. M. SUMMERS, Box B. 309—Windsor, Ont.

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INSURES EVEN DAMPENING
NICKELED BRASS
25¢ POST PAID
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Do you know that more real danger lurks in a common cold than in any other of the minor ailments? The safe way is to take Chamberlain's Cough Remedy, a thoroughly reliable preparation, and rid yourself of the cold as quickly as possible. This remedy is for sale by all dealers.

Big Ben

Big Ben—Two Good Alarms in One

Take your choice in Big Ben. He rings either way you wish — five straight minutes or every other half minute for all of ten minutes unless you switch him off. He's two alarms in one.

If you're a light sleeper, turn on the half minute taps before you go to bed. If you sleep heavily, set the five minute call. You can slumber then without the get-up worry on your mind.

When morning comes, and it's announced by Big Ben's jolly bell, you can't help getting up at once, for Big Ben never fails to get you wide awake.

Big Ben is really three good clocks in one, two excellent alarms and a fine time-keeper to keep in any room and tell time all day by.

If you have got to get up bright and early, if you have to get your help in the field on time, ask for Big Ben at your dealer's and try him for a week. You'll never want to be without him afterwards.

Big Ben stands seven inches tall. He is triple nickel-plated and wears an inner vest of steel that insures him for life. His big, bold figures and hands are easy to read in the dim morning light. His large, comfortable keys almost wind themselves.

He rings five minutes steadily or ten intermittently. If he is oiled every other year, there is no telling how long he will last.

He's sold by 6,000 Canadian dealers. His price is $3.00 anywhere. If you can't find him at your dealer's, a money order mailed to *Westclox La Salle, Illinois*, will send him anywhere you say duty charges prepaid.

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Your soil must contain an available supply of **POTASH** sufficent for the plant's requirements, otherwise you cannot hope to grow a maximum crop.

POTASH increases quantity; promotes maturity; improves quality and produces profit.

POTASH can be obtained from all reliable fertilizer dealers and seedsmen in the highly concentrated forms of

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Secretaries of Agricultural Societies and Farmers' Clubs, who may be desirous of having one of our representatives address a meeting on the subject of fertilizing, are requested to communicate with us as soon as possible so that date may be arranged.

Write us for free copies of our educative, illustrated bulletins, stating which of the following you require :—

"Artificial Fertilizers; Their Nature and Use"
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"The Potato Crop in Canada"
"Fertilizing Fodder Crops"
"A Farmer's Field Tests"
"Farmer's Companion"

GERMAN POTASH SYNDICATE, 1105 I. O. F. Temple Bldg., Toronto, Ont.

Order Your Horse Posters From The Maritime Farmer.

What Is The Matter?

Talking with a farmer not long since about the present demands upon the man who tills the soil, he said:

"Sometimes I get almost discouraged. It seems as though the colleges and you editors were crowding us farmers along faster than we know what to do. It didn't used to be so. The demand for this and that change are coming thicker and faster."

We do not wonder that some farmers feel like this. The minds of men are getting greatly stirred as to the necessity for more and better knowledge, for better methods concerning the handling of our farms. The very conservative farmer, like our friend above quoted, does not feel just clear that these things are just right, so they feel uncertain. Like honest men, they want to do what is for the best. They do not feel like admitting that they have been wrong in their understanding of their soil. They will confess that it does not act as it used to twenty-five or thirty years ago. Like most men, they incline to the easiest conclusion and say the seasons are to blame. And so they say, "What's the matter?"

To our mind, all these things come to one point, that is, decline in the producing power of the farm; in other words, loss of fertility. All this has taken place unconsciously to the mind of the farmer. He has not increased his knowledge as fast as these disastrous changes have taken place. He has drifted along, doing his farming mechanically, plowing in the same old way; sowing and planting in the same old way; and so it has gone.

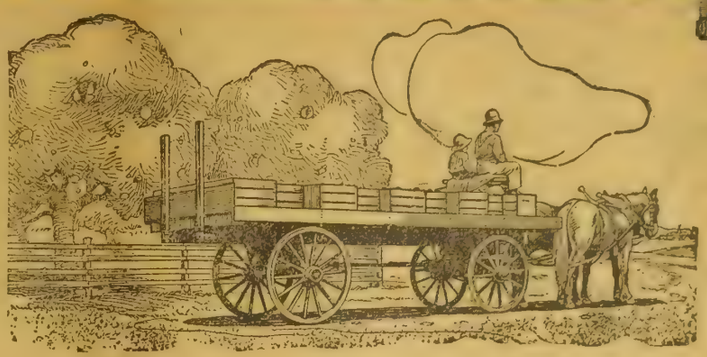
Now he is troubled on two sides. (1) By the growing stubbornness of his soil. "It don't act as it used to," he says. "What's happened to it?" (2) He is troubled by the colleges and those agricultural papers that dig down to the reason of things. They keep him stirred up telling him he must readjust his mind and judgment to the changed condition of the soil; that he must do the things that will bring back this fertility that the farm has lost. That worries him. He more than half suspects they are right.

Now all these things would appear more clear and capable of solution if the farmer in days past had devoted some time to a study of the soil. Right now changes must be made, remedies applied, and the farmer feels as did our friend whom we quoted at the beginning, "almost discouraged."

But there is a way out. Thousands of farmers have found it. What is it? Commence at once to make a serious study of your farm with the determined purpose of finding out why fertility has declined. Probably there are a number of causes, but the principal one is that for years more phosphate and nitrogen have been taken out of the soil than have been put back. Hoard's Dairyman has been talking a long time to its readers about the importance of apklying two things especially to their soil—phosphate and the right form of lime. Only occasionally have we heard of a neighborhood of farmers who have clubbed together and sent to Tennessee for a carload of raw ground phosphate. Local dealers do not keep it, and if got, it must be got by the carload. So it is with ground lime stone or marl. It is like pulling teeth to get a farmer to turn under a good crop of clover or alfalfa in the fall so as to add to the humus in the soil. It takes knowledge and then pluck to do the right thing.

Two main things must be done to save our farms. (1) We must know more than we do about the soil. (2) We must have more courage to do as well as we know or may know. That's what's the matter. We never heard of a man who grew poor because his soil grew rich. Have you? —Hoard's Dairyman.

IHC Wagons Are Tough



DID you ever notice, when one of the wheels of your loaded wagon dropped into a rut or bumped over a stone, how the seat springs gave and rebounded, almost throwing you off? That is an indication of the shock and strain that the rigid spokes and axles have to stand whenever the wagon is traveling over a rough road or through a field. Even on a smooth road there is always the crushing strain of the load, affecting every part from the top box to the lowest point of the tire. I H C wagons

Petrolia Chatham

take these stresses and strains as a matter of course. They are made to stand just that sort of work. From neckyoke to tail board they are built of selected, air-dried lumber, strong and tough, bending to strains but coming back as straight and true as ever when the load is removed. Besides being tough, I H C wagons are light running. The wheels have just the right pitch and gather, and run true. All skeins and skein boxes are paired. The running gear is assembled by skilled workmen whose wages depend as much on the quality as on the quantity of the work they turn out. Machine work, being more uniform and a great deal faster, takes the place of hand work wherever possible. Consequently, I H C wagons are practically all of the same high standard of quality throughout.

You cannot do better than to equip your farm with I H C wagons. The I H C local agent sells the wagon best suited to your work and your conditions. See the wagon at his place of business and get catalogues and literature from him, or, address your request to the nearest branch house.

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International Harvester Company of America

(Incorporated)

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

Built at Chatham and Petrolia, Ont.

Test Soil For Acidity

"I have seen fields so dotted that litmus test would show decided acidity in one place, when forty feet away I would not get the reaction. So it is not always safe to assume that the entire area of any field is uniform. The thing to do is to make the test in several different places, and if sourness is indicated by the coloring of the litmus paper apply lime. And it will do no harm to apply it over the entire area.

Where alfalfa, or any of the other legumes fail to prosper it is well to determine whether or not the soil is acid. Because the enormous quantities of vegetable matter turned under, lime is becoming an important factor in keeping soil in fit condition."

This is a fair, true statement of the situation on a very large percentage of dairy farms. Dairy farmers should understand that all land that has or is receiving considerable manure or turned under green stuff naturally evolves an organized acid of itself. This is largely the reason why farmers are so frequently disappointed in growing clover or alfalfa, although alfalfa in southern Wisconsin at best will arrive where red clover will not. But the one thing needed with our soils is more lime both to correct acidity and to promote a larger degree of nourishment to plant life.

"A correspondent in our paper of July 4 reports having used acid phosphate in his stables upon the manure, with the result of a disappearance of flies. He asks, "Will raw rock do as well?" Having seen the same fact stated elsewhere (i. e., that the use of acid phosphate caused flies to be less plentiful), I reasoned that anything destructive of flies on the manure heap must be a soluble chemica, which either destroyed the egg or the maggot, or so changed the ferment that it no longer was fit for the nourishment of the fly. This points to the free sulphuric acid in the dissolved rock, as the fly destroyer. Following out this conclusion, I have tried sprinkling the manure pile, as well as the stable floor, with a solution of one pound of commercial sulphuric acid in 100 pounds (12½ gallons) of water, and find that its use greatly lessens the number of flies and does away with the ammoniacal odors."—W. B. Cleaves, in Stockman and Farmer.

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will be natural, and justified, if you plant Ewing's Reliable Seeds and give them proper care. The bumper crops which, for forty years or more, have been grown from

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are explained by the care which we take to give our customers only specially selected seeds that are clean, fresh, healthy and true to type—seeds that produce grains, roots, vegetables and flowers of which the growers may well be proud. **Write for our handsome illustrated catalogue,** and if your dealer hasn't Ewing's Seeds order from us direct. 22

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For thoroughly cleansing baths and sinks. And it does not hurt the hands like most cleansing powders and soaps. It leaves them smooth and soft

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In order that our local farmers should be supplied with the very best cleaned and true to name oats, we have purchased from the most reliable growers in Prince Edward Island, a large quantity and will therefore be in a position to sell to any who may want good, reliable seed.

Correspondence solicited.

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We have just purchased from one of the largest manufacturers in Canada, their surplus stock of Barb Wire, Fencing and Wire Nails, at a big reduction off regular prices. All made of best galvanized steel wire Some of the barbs are slightly loose in some reels. Our prices are 20 p.c to 40 p. c. less than regular prices.

2000 reels Barb Wire, about 100 lbs. per reel ..... 2c. per lb.
1000 rolls No. 542 Farm Fencing, all No. 9 wire, spaced 6-12-12-12.....15c per rod
100 kegs new wire nails, containing sizes, 2 in. 2 1-2 in. 3 in. & 4 in. .$2.25 per keg of 100 lbs.

All delivered free to the cars here. Send order at once before stock is sold out. All orders filled promptly and only in order as received. Also bargains in Belting, Iron Piping, etc. Catalogue free.

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WEIL BROS. & CO. Box A 60 Ft. Wayne, Ind.

Good Square Meal For Hogs

What about a square ration for fattening swine? The popular standard for every 1000 pounds weight is 31 pounds dry matter, four pounds protein, and 24 pounds carbohydrates and fat; this for daily ration. Corn meal and middlings are popular hog foods. The analysis of the former runs 85 per cent dry matter, 6.5 per cent. protein, 68 per cent. carbohydrates and fat. Wheat middlings run 88 per cent dry matter, 14.4 per cent. protein, 53 per cent. carbohydrates and fat. Suppose we start with 20 pounds corn meal and 17 pounds middlings. In the 20 pounds meal there would be 17 pounds dry matter, 1.3 pounds protein, 13.6 pounds carbohydrates and fat. In the 17 pounds middlings there would be 14 pounds dry matter, 2.44 pounds protein, nine pounds carbohydrates and fat. This placed in tabular form would be:

FOOD VALUE OF MEAL AND MIDDLINGS.

	Dry matter lbs.	Protein lbs.	Carbohydrates & fat lbs.
20 lbs. corn meal...	17	1.3	13.6
17 " middlings...	14	2.44	9.
Total.....	31	3.74	22.6
Standard.....	31	4.	24.

This is a bit low on protein and carbohydrates and fat, and two or three pounds linseed meal added would be close to the standard and also prove valuable in keeping hogs healthy. Notice that these figures are for for 1000 pounds pork, and if the hogs weigh 200 pounds each, this would be the daily ration for five of them. Figures, too, are for fattening animals in the second or medium period. At the start an even stronger ration should be provided. Again, this is for animals fed wholly on mill products. Actually, the farmer should plan to provide some succulent food like clover or June grass pasture, and possibly roots in winter.

FEED NECESSARY FOR SHEEP.

As regards fattening sheep, the approved standard ration is 25 pounds dry matter, 3.5 pounds protein, 15 pounds carbohydrates and fat for 1000 pounds weight. Starting with clover hay, which is a recognized product of merit for sheep, we note good clover hay runs 84 per cent. dry matter, 6.8 per cent. protein, 37 per cent carbohydrates and fat. If we feed 20 pounds of this, there would be 16.8 dry matter, 1.36 pounds protein, 7.56 pounds carbohydrates and fat. For a grain ration, various feeds could be selected, but suppose we take a wheat mixed feed, which runs 90 per cent. dry matter, 14 per cent. protein, 50 per cent. carbohydrates and fat. If we take ten pounds of this wheat mixed feed there will be nine pounds dry matter, 1.4 pounds protein, and five pounds carbohydrates and fat. Now place these in tabular form and note the result:

FOOD VALUE OF SHEEP RATION.

	Dry matter lbs.	Protein lbs.	Carbohydrates & fat lbs.
Clover hay.....	16.8	1.36	7.56
Wheat mixed feed..	9.	1.4	5.
Total.....	25.8	2.76	12.56
Standard.....	25.	3.5	15.

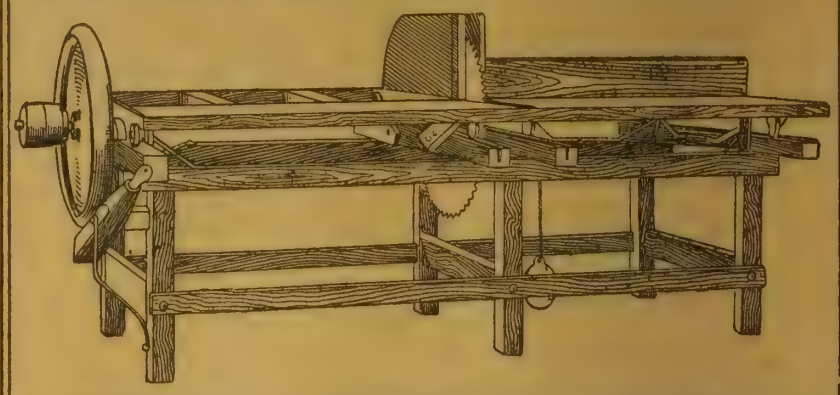
This shows a short ration on protein and carbohydrates, when compared with the standard. The addition of two or three pounds corn meal would bring it much closer. Note that these figures again are for 1000 pounds fattening sheep, or for ten sheep weighing 100 pounds each.

Readers are reminded they need not consider these rations mentioned as models. The idea has been to show how a ration is balanced. Just what a man will feed depends on many factors. Examples given above will help to figure good value no matter what the combination may be.

The Wood Cutting Season Is Here

Save money and labor by getting a Sussex Wood Cutter. Manufactured in four different sizes; two Long Swings, Short Swing and Flat Roller Table. Tables of all are built of the best seasoned hardwood, and strongly braced with steel bars. The greatest care is exercised in the making of the iron and steel work. The Balance Wheel is a solid web and weighs 180 lbs., thus allowing it to be operated with a minimum amount of power.

Every machine is inspected and tested before leaving the factory by painstaking and competent men, and is guaranteed for one year against all defects in workmanship and material.



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"Ideal" Gas and Gasoline Engines

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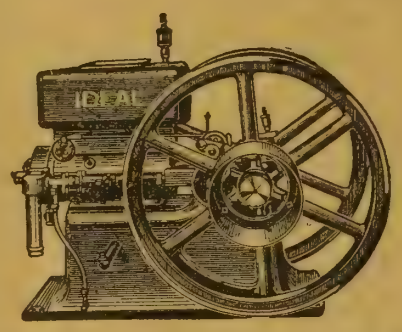

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Brantford Wind Mills
Steel Saw Frames, Pumps
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Good Live Agents Wanted in Unrepresented Territory

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A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

Handling Bulls of a Jersey Dairy Farm

A subscriber recently asked through the columns of the Maritime Farmer concerning the handling of bulls. On this farm "the old man" has most of this to do, and I have reached the conclusion that the bull is best handled by being tied while in the barn. I prefer two rings in an old bull and prefer keeping on the horns (sawing off the tips if mean), and having a chain with a ring and swivel around the horns to which the tie chain is snapped by first passing through the nose rings. These rings should be replaced frequently. They cost but little, and the danger should they break in a crisis is considerable.

I keep my present bull chained in one end of a box stall while in the barn, but in all favorable weather keep him loose in a good tight paddock with shed to which he can run.

We are short of barn room, and so for this winter have had to keep him outside pretty nearly all of the time. He has been in the barn only three nights up to January 24th, and for all I can see is more active and much more certain than ever before. I notice that he is a little more independent now, so would judge that there might be a little more danger of his going wrong if left too free.

The one thing that I always try to impress upon the bull is that there is no boss except man, that no bluffs go on the bull's side and that absolute obedience is expected. As a youngster it took a club once or twice to convince him of the fact, but of late a slap is enough to remind him of his position.

The thing that I always try to avoid is any semblance of retreat and the position to be most studiously avoided is one where a quick move on the bull's part would corner the handler against a stall, gate, fence or other obstruction. This is a lesson I had driven into me by a previous bull.

One thing more: a bull will sometimes be in too much fear of his handler and fancy himself cornered and do things then that he would never do if the overbearing fear were not present. So-called dicipline can be carried too far. Firmness may verge on roughness at times, but should stop far short of abuse.

Old hands tell me the dangerous age with a bull is at two years; that if he can reach three years old without becoming unduly enraged, he will probably never become more than potentially dangerous.

The only safe bull of course is a dead bull. All others can do mischief if aroused. The prepotent bull is usually full of life and vim, and is the most apt to resent any curtailment of privileged authority.

We are still mourning the untimely demise of a bull that we now know was truly great. My predecessor killed him because he got cross.

Why Some Bulls Get In Mischief

Some bulls are not ringed simply because their owners dislike the rather disagreeable job of doing the ringing. I remember my first experience at the work. The bull had found his way to a neighbor's herd. He was driven nearly home when he went back to the neighbor's barn. A halter was put on him and he was tied to a post. A pocket knife put a hole in the nose, but having no ring a piece of heavy wire was made to take its place and the bull was led home and the ring inserted. There are instruments made especially for ringing bulls but they are not an absolute necessity. Ringing a bull is neither difficult not dangerous although not altogether bloodless.

Why are my bulls never cross? Possibly it is good luck in great measure, although their general management doubtless has something to do with it. They are never overfed. A bull that is constantly in high flesh may attract the admiration of beholders but his temper will be something like that of an overfed child. High feeding coupled with idleness has caused more bulls to become unmanageable than anything else, although ill-treatment, worrying by dogs, the presence of strangers, pasturing horses in the same field, timid managers, inherited disposition and the particular breed of cattle all have their influence.

The problem of furnishing exercise for the bull is at times a perplexing one. In some respects he would do better in the field if it were not for his breechy disposition. Some breeders report splendid success by blindfolding with a piece of heavy leather through which horns and ears protrude; or in case the bull has no horns the hood is fastened to a strong halter. He may occasionally become lost from the herd but he will be found somewhere in the proper field. Others use the bull two or three times a day on a tread-power. This method not only gives the bull an opportunity to work off some of his superflous energy but also to pay at least a part of his board bill by running machinery of various kinds. A good plan is to stretch a wire rope between two trees and tie the bull to a ring that slides upon the rope.—W. C. Jeffries. in Ottawa Valley Journal.

Housing Swine

In the class in "Swine Production" at the Washington State college the question of hog houses recently came up. These are the conclusions:

Hog houses need not be elaborate or expensive, but they must be good for the purpose. A good house:

1st. Is dry and clean inside.
2nd. Is well ventilated.
3rd. Admits plenty of light.
4th. Is free from drafts.
5th. Is comfortably warm for the hogs.

Such a shelter will avoid trouble from colds, rheumatism and pneumonia. It will not be a breeding place for disease germs. If your hog shelters are not satisfactory, see how well and how cheaply you can make them fit these conditions.

In our damp winter weather, dryness is absolutely essential. Don't give too much bedding and change it frequently by cleaning everything out of the sleeping pens. Scatter air-slaked lime about at frequent intervals. Use a coal tar dip or crude carbolic acid solution and spray the pens every few weeks.

Keep lice off the hogs. Do you like to go into your hog house? Why not? Fix it so it suits you and see what the pigs say.

No Milk After Weaning

I have successfully raised pigs and kept them in fine condition after weaning without any milk. They were first taught to eat before being weaned. Dry feeding saves both time and labor. I used self-feeders and water fountains and fed the following mixture: Corn meal, bran, shorts and tankage. Oil meal may be substituted for the tankage.

The other method was to fix the feed into a slop, fresh each day. If convenient, it is a good plan to pour boiling water over the feed, then thin to proper consistency. A clover pasture is a great aid in the proper development of pigs. In warm weather good shade is a necessity.—S. J. Jackson.

The Farmer's Butter Parchment Offer.

The offer of the Maritime Farmer to furnish butter parchment at wholesale prices to its readers has been bringing in numerous orders and many more enquiries. Customers who have investigated the proposition are more than pleased with the prices quoted and the quality of the goods supplied. One parchment user told us that the quality of the parchment he had been buying was away below par and his is only the experience of many. Possibly there is no commodity offered for sale to-day, concerning which there is more deception practiced on the public than in the case of butter parchment. In many cases the dealer is not to blame as he is supplied with paper that has no claim to be labelled "pure parchment." The Maritime Farmer's guarantee goes with every sheet of paper it sells. The stock is bought direct from the largest dealers in Germany and out of millions of pieces of parchment handled by us not one sheet has given cause for complaint. Write us for prices before buying. We can save you money and at the same time give you a genuine article.

The N. B. Fruit Grower's Association

convened in one of the exhibition Board rooms on the 8th inst at 2 o'clock P. M.

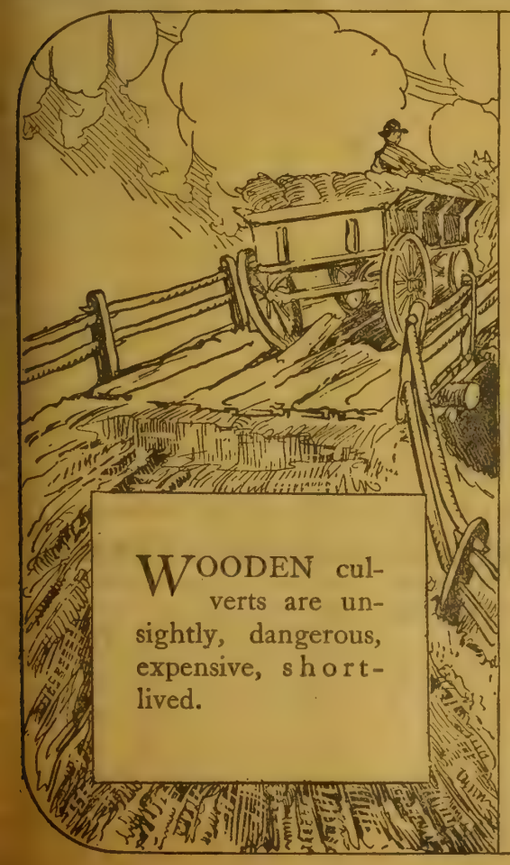
C. N. Vroom, president of the association, presided and read the following address:—

The bye laws of the association were read, section by section and recommendations were made to have certain necessary revisions made at the next annual meeting.

It was resolved that a large fruit exhibition be held in the city of St. John about the first of November of this year.

The election of officers resulted as follows:—

President—S. L. Peters.
Vice-President—W. B. Gilman.
Secretary—A. G. Turney.
Treasurer—Henry Wilmot.



Which kind of a culvert does your waggon cross?

DOES the road *you* use pass over rickety, dangerous wooden culverts, that are constantly in need of repairs and often washed away entirely? Or is it carried safely across the low places by modern, everlasting culverts? Build your

CULVERTS OF CONCRETE

which not only cannot be washed away, but actually grow stronger with age and use.

Every farmer owes it to himself to insist that the money he pays for road-taxes be spent to the best advantage. As a ratepayer, he is entitled to the best roads that can be made with that money. When culverts are washed out, and the road rendered impassable, he not only suffers inconvenience but may also be caused financial loss by inability to get necessary supplies in time for spring planting. And at best, with wooden culverts, part of the money that should be used to make better roads must be spent every year for repairs.

Insist upon Concrete Culverts

It will pay you and everybody else in your county.

Canada Cement Company Limited
505-561 Herald Building, Montreal

LET us send you a copy of our free book. *"What the Farmer Can Do With Concrete."*

IF you want to know more about Concrete Culverts, write our Information Department.

Some Details of N. B. Experimental Farm

W. W. Hubbard, superintendent of the new dominion experimental farm at Fredericton says that arrangements are completed for the erection of the farm buildings and work will be started as soon as possible in the spring.

The buildings so far arranged for include: A main barn 50 feet wide by by 100 feet long with root cellar and silo; a dairy barn, 41 feet wide by 102 feet long, constructed upon the most sanitary lines for milk production; a horse barn 30 feet wide by 90 feet long; an extensive piggery; several poultry houses and a dairy building where butter and cheese will be made.

It is intended that there shall be kept on the farm about 100 cattle, of which forty-eight will be milking cows.

The breeding of heavy horses will also be carried on, and of the twelve or fourteen horses kept for farm work a large proportion will be mares. Two of the mares now on the farm were bred to H. C. Jewett's Clydesdale Sorbie Boy. The horse barn in addition to providing stall room for the work team will also have boxes for brood mares and colts.

A water system will be installed but it has not yet been decided whether the supply will be obtained from Mill Brook which flows through the farm from springs on the Adams lot, or by boring. In any case a water tower will have to be erected through the various buildings and fire protection provided.

A residence for the superintendent will also be built this year, but the plans are not as yet entirely settled. It is probable, however, that the house will be of brick of colonial design and placed on the hill top on the Jewett lot where it will command a magnificent view and be in plain sight of the city.

F. E. Buck, B. S. A., the expert in charge of landscape work for the dominion experimental farm system, will visit Fredericton in the early spring and lay out the ornamental grounds, including roads, ornamental and shelter trees, shrubbery, etc. Mr. Hubbard says that extensive orders have already been placed for fruit have already been placed for fruit and ornamental stock, which will be planted in nursery rows this year. No orchard planting will be done until 1914 as this summer will be occupied in getting the orchard site in readiness.

As soon as the frost is out of the ground extensive drainage, road building and land clearing operations will be commenced and it is hoped to have one hundred acres of new land in readiness for cropping next year. Corn, roots and potatoes with the coarse grains, will be the principal crops this year and the experimental work proper will not start until sufficient land is cleared and fenced to enable its start upon a systematic basis.

Now Is The Time

Now is the time, when work is slack during the winter months, for the farmer to see that his tools are in condition for the spring work. It will cause a serious loss of time to wait until the season opens before getting his tools ready for their work. They should be carefully gone over, all burrs tightened and set, all necessary repair pieces secured and put in place, and everything made ready, even to the removing of the rust and dirt on all bearings. It would also be well at this time to lay in a supply of the bolts of various sizes that will probably be needed during the season. This will mean quick repairs and a saving of time when it is valuable.

"LION" BRAND OF RED CLOVER SEED

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HAMILTON TORONTO WINNIPEG

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Can be Made Strong

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Dr. McLaughlin's Electric Belt

is an absolutely positive cure for all forms of nervous debility, loss of memory, varicocele, weak stomach, and all those physical and vital weaknesses, confusion of ideas, kidney and allied complaints, rheumatism, sciatica, etc., etc.

It has cured thousands every year after every other known remedy has failed. The fact is medicines cannot cure these complaints, as you will know when you have tried them. Electricity—which is nerve force is the power that has been drained from the system, and, to cure, it must be replaced. This Dr. McLaughlin's Electric Belt will do. It is the crowning triumph in electrical science and its cost is within the reach of every sufferer.

The Dr. McLaughlin Electric Belt is a cure for all signs of Breakdown in Men and Women. The Vitality of the body is Electricity—the force in the Nerve Cells. My Electric Belt will give you back this power and enable you to fight on in the Battle of Life !

The Dr. McLaughlin Electric Belt cures Neurasthenia, Hypochondria, Nervous Prostration or Nervous Weakness, Headaches, Sleeplessness, Stomach Trouble, Indigestion, Constipation, Weakness of the Kidneys, Lame Back, Rheumatism, Lumbago, Sciatica, Neuralgia, Poor Circulation, Urinal Trouble, Weakness of the Organs, Night Losses, all evidences of Permature Decay.

BLACK RIVER, N. S.

Dear Sir,—It is with the greatest pleasure that I write to you to let you know what your Belt has done for me. I have never found anything to equal it for my trouble. The greatest thing that seems to me is when people come around and say, "Why, you can get about better now, and you have no more asthma." Then I say that I took medicine for 15 years, but Dr. McLaughlin's Electric Belt cured me in less than six months. Now, Dr., I want to thank you from the depth of my heart for what you have done for me and whenever I get an opportunity to recommend your Belt I will do so. Wishing you every success, I remain, yours sincerely,

A. E. SPITTLES.

TO YOU WHO ARE WEAK and want to regain your youth, who want to feel like you did when you were young, I offer a book which will show you the road to happiness—book of 80 pages, which is brimful of the things you like to read, which will give you courage and enlighten you as to the cause and cure of your troubles. It will point out the pitfalls and guide you safely to a future of strength and vitality. It is beautifully illustrated. It tells what others have suffered and how they have cured themselves. It is free. I will send it closely sealed, without marks, if you will send this coupon. If you are not what you ought to be SEND FOR IT TO-DAY.

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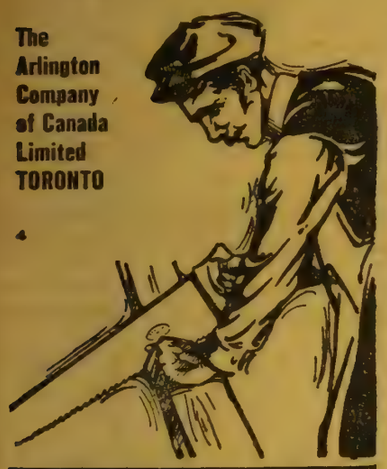

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Our handy Farm Wagons are built low—making them easy to load and unload—and are espeeially designed to meet the requirements of the man who wants a light, strong wagon for all kinds of work on the farm.

Let us send you our catalogue. It will give you complete information.

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Gates' Nerve Ointment For Frost Bites

C. Gates, Son & Co., Middleton, N S.

Gentlemen:--I had the misfortune to freeze my toe which caused me a great deal of suffering, and although I had it treated, yet without success till I used your Nerve Ointment, which has completely cured it, and I have no hesidency in recommending it to others as the best I ever used,

Yours sincereiy, Matthew Wood, Point Phillip, N. S.

Furnishing Cows on Shares

In reply to the following inquiry Hoard's Dairyman says:

"A," professional man, wishes to invest some money in registered Holstein cows and place them with "B," a dairyman, on shares. "B" furnishes everything except the cows, (this includes a better bull than the cows are to be, feed, care and etc.) What share shall each receive of the profits?

It is the intention for "B" to raise the heifers to cows and sell the bull calves as soon as he can get $50 for them. Can you give me any information as to what shares each should have? If "A" gets one-half of the stock increase and none of the milk, would that be enough?

If "A" loaned "B" $2,000, taking a mortgage on a number of pure bred dairy cows as security, "B" would probably pay 6 per cent. or $120 per year for the use of the money. The mortgage would cover cows of greater value than the amount of money loaned. "B" would of course stand all expenses and get all returns from the cows.

If "A" loans "B" $2,000 worth of cows under contract that "B" will return the cows or their equivalent in other stock or cash at the expiration of the contract, "B" is under no greater obligation to "A" than in the first case nor has "A" any greater risk. "A" is entitled to the equivalent of the interest on his investment. However, if "A" assumes all risk of loss on the cows so placed, he is entitled to an additional return, the amount of which will depend on the size of the risk. If "B" is known to be a careful, conscientious dairyman in whose hands the cows will receive the best of treatment and care, "A" would probably be content with less return than if "B" were known to be careless or reckless in handling his affairs. "B" should pay proportional to the risk. Under ordinary circumstances, one-half of the stock increase should be ample pay for the use of the stock and the risk assumed by "A."

Farm Whitewash

The Australians use a whitewash which it is claimed will not rub off. It is prepared in the following manner:

Dissolve two pounds ordinary glue in seven pints of water and when all is dissolved add six ounces of bichromate of potassium dissolved in a pint of hot water. Stir the mixture up well, and then add sufficient whiting to make it up to the usual consistency and apply with a brush in the ordinary manner as quickly as possible. This dries in a very short time, and, by the action of light, becomes converted into a perfectly insoluble waterproof substance which does not wash off even with hot water, and at the same time does not give rise to mold growth, as whitewash made up with size often does. It may be colored to any desired shade by the use of a trace of aniline dye or powder coloring, while by the addition of a small proportion of calcic sulphite its antiseptic power is much increased.

A recent United States consular report states that a traveller in the rural districts of Uruguay will be struck by the fine white color of the farm buildings even during the wet season. This neat effect is secured by the use of a whitewash prepard by macerating the sliced leaves of the common cactus in water for twenty-four hours, producing a liquid of creamery consistency, to which lime is added and the whole well mixed. When applied to any surface, be it of wood, brick, iron or other material, a beautiful pearly white appearance is produced, which will endure through storms and frosts for many years."

BUTTER Direct Importers and Printers WRITE PARCHMENT FOR SAMPLES AND PRICES PAPER. The D. F. Brown Paper Box & Paper Co. Ltd., ST. JOHN, N. B.

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FREE TO MEN

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VITALITY is the greatest power in the world. If I renew your VITAL VIGOR I restore you to full and complete manhood. No matter what your age, whether you are young or elderly, no matter what early indiscretion may have sapped your courage. If I resupply you with new VITALITY I give you the strength that all healthy, vigorous men possess. I know the source of this VITAL SUPPLY. My HEALTH BELT, with suspensory attachment, pours a great stream of VITALITY into your system hour after hour all night while you sleep. Thousands have said it immediately benefits and takes the pain and weakness out of the back from one night's use. No drugs, no medicines, no restrictions of any sort excepting that all dissipation must cease. The man who indulges an excesses and unnatural practices can never be other than a weakling, but if you promise me as man to man that you will be decent, take ordinary care of your health and then use my HEATH BELT every night for 60 to 90 days, I should then be able to do in your case exactly what all these other thousands of men have said I did for them. Please write for my booklet to-day. Never mind about purchasing a Health Belt now; first get into communication with me, read what my book says, then later, if we decide between us that you should have a Belt and if you decide that you want to use it, I will arrange for you to have one to wear until you are cured. My Health Belt is the greatest vitalizer the world has ever known. With special attachments it is a remedy for kidney, liver, stomach, bladder disorders, rheumatism. etc.

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Dear Sirs:—Please forward me your book, as advertised, free.

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When Writing Advertisers Please Mention the Maritime Farmer

The N. B. Farmers and Dairymen in Annual Session

(Continued from page 346)

soil was very much more thoroughly done. Weeds were kept down, rotation was followed and the very best results obtained.

As an illustration of what can be done, some seven years ago Professor Holden of Ames, Iowa, perhaps the greatest corn expert in the world, went out and inspected the corn fields and found less than eighty per cent. of a perfect stand in the hundreds of farms inspected; that the cultivation was conducted in a most perfunctory manner; weeds were rampant and crops exceedingly small. Through the persistent endeavors of Professor Holden and his assistants, it is conservatively estimated that they have added $30,000,000 per year to the value of the corn crop of the State, and now fields would average ninety-five per cent of a perfect stand.

Railways, banking associations and manufacturers of agricultural machinery are vying with each other in the United States in providing money for the extension of this kind of work. The Soo Line, Great Northern and the Northern Pacific all have crops of agricultural experts under the direction of highly paid officials, while the International Harvester Co. has laid aside $1,000,000 for the same purpose, and have placed Professor Holden at the head of the work.

"If we in Canada are going to hold our own as our geographical position and quality of land would permit, it is necessary for us to see to it that we adopt some vigorous method. The present Minister of Agriculture deserves great credit for his outspoken and liberal policy in making it possible for these advanced methods to be pursued in the Province of New Brunswick," declared Mr. Elliott in conclusion.

Following Mr. Elliott's address the meeting settled down as a heart to heart conference between the Secretary of Agriculture and delegates from various agricultural societies.

The first subject taken up was that of drainage, and the meeting was unanimous in expression of the importance of this subject, which it was felt had up to the present been sadly neglected. It was decided to ask the government to at once buy a traction ditcher, so that operations can be commenced without delay,

The question of clover hullers was then discussed, and Secretary Dagget announced that Hon. Dr. Landry, the Commissioner for Agriculture, had decided that the department would aid in the purchase of hullers. The announcement was received with applause, and the opinion expressed that material aid in the matter of seed would result to the farmers.

Dairy Superintendent McDougall was the principal speaker on the subject of dairying, and he said that by taking the matter up vigorously and persistently within a few years the problem of lack of feed, which is the weak point of the industry at present, could be overcome.

Secretary Daggett announced that Mr. N. W. Eveleigh, of Sussex, had been appointed to a position on the dairying branch staff of the Department of Agriculture, and will give especial attention to the work of the creameries. Announcement was also made of the appointment of Mr. H. B. Derost, of Carleton County, to take charge of the work in connection with drainage, fertilizers and bee culture. Mr. Derost is a graduate of Macdonald College, Quebec, and both he and Mr. Eveleigh are well fitted to take up their respective lines of work.

The matter of the annual returns made by the Agricultural Societies to the Department of Agriculture was discussed and some change will likely be made in this regard.

When the question of horticulture was taken up, Mr. Turney, Provincial Horticulturist, announced that the department was bringing in a large number of carefully selected trees which would be sold at cost to the farmers, who were strongly advised to buy their young stock through the department.

It was well on towards 2 o'clock Friday morning when the meeting concluded.

The results of the conference were eminently satisfactory to the representatives of the Farmers' & Dairymen's Association.

The Quiet One

Your hand and ear are wonderful judges of mechanical perfection. They detect poor construction no human eye could see.

Five seconds after you touch the crank of the quiet running Waterloo Boy cream separator you know it is perfectly designed, otherwise it could not run with such remarkable ease.

While you hold one ear within a foot of a Waterloo cream separator running at full speed you can hear the ticking of a watch held near your other ear.

That is excellent proof of perfection.

Insist on getting the clean skimming, easy running Waterloo Boy if you want the best.

Sussex Motor Co. Ltd., Sussex, N. B.

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It's the **Cleanest, Simplest,** and **Best Home Dye,** one can buy -Why you don't even have to know what **Kind** of cloth your Goods are made of. So mistakes are Impossible.

Send for Free Color Card, Story Booklet, and Booklet giving results of Dyeing over other colors.

The Johnson-Richardson Co., Limited, Montreal.

Shelter for Farm Tools.

Tool protection necessarily requires considerable room, more than some farmers can easily provide. The farmer who is able to own a large tool shed can run his implements in it at the end of the season and leave them there until he wants them again next season. But the farmer who feels that he is not able to own a shed for his implements must do a little planning in order to get all of them out of the weather. He can and should utilize all the space he has by planning to store his implements in as little space as possible.

Some of the machines may be taken apart and thus stored in a very small space. Those that cannot be taken apart easily must be run together as closely as possible. The hay rake may be condensed by removing the wheels and tongue; the mower can be placed in close quarters by taking off the tongue and sickle-bar. The spike tooth harrow can be taken apart and hung upon a wall with railroad spikes. The corn planters and the cultivators will not require much room if dismantled. It is often quite a job to find room for the binder, but by taking off the reel and bundle carrier the space needed for this machine may be much lessened. An effort should be made to get the binder under shelter by all means, as the elements will quickly play havoc with this complicated implement.

Often there is considerable room in the barn loft that may be utilized for the storing of plows, and those tools which have been taken apart. When implements are oiled or greased, taken apart and packed away, try to place the parts so that you can get at those you will need early in the spring without having to move the ones you will not need until late in the season.

In the wagon-shed or driveway, or in any shed for storing tools, a system of ropes and self-locking pulleys can be used to good advantage to hoist some of the tools out of the way. The wagon boxes, hay rack or hog rack may thus be removed entirely out of the way and they can be raised or lowered easily directly on the wagon.

Sometimes a farmer will permit good shelter for his tools to go unused because he does not realize that he has the shelter. I know several farms on which there are one or more old sheds filled with nothing but worthless rubbish, while the farming implements stand in the fields. By clearing the rubbish out, and then repairing the leaky roofs and replacing loose boards so as to make the sheds dry, these old buildings would become valuable, considering the use to which they could be put. A tool house does not need to be so well constructed as stock buildings, as the question of warmth need not be considered. A tool shed needs to be very dry, of course. A good dry floor can be made by hauling a few loads of cinders.

Stearlized Milk.

In sterilized milk there are no bacteria or spores, as both of these have been destroyed by the milk being ing subjected to intense heat two or three times. After each heating the milk is kept fairly warm for several hours in order to cause the spores which have not been destroyed by the heat to develop bacteria. The subsequent heating destroys these germs. Sterilized milk will keep for practically indefinite periods so long as the bottles containing the milk are kept hermetically sealed. When once air is admitted the milk soon turns bad unless it is used up.

Failure to Breed.

Sometimes due to over-fatness or some other out-of-condition cause. But if due to a diseased condition within try this simple remedy: Take an ordinary fresh yeast cake and with a little water mix to a paste. Let it stand in moderately warm place for 12 hours. Put this in a pint of freshly boiled lukewarm water and stir, let stand about 12 hours longer and it is ready for use. Inject the whole solution into the vagina when heat is first noticed and breed just as period is about over.

The Homogeniser.

This, as used in the dairy, is an appliance for splitting up the fat globules of milk into a very finely divided state. After milk has been homogenised the cream will not rise, which is, of course, an advantage where milk is to be sold, and is not required for butter-making. When untreated milk for sale is not kept well stirred, the cream will rise, and then any milk taken from the top of the churn will contain cream, thus leaving the remainder of the milk devoid of its due proportion of fat.

A Breeding Record.

This does not come from America, the country of "tall" stories, but from Ireland and County Kildare. A hornless cow, locally called a "muihl" has produced eight calves in three years, or, to be exact, a little more than 37 months. The details are as follows:—October 26, 1909, twin bulls; November 15, 1910, twins, bull and heifer; November 17, 1911, twin heifers; December 5, 1912, twin bulls. The owner of this prolific animal is anxious to know if there is any record of a performance beating this.—Farm and Home, England.

The Maritime Farmer will send to any address, for 40 cents, post paid, one of its useful stallion record books. Each book contains 100 forms for recording full description of mares, 100 receipt forms and 100 blank notes of hand. It is a perfect system of keeping an accurate record of all transactions during the season. Every groom should have one. It provides him with a complete bookkeeping outfit and the books fit comfortably into an inside pocket.

The Dairy Cow as a Soil Builder.

The dairy cow not only furnishes a means by which ready money can be made from the sale of her products, but furnishes a very valuable means of helping to solve the more important question of soil fertility.

A cow produces 14 tons of solid and liquid manure yearly, a ton of which contains 8.6 pounds of nitrogen, 5.8 pounds of phosphoric acid and 8.8 pounds of potash, which at 20 cents per pound for nitrogen and five cents each for phosphoric acid and potash is worth $240 for plant food.

It is true that all this manure is not saved, but consider that wheat or oat straw contains 9.6 pounds of nitrogen, 4.4 pounds of phosphoric acid, 16.4 pounds of potash, per ton, and on the above prices for these ingredients are worth $296, and forest leaves contain 15 pounds of nitrogen, 3.2 pounds of phosphoric acid, and 6 pounds of potash per ton, and are worth $346. Say one-half the value is preserved and a liberal quantity of either straw or leaves is added as bedding for the cows, the loss by not being able to save all will most certainly be made up. Think what this amount of manure per cow means to poor land.

The dairy cow is indeed a valuable soil builder.

How Many Eggs a Year?

It is impossible to answer anything about how many eggs a hen of any variety or breeding will lay. The various breeds have different characteristics of egg laying, but still more striking is the difference in the number of eggs laid by special strains of fowls, even of the same breed and variety. Yet more remarkable are the performances of different hens of the same strains, even when these are kept under identical conditions.

It is no unusual thing for individual hens in a flock to have records ranging from no eggs at all to more than 200 eggs a year. When an egg yield is below six dozen annually it may be considered a poor one. Ordinary egg yields run from six to 10 dozen eggs to the hen a year. When a flock ranges between 120 and 150 it may be said to be yielding remarkably well. Flock averages above 150 may be said to be extraordinary.

Unfavorable weather or even season may effect an egg yield temporarily, but fowls will usually pick up and make a good average. It must be seen that to answer the question as it stands is impossible, but by giving the above facts, the importance of having fowls not only of good variety but also of good strain is a more important factor than mere breed or variety, because there are strains in all varieties that compare favorably in egg laying with one another.

This statement applies not only to the various varieties of one class, such as the American, but to the various varieties in other classes. That is to say, there are strains of Plymouth Rock fowls, which breed belongs to the American class, and strains of Brahma and Cochin breeds, which belong to the Asiatic class, that compare favorably with even the best strains of Minorca and Leghorn breeds, which belong to the Mediterranean, the most noted egg laying class. It must be remembered, however, that extraordinary egg yield may not be most profitable to secure, and for this reason the farm flock that averages more than 10 dozen eggs annually is doing really very superior work—better work probably from the standpoint of profit than many of the egg specialists' flocks do, particularly if these eggs are secured when prices are high.

Curing a Forger.

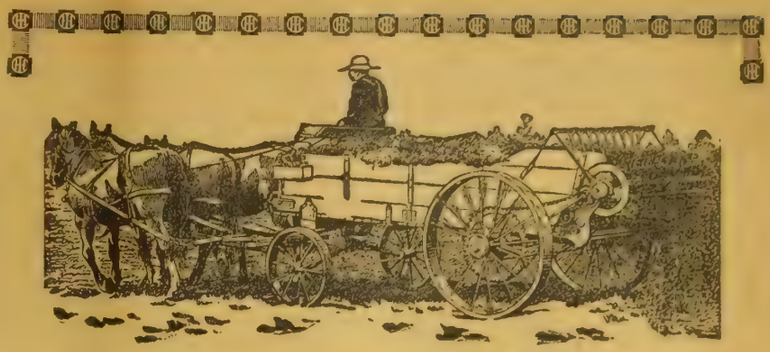
J. B. M., Kings Co., P. E. I.— A coming three-year-old colt, of good conformation and a smooth traveller, forges sometimes when ridden or driven. He has never been shod, as I fear he may injure himself with his hind shoes. How can this fault be remedied? I want to use him as an all-around family horse.

Ans.—The forward action of the colt must be quickened and the hind action shortened. To accomplish this, shoe with good weight in front with either a square or roll toe to the shoe. Generally a square toe of about 2½ inches is most effective. Dress the front feet to a high-heeled and short-toe fashion, allowing the horn to project beyond the square toe. Behind have a low heel and long toe, with shoe flush with the toe. Make the shoe long, extending back to the heel, with rather high heel calks and no toe calk. Most of the weight of the front shoe should be in the toe, thereby extending the action and and helping in that way. If the roads require calks for front shoes, braze them on lengthwise at the heel, using two screw calks at the toe.

Usually this method will solve the difficulty, but not always. An expert smith riding behind the colt, or watching his action from the ground, is the most likely to solve the problem. A couple of deep grooves across the square or rolled toe are often of appreciable aid by furnishing a grab without slowing the break over. Occasionally the high-front heel is a detriment, but not often.

The Lay of the Hen.

Possibly no part of the farm has been so neglected in the past as has the poultry crop. A bunch of chickens have always been considered as part of the necessary adjunct of any farm, simply because everybody had a few hens picking up grain about the barns and graneries and breaking down the binder reels and painting the seats of the sufky plow with manure, which elicited much grumbling from the farm hands. Ma and the girls took care of the hens, gathering the eggs and sitting the hens every spring. They liked to fool around with a bunch of hens and a lot of little chickens all summer, complaining when the rats and the civit cats got the major portion of the bunch, and bewailing their luck when a freshet drowned fifty or so, but stubbornly sticking to raising chickens because they could get a little pin money for parlor furniture, rugs, silk dresses, etc., after the grocery bills had been traded out in eggs, and the boys had all been supplied with overalls and work shirts. Such was the hen which we first knew. She carried the house expenses along without anyone paying any particular attention to her the fact that she did this being merely a common occurrence which drew no particular attention to her homely appearance. If the crops failed, the hens kept the table up to the mark without making a draft on the bank account. But that was expected of the patient and long-suffering hen. Of recent years, however, the hen is getting her just recognition, even on the farm. No longer do the women bother with the common, or garden-scratching variety of hen. They must have imported strains of Rose Comb Rhode Island Reds, Barred Rocks with pedigrees for every egg, or any other breeds they may prefer, but insisting on birds with reputations for doing things, and doing them oftener and at more opportune times than the birds they had last year. The hen is no longer given a squatter's claim to the old buggy top, the binder seat or the stable. She has a house of her own, and it is kept sweet and clean. When she lays an egg it is an event that becomes history. If she doesn't lay one and repeats this omission often enough, she becomes pie. She must be useful as well as ornamental. There is no sentiment for the hen even now, unless it is the kind that begins at home. The hen has become a machine for turning out eggs and meat. The more she turns out, the more welcome she is. Science has been put into the hands of the breeder to build a hen that will do these things in the way they are wished. Through generations of clucking biddys this tool is fashioning the homely old hen into a money maker that ranks in return second to none. Cultivate the hen. She will return you a wonderful crop. Her cackle will become music to your ears, especially on days when the thermometer registers 40 degrees below zero and the market registers 60 cents per dozen.



What Three Bushels More to the Acre Means

EIGHT years ago the farmers in a central state raised average crops that ran three bushels less to the acre than they now get. Suppose each acre of farm land in this country were so tended that it produced an equal increase. How much more money would farmers have, with which to buy the luxuries of life that they earn and deserve?

What others have done, you can do. Your share in this prosperity depends entirely upon yourself. The first step for you to take is to fertilize your land properly with manure spread by an

I H C Manure Spreader Corn King or Cloverleaf

Manure cannot be spread as it should be unless a machine is used. An I H C spreader covers the ground with an even coat, light or heavy as may be needed, and pulverized so that the plant food elements in the manure combine with the soil to best advantage.

The spreader that does this work as it should be done must have many excellent mechanical features. The apron should move without jerking; the beater should meet the load at exactly the right point to pulverize the manure without too greatly increasing the draft of the machine; the speed changes of the apron should be positive whether the spreader is going uphill or down, otherwise the spreading will be uneven. All these features are provided for in the construction of I H C spreaders.

The I H C local agent carries in stock the machines best suited to your locality. See him for catalogues and full information, or, write the nearest branch house.

CANADIAN BRANCH HOUSES

International Harvester Company of America

(Incorporated)

At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton

The N. B. Women's Institute.

The first convention of the Women's Institute of New Brunswick was held in Fredericton on the 18th and 19th, inst. A full report of proceedings will appear in a future issue of the Maritime Farmer.

It's easy to get a man to agree with you if he wants to borrow money.

Send your Raw FURS to John Hallam

Sixty Thousand trappers now send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada.

FREE Our "Up to the minute" Fur quotations and the last Edition of HALLAM'S TRAPPERS GUIDE, a book of 96 pages, mailed FREE.

Write to-day to John Hallam, Mail Dept 18 , TORONTO, 111 Front St. E.

THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking,

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address me personally;

E. M. MORRIS, Manager 1900 Washer Co'p'y.

357 Yonge Street, Toronto, Can.

$60 Engine

Runs small machinery like pumping water, churns, small drag saw, ice cream freezers, or as good as any two men on the farm, drop a line for circulars and other sizes.

Guarantee Motor Co.,

370 Bay N, Hamilton, Ont.

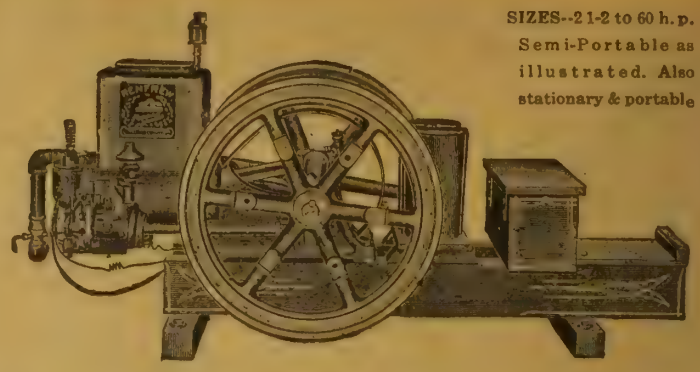
Keeping Any Bovine Boarders?

In the midst of our "cow preaching" we pause occasionally to insist on farmers knowing something of their cows. There are cows and cows, you understand, and there are loafer cows as well as loafer men, loafer grains of wheat, vagabond fruit trees and boarder hens. As Prof. Holden, of two-grains-of-corn fame, expresses it, "A stalk of corn that has been loafing around all summer doing nothing." It is all very well to have cows and live stock of other kinds—it's the proper thing in farming. But remember to have cows, hogs, chickens, or whatever kind of live stock you raise, that aren't loafing around all year doing nothing but board with you. Have only the kind that pay you handsomely for their board. With all this agitation for more live stock in the West, especially dairy cows, there have been hundreds of "boarder" animals brought in and sold as heavy producers to farmers who know no better. They are reaping the consequences now, simply because they do not understand how to weed out the "boarders." The Babcock test for butter fat in milk and the common spring balance make it possible for any person to know what cows are "boarding" with him and he can eliminate them from his herd and grade up his herd until good cows will be producing double, triple or even quadruple what the average herd of grade cows give. It is dollars and cents to the owner. If one cow can be made to do the work that three have been doing and do it on one-third the feed and take but one-third the stable room and one-third the milker's time, it is worth investigating. A man spends something like four days sitting under a cow in the course of a year. If he likes his job well enough to spend a week or even twelve days under three cows instead of one, well and good. Our message is not for that man. We want to talk to the man who milks for results. He is the man who gets the most milk from the least number of cows on the least stable room and feed possible. This does not mean that he starves his cows. He feeds them heavily and experiments with the Babcock test to ascertain the amount that will bring the most butter fat. He uses the scales every night and morning for weighing the milkings and the Babcock test at least once a month to get the fat content. At the end of the year he has an account that shows whether or not each and every cow in his herd has been boarding with him or working for him. His checks from the creamery also shows that it has paid. If you are the man, write and tell us about it. If you are not read and learn how from the experiences of those who are.

Poultry Notes

A fowl should always be fattened as quickly as possible. Ten days is long enough, but it should be confined either in a coop or a number in a small yard. They must have a continual supply of fresh water, and should be fed four times a day, the first meal being given early, and the last one late.

The poultryman who follows the daily cleaning method is generally the one who looks after the other essentials, considering them equally as important. Cleanliness should be more rigidly enforced in winter than account of much bad weather, and in summer, for the reason that on longer nights, the fowls are compelled to spend more time in the houses.



SIZES--2 1-2 to 60 h.p. Semi-Portable as illustrated. Also stationary & portable

Tested With Boiling Water

Every Renfrew Standard gasoline engine is thoroughly tested before shipment. It must show at least 10 p. c. more horse power than it is rated, by an actual brake test, with boiling water in the hopper. This test also proves the soundness of the workmanship. Every

Renfrew-Standard

engine is also tested for balance. It must be so perfectly balanced that it will run with clock-like precision and smoothness. It must start easily without cranking. In short, the engine must be absolutely right in every particular before our inspectors affix their O. K's. If you were at the factory, you might think we were over-particular. But just think what our painstaking and care means to the purchaser of a Renfrew-Standard engine. It assures him getting an engine whose reliability has been proven under test—one that will give him great satisfaction.

Write for our engine catalog. It describes the Renfrew-Standard in detail, and contains information about gasoline engines that every progressive farmer would like to know.

The Renfrew Machinery Co. Ltd.

Head Office and Works, RENFREW, ONT.

AGENCIES EVERYWHERE IN CANADA

Write for particulars about our 1 1-2 H. P. Gifford Engines

ORNAMENTAL WIRE FENCE

8¢ PER RUNNING FOOT FREIGHT PREPAID

We want you to investigate this statement—we make a better ornamental wire fence than can be purchased elsewhere for double the money. We guarantee absolutely every foot of fencing we manufacture; satisfaction or money back and we pay the freight. We are manufacturers of the REGAL Extra Heavy Galvanized Ornamental Wire Fence, and we sell miles and miles of it all over Canada for enclosing lawns, parks, cemeteries, churches, cottages, farm houses, mansions, schools, etc., etc.

For the City Residence

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Remember, we are largest buyers on wire market; our is 20 per cent of any other manufacturer. We employ no agents nor jobbers, but sell direct to the consumer for cash, saving you the dealer's commission, and heavy expenses incident to a credit business. We have just published a catalogue. It tells of the greatest fence offer ever made. You owe it to yourself to read this great REGAL offer. Use the blank form herewith and mail to us today and we will forward to you our special offer at once.

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WE GUARANTEE Every foot of Regal Fence to be in every way satisfactory in appearance and quality. If your purchase is not satisfactory we return to you your money without question and get your fence back at our expense and get your money without question and get your money without question. We guarantee the Regal to be made from the finest brand new fencing wire; that every strand is the full gauge specified; that every strand of wire is of our own manufacture; that every strand is heavily galvanized; that the Regal fence has been submitted to and passed chemical test, thereby proving that it will outlast and outwear any other fence on the market. This guarantee is positive and absolute. The Regal Fence Co., Ltd., Sarnia, Ont.

The Regal Fence Co., Ltd., Sarnia, Ont.

Gentlemen:—Send me full information and circular of your SPECIAL PRICE Fence Offer, postpaid and without expense to me. Yours truly,

Name.....

St. or R.R. No.....

Town.....

Prov.....

FLORICULTURE.

Moncton Correspondent:—Bulbs received are undoubtedly off-shots of the Chinese Sacred Lily and should hardly be expected to bloom. Possibly, if grown out of doors next summer, in the ground, they might come to bloom next winter, but that is very problematic. Better buy full-sized bulbs another time. There is nothing saved by buying cheap stock.

Oralia, St. Stephen, N. B., writes:—I have a plant of Oralia, that bloomed finely last Easter. I grew it out of doors as directed by you and it did finely, being covered with little budded tips when it was brought in this fall, but now the leaves are turning brown and dropping off. They have a sort of rusted appearance on the under side. What should I do to save it?

The Oralia is probably infested with red spider or thrip, possibly both. These can be conquered by spraying with cold water applied forcibly to the under side of the leaves. In the event of there being thrip present, it would also be advisable to use tobacco water as a wash once a week. Do not use the tobacco water if the buds are showing color or it will spoil the flowers.

A flower lover, of Woodstock, N. B. writes:—Is there a plant called the Resurrection plant? If so what does it look like? Is it a desirable plant for the house.

There is a small desert plant, that when dry, somewhat resembles the liverwort that grows so commonly on maple bark. It is thoroughly dormant when sold but on being immersed in water it gradually opens out becoming quite green and presenting a quaint rather than pretty appearance. It gives off an odor which has been compared with that of a newly scrubbed floor, when plenty of hard soap is used. I would not consider it a valuable plant, it is a curiosity.

H. A., St. John, N. B., writes:—I have a palm that is beginning to turn a little brown at the tips of the leaves. It is quite a large plant and is kept in a jardiniere, but it is so heavy that it is seldom taken out except when the pot is washed. I have been advised to water it with coffee grounds. Would that hurt it?

I would fancy that your palm needed a little air around the pot or that the drainage is in some way deficient. You had better examine the drainage carefully. You wash the pot well and clean the inside of the jardiniere. I fail to see what benefit the coffee grounds would be in any case and certainly if the drainage should be bad any further application of foreign matter would only aggravate matters. I am quite aware that people who are successful with palms use such remedies but have never seen a case where any real benefit could be directly traced to either use. However, there may be such and to a healthy plant, they could not be injurious.

Few people are aware of the value of soot. It is generally regarded as a waste article. Save carefully all you can obtain from chimneys and stove pipes and keep it dry for use in your garden next spring. It is not only a powerful fertilizer but is also a very valuable insecticide. When mixed with the soil dry or applied to the surface in liquid form it will destroy all forms of insect life, either the eggs, larvae or perfect form.

Many old rich gardens that have been used for years are infested with small white grubs that feed on the roots and crowns of plants. They are especially fond of pansies, rendering it almost impossible to cultivate them. Soot is the only remedy for this grub. When you dig up your beds in the spring apply a coating of half an inch to the top of the soil; Mix it in well, then after your plants are established apply once a week about a handful of the soot mixed in a gallon of water and you will find the grub very quiet. Not only this, but you will find that your plants make an extra, vigorous growth due to the nitrogen carrying ammonia the soot contains.

As soon as the ground freezes about two inches deep apply about six inches of coarse strong manure. over your bulb beds. Never do this until the surface is frozen as the heating of this mulch would induce top growth of the bulbs which would enfeeble them at this time of year.

If you want a running vine for a room decoration in winter, that will only give you the trouble of watering use an Ivy. The old English is good for that purpose as it will stand extremes of temperature and light. As I write, over my desk, in a dark corner of the room, is an English Ivy, some ten feet long, well branched, that has been in that position for several months, growing as strongly and as healthy as it did in the green house. Of course, more light would be better for it, but a portion of it trained over the ceiling is as strong growing and with as good foliage as it is where more light strikes it.

Be sparing with fertilizers until March unless plants are very much root bound and cannot be repotted conveniently. Most decorative plants make little growth during the cold months even in well heated houses and, therefore, do not require as much food. If any one experiences difficulty in getting a fern to grow well in small dishes try that pretty, little, compact, hardy fern, aspidium psusimense, it is most satisfactory for those small silver pans.

W. P., Victoria Co., N. B., writes:—Will you please tell me what is wrong with our house plants. They are ail dying down and on looking at the roots we find them all covered with small, white worms that look like jelly. We have tried all kinds of earth but they come just the same. Please let us know what we can do through your paper.

Ans. Please mail sample of insects on roots of plants, we cannot identify without same.

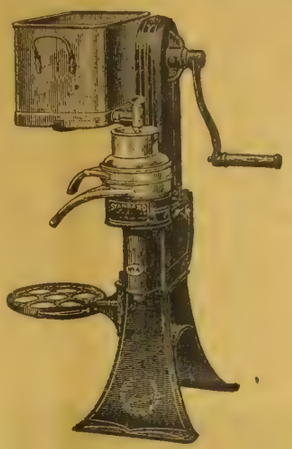
HAWK BICYCLES

An up-to-date High Grade Bicycle fitted with *Roller Chain, New Departure Coaster Brake and Hubs, Detachable Tires*, high grade equipment, including Mudguard, Pump, and Tools, **$22.50**

Send for **FREE 1913 Catalogue,** 100 pages of *Bicycles, Sundries and Repair Material.* You can buy your supplies from us at Wholesale Prices.

T. W. BOYD & SON,
27 Notre Dame St. West, Montreal.

For These Reasons



FREE

Write for the Standard Booklet, giving a full description of "The World's Greatest Separator," also folder entitled "Skimming Results."

TO tell all the reasons why we believe your choice of a cream separator should be the Standard would be impossible in this space, but here are four. **FIRST**--Because the

Standard

cream separator under ordinary conditions skims to .01 per cent. or less. It loses but one-tenth of a pound of butter fat in 1000 pounds of milk skimmed. The ordinary separator loses a full pound. **SECOND**--Because the Standard has a widc open bowl, and no cream or milk tubes to clog up. Everything easy to clean. **THIRD**--Because the supply can is more than a foot lower than on ordinary machines. No high or awkward lifting to do with the Staudard. **FOURTH**--Because the Standard has a self-oiling system and lubricates its working parts automatically all the time it is running.

The Standard will save more time and labor, and make more money for you, than any other cream separator. Try one and let the machine prove these facts.

The Renfrew Machinery Company, Limited

Head Office and Works, RENFREW, ONT.

Agencies Everywhere In Canada

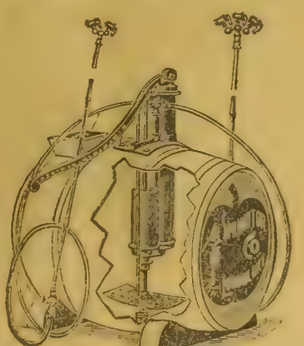
Shall I Buy a

SPRAMOTOR

or an ordinary spraying outfit?

That's *the* question—

Your decision should be *determined* by *what* you expect the machine to do and *how long* you expect it to do it.



If—you want a *durable* hand machine for the purpose of destroying weeds—spraying orchards, potatoes and row crops—one that you can also paint with—you want a

Hand Spramotor

If you want a *durable* H. P. machine to do all these things besides spraying grain and doing the white-washing you want a

H. P. Spramotor

If you want a *durable* gasoline machine to do all these things in a *bigger* way but *mainly for orchard work* and *white-washing* you want the

Model "C" Spramotor

The SPRAMOTOR in every class, has *demonstrated* its *superiority* to all other spraying outfits and *there's one built specifically* for your needs.

Prices range from $6.00 to $350.00.

N. B.---When you buy a SPRAMOTOR you make a *permanent investment* because every machine bearing the name is built to endure.

SPRAMOTOR CO.,

1531 King Street, - - LONDON, Can.

Advertise in The Maritime Farmer.

MARKETS.

Charlottetown Prices.

GRAIN—Wheat, 90c. to $1.00; Oats White 38c., Black 40.

FEEDSTUFFS—Bran, $1.30 to $1.40 Shorts, $1.45 to $1.55; Middlings, $1.50 to $1.60; Oil-Cake, $2.10 to $2.25; Cottonseed Meal, $2.00; Gluten Meal, 1.80 to $1.85; Corn Meal, $1.90.

LIVE STOCK—Butcher's Cattle, 5c. to 6c. per lb; Stockers, $18.00 to $35; Milch Cows, $25 to $40; Sheep 4c. per lb.

DRESSED MEATS—Beef (carcass), ordinary quality 7c. to 8c.;Beef (retail) 9c. to 14c.; Mutton (carcass) 9c. to 10c.; Veal 5c.;Pork, 11 to 11½c.

HORSES—Drafters, $150 to $200.00 Roadsters, $150 to $250.00; Carriage, $150 to $250.00.

DAIRY PRODUCTS—Creamery Butter, 28c. to 29c.; Dairy Butter, 24c. to 26c.; Cheese, 14c. to 14½c.

POULTRY AND POULTRY PRODUCTS—Eggs, 18c. Fresh; Fowl, 10c. to 14c.; Chickens, 12c. to 15c.

FRUIT—Apples, $2.50 to $4.00 bbl.

MISCELLANEOUS—Hay, $10.00 to $12.00 per ton; Straw, $5.00 to $6.00 per ton; Wool 24c. per lb.; Beef Hides, 10c.; Calf Skins, 14c.; Lamb Skins, 70c. to 80c.

VEGETABLES—Carrots, 50c. per bush.; Potatoes, 25c. to 30c. per bush; Turnips, 18c. per bush.

Owing to storms the market during the past few days has been very poorly supplied and it is difficult to quote on many lines, in fact, prices quoted in several cases are only nominal, no transactions having taken place. For instance, there has been no vegetables on this market for some time. Butter is dull, demand poor. Eggs are in fair demand for fresh receipts but held eggs are almost unsellable. Pork and beef are both in good demand and prices firm; but supply of former very limited, prices are being advanced daily. Poultry is scarce, fowls being about the only thing offered. Hay is fairly plentiful, but demand is limited. Oats are dull and farmers are not pushing sales. Feeds of all kinds are lower and in only limited demand. Trade in general is quiet.

Halifax Prices.

GRAIN—Oats, 53c. to 54c. bag; Peas, split, $8.00 bbl., Rd. $7.00 bbl.; Barley, Seed, $1.60 bag, 100 lbs.

FEEDSTUFFS—Bran, $24.00 to $24.50; Shorts, $24.50 to $25.50; Middlings, $25.50 to $27.00; Oil-Cake, $2.15 to $2.25 100 lbs.; Linseed Meal, $2.15 to $2.25 100 lbs.; Cottonseed Meal $1.85 to $1.90 bag; Gluten Feed, $1.50 to $1f5 bag; Corn Meal, $1.45 to $1.47½ bag.

LIVE STOCK—Milch Cows, $40.00 to $50.00.

DRESSED MEATS—Beef (carcass) 8c. to 10½c.; Beef, (retail), 16c. to 24c.; Mutton, 13c. to 15c.; Veal, 52c. to 14c.; Pork, 13c. to 16c.

HORSES—Drafters, $250.00 to $300. Roadsters, $200.00 to $250.00; Carriage, $200.00 to $250.00.

DAIRY PRODUCTS—Creamery Butter, 30c. to 32c.; Dairy Butter, 25c. to 26c.; Cheese, 15c. to 15½c.

POULTRY AND POULTRY PRODUCTS—Eggs, 26c. to 30c.; Fowl, 14c to 15c.; Chickens, 16c. to 17c.; Ducks, 17c. to 19c.; Geese, 15c. to 17c. Turkeys, 20c. to 21c.

FRUIT—Apples, $1.50 to $3.25 bbl.

MISCELLANEOUS—Hay, $14.00 to $16.00 ton; Straw, $9.00 to $9.50 ton; Beef Hides, 11c. to 13c. lb.; Calf Skins, 12c. to 16c. lb.; Sheep Skins, 85c. to 90c.; Lamb Skins, 75c. to 85c.

VEGETABLES—Carrots, $2.00 bag of 3 bus.; Potatoes, $1.60 to $1.75 bag of 3bus.; Turnips, $1.00 to $1.10 3bus. bag; Beets, $1.75 3 bus. bag; Parsnips, $1.75 to $2.00 3 bus. bags; Cabbage, $1.75 to $1.80 bbl.

Cucumbers Under Glass.

A good many greenhouse men devote a part or all of their houses to cucumbers instead of tomatoes in spring and early summer. Cucumbers are a more uncertain crop than tomatoes. They are hard?r to grow as the vines are very tender, and the prices fluctuate more than the prices of tomatoes. When a maximum crop of cucumbers is secured and prices are high, that is 40 or 50 cents a dozen, the income from a given area voted to tomatoes. When the cucumis greater than an equal area than deber crop is poor or the price low, 20 or 25 cents a dozen, the profit from cucumbers is less than from tomatoes. The income from cucumbers, if considered for a period of years, will be about the same as that from tomatoes.

Cucumbers grow to maturity much sooner than tomatoes. This is one of the reasons why they are grown more commonly under glass. They are usually started in 3 or 4-inch pots, the seeds being sown three or four in a pot and about four weeks before the plants are to be set in the permanent beds. After the plants have started nicely they are thinned to two in a pot.

Some growers set the plants in rows several feet apart and from 12 to 15 inches in the rows, one plant in a place. When grown these distances apart the vines are trained on an inverted V-shaped trellis made of wire with wooden supports. Other growers set the plants 2 by 2 or by 3 feet, in which case the vines are trained to strings or laths which are strung or set upright, the upper ends being attached to wire run directly over and parallel with the rows. The vines attach themselves to the string if twisted around them. When laths are used, a rail fastener is employed to support the vines. Bees are placed in the houses to pollinate the blossoms; thus hand pollinating is not necessary in the case of cucumbers. The lateral vines on cucumbers are all cut off just beyond the first female blossom. This practice is followed, no matter what the method of training.

Echoes From the 1912 Ayrshire Breeders' Association.

Following are the Ayrshire judges selected at the recent annual meeting of the Canadian Ayrshire Breeders' Association, to officiate at Maritime Shows in the Autumn of 1913.

Halifax—D. Drummond, Ottawa; Wm. Stewart, Menie, Ont., reserve.

Chatham—Wm. Stewart; D. Drummond, reserve.

Fredericton—John McKee, Norwich, Ont.; Hector Gordon, Howich, Que., reserve.

Charlottetown—John McKee; Wm. Stewart, reserve.

Victoria, B. C. and Red Deer, Alta. —G. C. P. McIntyre, Sussex, N. B., Robert Robertson, Nappan, N. S., reserve.

AYRSHIRE ASSOCIATION EXHIBITS GRANTS.

Fredericton, $50.00; Charlottetown, $50.00; Halifax, $50.00; Chatham, $25.

Delegates Attending the First New Brunswick Women's Institute, Fredericton, February 18th and 19th, 1913.

Report of meetings will be given in a future issue of the Maritime Farmer.

00. The above amounts in each case to be given to four the get of one sire, to be bred and owned by exhibitors. Two animals, the progeny of one cow, to be bred and owned by exhibitor.

Maritime Winter Fair dairy test, $200.00.

DELEGATES TO FAIR BOARDS.

Fredericton—G. C. P. McIntyre, Sussex, N. B.

Halifax—John Retson, Truro, N. S.

Charlottetown—Jas. Easton, Charlottetown, P. E. I.

Chatham—Geo. E. Fisher, Chatham N. B.

Black, Amherst, N. S.

Maritime Winter Fair, Fred S.

OFFICERS.

President—Wm. Stewart, Merrie, Ont.

Vice.President—G. C. P. McIntyre, Sussex, N. B. Mr. McIntyre is the only Maritime man on the boald of directors.

Secretary—W. F. Sleptren, Huntingdon, Que.

Poultry and the Orchard.

For my flock of 1000 hens I have a 30-acre orchard for range. I keep the hens in colony houses built in a row through the centre of the orchard. There are 50 hens to a house. I have found that growing poultry between the trees in the orchard is not only a good way of taking care of the poultry themselves, but it helps to enrich the soil for fruit trees It also brings in a consant revenue while the trees are preparing to bear.

I supply the fowls feeds that I know contain enough protein for egg laying and let them do the balancing themselves. For feeding and finishing broilers I feed corn meal, moistened with milk. The regular rations are wheat, oats, dry mash and beef scraps. I sell nothing but strictly fresh eggs, as they bring the highest prices. I also sell eggs for hatching. The poultry business is certainly profitable, or can be made so by any man willing to work and study the nature of fowls. It is a business, however, that no man can engage in half-heartedly and win.— N. C. Jorgensen.

Cause of Soft Pork.

A great deal of soft pork may be seen on the market and in farm smoke houses. The kind of feeding was the cause of this, and it could have been prevented by a proper use of proper food materials.

The exclusive use of corn for hogs, especially through the growing period, produces excessive fat and makes soft pork. Cowpeas, soy beans and peanuts make even a softer and oilier meat than does corn. All of these are excellent foods for hogs, but should form only a part of the ration and should be reduced at the close of the fattening period.

Barley is one of the very best feeds for making high-class pork. It is used extensively by the Danes, who have an international reputation as producers of pork. Oats also rank high, but the price in this country is usually prohibitive, except for breeding stock. Skim milk and butter milk fed in combination with grains make ideal hog feed.

Planting Trees.

How many attempts at planting shade or ornamental trees have been failures in whole or in part, and how many times is the tree planter at a loss to understand the cause of his failure? The following discussion by Dr. B. A. Fernow, Dean of the Faculty of Forestry, University of Toronto, will throw much light on this problem, and should assist many who will plant trees next spring or fall:

The first cause of trouble and of death in transplanted trees is not unfrequently to be found in the ignorance and lack of care exhibited before and during transplanting. Many trees set out are dead or are doomed to death before they reach the plant hole. Transplanting a tree from one side to another is a surgical operation during which the patient needs special attention.

FEEDING SYSTEM IMPAIRED.

It is rarely, if at all possible to take up all tne fine rootlets with their root-hairs intact; these adhere closely to the soil particles, hence, in the attempt to remove them, a portion of the feeding apparatus is always mechanically destroyed. Next, the delicate root-hairs, and fibrils are not apt to dry out when exposed to the air, especially in windy, sunny, dry weather, and thus another portion of the feeding apparatus is lost. Lastly, with larger specimens, the far-lying roots can practically not be reached and a third portion of the root system is cut off. Furthermore, if the plant material is shipped any distance, the vital activities are interrupted, temperature and moisture conditions may be unfavorable during transhipment, and a partial drying out of roots, buds or foliage is the consequence.

As a result of these losses, the balance between crown and root, between consumption and supply of water is disturbed, and unless this balance is at once re-establ shed by pruning at the top and by favorable conditions for replacement of lost parts of the root, a part of the crown must die.

HOW TO TRANSPLAET TREES.

This trouble may be nearly or entirely avoided by transplanting with a ball of earth, when the root system is not at all disturbed. This is usually practicable only with small trees; as a rule transplanting is done with the naked roots. Care should then be had to take up as much as practicable of the root system, keeping it intact, using a fork rather than a spade, and keeping in mind that the root tips are the important part, then the roots should be immediately protected against drying out by covering with moist soil, wet bagging, moss, etc., and be kept moist until the tree is reset.

If it has not been possible to secure the entire root system practically intact, then a proportionate amount of the crown system should also be removed by cutting back branches, using at the same time the opportunity for correcting the farm. This pruning is best done before setting the tree, or, more conveniently, at once after setting while the knowledge of the conditions of the root system is still fresh in mind. If it is neglected parts of the crown will die, and these may not be the parts we are willing to spare. It does not matter much if the pruning at the top is more severe than necessary; sparing the knife unduly matters much more.

Nursery stock, when received, should be opened at once in a shady cool place and the root packing examined. If it is dry and hot, the chance of securing a living plant is small. Nevertheless, by proper treatment, plants may sometimes be resubmerged under water may restore will stand a good deal of maltreatment and are able to recover. "Heeling" them in deeply in a trench under shade and in fresh soil, and drenching them thoroughly with water, keeping them drenched for a day or two, or even keeping them entirely submerged und?r water may restore what appeared quite hopeless material. Even if the leaves of contifers have suffered, so long as the buds are still fresh looking, the case is not quite hopeless provided proper care is applied in keeping roots and tips moistl and, especially, if rainy weather sets in.—C. L.

Ophthalemia.

G. B. D.—My sheep have been troubled this winter with sore eyes. The eyes first begin to be watery and then turn red and then white, and look as if they were frozen. Some of the sheep get blind, but all have recovered from it. Would you please answer through the columns of "The Maritime Farmer" what this trouble is, and if it is contagious as it seemed to go through the whole flock. I bought an imported buck last fall, and I thought perhaps that was where they got it, although he did not have the disease.

Ans.—The disease is Ophthalmia or inflammation of the mucous membrane lining the eye lids and covering the eye and finally including the structure of the eye-ball. It is supposed by some practitioners to be contagious, but doubted by others. Generally a whole flock will be affected but they are sdbjected to the same cause, whether it be food or some other cause. It is most prevalent in the fall of the year after a wet season and on pastures where there is stagnant water or swampy ground. It is not often found on high, dry pastures.

Treatment: Remove the animals to shaded, high, dry pastures if attack is during grazing season. If after housing, place in well-ventilated clean pens and do not over crowd. Feed light food, such as well cured hay and some roots—turnips, carrots or mangels— and bathe the eyes once daily with warm water, afterwards applying around and in the eye, a small quantity of an eye lotion made by mixing four drams of Sulphate Zinc; four drams of Laudanum, and one pint of water, or one ounce of Boracic Acid dissolved in one pint of water. I prefer the Zinc and Laudanum solution. With care nearly all cases recover. The animals in pasture require the same attention to the eyes as when housed.—J. Standish, V. S.

Cheaper Chemicals for N. B. Farmers.

Quite a lengthy discussion followed the introduction of the resolution introduced by A. C. Fawcett before the recent N. B. F. & D. A. at Fredericton, in which the Government was asked to take steps to procure for the farmers of the Province, at first cost, the necessary chemicals for the home mixing of fertilizers.

Mr. Fawcett had a good grasp of the situation and showed how farmers were unwittingly paying exhorbitant prices for fertilizing elements, which were frequently obtained from sources which were not immediately avaifable for plant food. To obviate this he pointed out that the home mixing of fertilizers was the only solution.

The propaganda inaugurated some years by the German Kali Works has to a large extent been responsible for awakened thought in the direction of cutting down fertilizer bills.

Mr. Fawcett also stated prices quoted by the Cross Fertilizer Co., of Sydney. Their basic slag delivered at Sackville for $11.00 was considered to be a fairly reasonable figure.

Messrs. Ashley George, Upper Sackville and R. G. Murray, St. John, followed Mr. Fawcett in favor of the argument and when the question was brought down for the final vote, there was not a dissenting voice.

About the Farm.

Don't be a "near knocker." Be a booster. Every one knows what a booster is.

If nuts work loose in machinery bolts try daubing the bolt threads with varnish.

You can't run away from little difficulties. You must fight them or go under. So when you meet them don't back up but get them out of the very

The elevator to success is generally crowded. Better try the stairs.

When raking the lawn with the iron rake try putting a piece of cob on each two outside teeth of rake to regulate depth.

It will pay the landlord nine times out of ten to purchase a good manure spreader for his tenant. In many cases, where a long time lease is in vogue, it will prove profitable for a tenant to get a manure spreader. Why would it not be a good plan for the two parties to the contract to divide the expense?

The broad-tired, low wagon on the farm comes in handy in hauling stones, earth and stumps, as well as hauling implements back and forth on the farm, seeds in sacks, potatoes in sacks, barrels of apples, lumber, poles, wood, fence posts and wire husked or snapped corn, corn fodder, etc. There is no limit to its use. It is convenient and saves much labor on the farm. Aside from it being a labor saving device, it assists in road making instead of road rutting.

Sanitary Remodeling of Dairy Barns.

(Continu?d from page 341)

It is difficult to induce dairymen to discard or change the unsanitary plank flooring that is commonly found. Rotted by continual soaking from liquid manure, and often having cracks which allow bad odors to rise, these floors are not conducive to sanitary milk production.

Wooden floors must be constructed carefully in order to be satisfactory and a good absorbent must be used.

Under most conditions concrete is the best material for flooring, and it is certainly the most durable and the most sanitary in the long run, and therefore the most economical. Many mistakes have been made in dairy barns and in creameries by improper mixture of sand, cement and gravel,

Fig 8 Cement Manger.

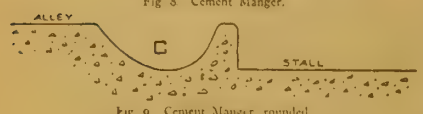


Fig 9 Cement Manger, rounded

Floor and Gutter.

and in improperly prepared foundation and slant for the floor. A fairly rich mixture makes the best cement floor, one part cement and two of sand for a top dressing. To make a good Grout or body, 1 part Portland cement to 2½ parts screened sand and 5 parts gravel or crushed rock, should be the proportion of mixture. While doing concrete work in hot weather, the pile of crushed rock should be thoroughly wet.

The floor must be graded or sloped, so that water will not collect on it and so that manure washings may be caught and run by means of gutters made in the floor.

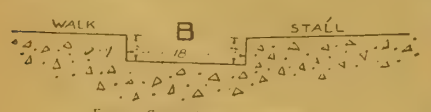


Fig 10 Cement Gutter, for common use

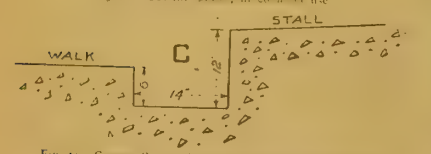


Fig 11 Cement Gutter, for large animals in common use.

Gutters behind the cows vary in depth from 4 inches to 12 inches, and in width from 14 inches to 18 inches. The gutter should allow the droppings to gather below and back of the animals when reclining. Often a movable crossbar is used, on the rear floor, to keep the animal ahead in the stall when lying down. Iron gratings in the floor for drainage of liquid manure are often found, but frequently teats are pinched in this way. When a good absorbent is used, no gratings are needed.

MANURE DISPOSAL.

Losses in the value of manure occur chiefly in three ways:

1. By escape of the liquid portion through barn floors for want of a proper absorbent.

2. By heating and fermentation due to being heaped for long periods at a time.

3. By leaching and drainage due to exposure to sun, wind and rain.

When a farmer understands that about 75 per cent of the fertilizing elements fed to the cow is left in the manure, he will realize that he can reduce his fertilizer expense and improve the physical condition of his soil by properly caring for and applying that manure.

It has been estimated that manure from ten cows for six months has a fertilizer value of $185.97. This does not include its value for adding humus to the soil, a factor not present in commercial fertilizers.

Under experiments in Maryland it was found that 80 tons of manure cared for in the average manner, lost 53 tons in weight alone in one year. That much nitrogen and other valuable fertilizing material are lost from improper care of manure on our Maine farms is very evident.

The common way of disposing of manure on our average farm is to push it through the barn floor or to pitch it out of an opening back of the animals.

The objection to the through-the-floor method is that it is allowed to accumulate too long, resulting in bad odors rising into the stable due to lack of ventilation beneath. Even with a concrete manure pit beneath the barn, odors rise because of improper ventilation.

If room enough can be made beneath the barn to allow a dump cart to be backed beneath the scuttle hole and when filled hauled to some field or manure pit, there is no doubt but that more sanitary milk and better crops would result. No man relishes the task of removing manure from a stuffy barn cellar in the spring of the year when a small amount removed once or twice a week would be sufficient.

The objections to pitching the manure out back of the cows are that much of its value is lost by leaching and that it becomes unsightly and rots away posts and woodwork. As a breeding place for flies, gnats and cutworms the manure heap is ideal.

The following cut shows a common condition,—lack of light and ventilation, and improper disposal of manure.

Fig. 12. Slack conditions on dairy farm

The farmer of the future must learn the value of caring for the manure. The overhead track litter and manure carriers are being installed in many barns because of their saving labor and comparative cheapness. The track usually conveys the tub to a waiting dump cart or to a manure pit away from the stable where it belongs.

These carriers are within reach of many who have not cared to investigate for fear of high prices but they are worthy of more attention as a means of economy to the busy dairyman.

STABLE YARD.

That the stable yard has a big influence on the production of clean milk is a fact entirely disregarded on many farms. It is not uncommon to find an otherwise sanitary milk farm with a poorly drained yard with perhaps the manure pile as a source of drain.

As the cattle gather here before entering the barn to be milked, it is essential that they be kept out of the mud and filth so that their udders and bellies will not become soiled. The time and labor saved in keeping cows clean and the lack of fine sediment in the milk will be very noticeable with a clean stable yard.

In order for it to be clean, no ma-

An Object of Pity

That part of our nature which we call the emotional is much more highly developed in women than in men. They are more sensitive, more tender, more sympathetic, more pronounced in their likes and dislikes, more susceptible to the extremes of pleasure and pain; and these refined mental qualities, no less than beauty of form and feature, make up the atmosphere of attractiveness and charm which always surrounds true womanliness.

The continued existence of these winning, engaging womanly characteristics depends to a very large extent on the regularity of the womanly functions and the condition of the womanly organs; and when these functions and organs become disordered or diseased the same mental qualities which are the glory of a well woman become the source of suffering and torture almost indescribable. Her cheery hopefulness is changed to a feeling of despondency, almost of despair, and she is haunted with forebodings of worse evils to come. Instead of being entertaining and companionable, she becomes moody and irritable, being unable to keep her mind from dwelling on her troubles. She becomes morbidly sensitive, imagining that she is being slighted or foresaken by her relatives and friends and she has a most humiliating sense of her miserable condition and of her loss of her womanly attributes. If she is religiously inclined she is very liable to be oppressed with doubts and fears in regard to her spiritual condition, or to think that she is eternally lost. In addition to this, she has also to endure the most distressing aches and pains.

What makes the case still more pitiable, especially with married women, is the fact that few men understand or appreciate the extent of their suffering, or the seriousness of the troubles causing it. Many doctors even speak of these disorders as subjects for ridicule, and the poor sufferer often gets a reputation for being a crank or a scold when she more nearly approaches being a martyr.

As these disorders are due to a disordered condition of the womanly organs, it is evident that to effect a cure these organs must be restored to normal condition; or, in other words, the circulation, which has become congested and stagnant in these parts, must be improved so that the waste matter will be expelled, and the nourishment so badly needed be brought to these suffering organs. It is the waste matter, or broken down tissue, which is held in the stagnant blood vessels in these parts, that causes most of the suffering by oppressing the nerves located in these parts.

The remedy known as ORANGE LILY will positively relieve this congestion and restore normal circulation in the disordered organs. It is an applied or local treatment, and acts wholly on these parts. It is absorbed into the blood vessels in these organs, and as it has powerful antiseptic properties, it immediately acts on the waste matter held there, and causes it to be discharged. As this dead matter is discharged the nerves are relieved, the pains and mental troubles become less, and the nerves and blood vessels become stronger. ORANGE LILY thus proves its merit by actual, visible results. It acts as certainly and as positively on all female troubles as anti-toxin does on diphtheria.

Winnipeg, April 28th, 1909.

Dear Mrs. Currah,—I am very grateful to ORANGE LILY for the change it has made in my life. When I commenced its use eight months ago I felt I would be surely insane before the year was ended. The pain I suffered often made me wish for death, and besides I would have such fits of depression and nervous twitching that I would have to scream. I had doctored with three different doctors for over two years, and had also used both the Pierce and Pinkham medicines, but none of them seemed to reach my case. I felt some improvement after the first month's use of ORANGE LILY and have kept gaining ever since. I do not feel that I am entirely cured yet, but I am so much better than I was that I am sure I will soon be entirely well. I sleep well, and feel cheerful and happy, except that I am occasionally somewhat depressed, but these spells are getting fewer and milder. I have also noticeably improved in appearance. Enclosed find $3 for which please send me two boxes of ORANGE LILY and one of Cerate Massage. I might add that the matter which used to be freely discharged, and which looked like a chicken's gizzard, is becoming very scant, and I imagine that the circulation is pretty well restored. Am I not right in this? Your sincere friend, MRS. L. E. A.

Free to all Sufferers

In order to enable every woman suffering from any form of female disorders to test the merits of ORANGE LILY, I will send to everyone who will send me her address, or the address of any suffering friend enough of the remedy for ten days' treatment, absolutely free. As this is worth 35c. it is only because I know that it must give relief that I make this free trial offer. Further, if any woman wishes expert medical advice, and will write me a full description of her case, I will submit same to the staff of the Coonley Medical Institute, Detroit, Mich., and they will write her direct without expense to her. INCLOSE THREE 2-CENT STAMPS and address MRS. FRANCES E. CURRAH, WINDSOR, ONT. 2

For Sale By Leading Druggists Everywhere.

nure should be allowed to accumulate against or near the barn. The yard should be graded to slope gently from the barn and should be covered with gravel or cinders suffiiciently deep to form a hard surface.

The practice of allowing swine to wallow in the dressing beneath or near the stable is detrimental to sanitary milk production. This may be a good way to keep and feed swine but from the numerous cases of hog cholera there is occasion for a big doubt. However, these conditions are adverse to sanitary milk as odors from a swine pen nearer than two hundred feet to a dairy room where milk is exposed are undesirable.

In some cases where reconstruction is planned the keeping of horses in a different room from the cow stable should be considered, as stable air for cows is contaminated by the presence of other animals. The practice of using horse dressing as an absorbent for liquid cow manure is very unsanitary, yet some dairymen seek to produce clean untainted milk under these conditions. It would seem as if they were endeavoring to abolish one evil by introducing another, and when the first is a problem in itself, why introduce the second? Horse manure may be a good economical absorbent but it has no place in a dairy barn where milk is being drawn and should be substituted at once with plenty of dry sawdust, shavings, leaves or straw.

CONCLUSION.

The problem of securing clean milk is necessarily one of reducing contamination from all outside sources to the least possible factor. Milk properly drawn, from healthy cows, in clean surroundings, handled and delivered in a sanitary manner is free from harmful bacteria and is ideal as a food.

Dirt must be kept out of the milk as neither straining nor clarifying will remove it or the bacteria it contains.

A dairyman must not be misled with the idea that new sanitary changes and equipment mean sanitary milk in themselves. The character of the output depends upon the man himself rather than upon his equipment.

Sanitary remodeling is of course an individual problem on most farms but the preceeding general principles and suggestions may be of assistance to some.

Muck as a Fertilizer.

A top-dressing of muck on upland soils should prove helpful in a number of ways. Whether the soil be light or heavy, the incorporating of muck should increase its moisture-holding capacity. If the soil is heavy the presence of the muck should improve its ventilation materially.

The presence of the muck in any upland soil will darken its color, and thus increase the capacity to gather the heat or the sunshine. The temperature of the soil is thus raised. In sunshiny weather during the heated portion of the day, such a soil is likely to be several degrees warmer than one in which no muck has been incorporated.

The fertilizing value of muck is variable. The total content of the nitrogen of muck soil may range from 5 per cent. to 4 per cent. It is a notable fact that the nitrogen of muck soils is not so readily available as the nitrogen of the organic matter of upland soils. Nevertheless its presence, even in quantities such as would be applied to the top-dressing referred to, should prove helpful from the fertilizing standpoint. In a large number of determinations which I have made, it was invariably found that the per cent of nitric nitrogen in muck sails was much higher than in the best upland soils. Nitric nitrogen is the form in which plants most largely use nitrogen.

If the sparse vegitation on this muck is due to improper drainage, that fact should make little difference in the value of the application of the muck to the upland soils. In some cases areas of muck are found upon which no vegetation will grow because of the presence of some undesirable substance.—Michigan Agricultural College. J. A. Jeffery.

This is the season of the year when mothers feel very much concerned over the frequent colds contracted by their chilhren, and have abundant reason for it as every cold weakens the lungs, lowers the vitality and paves the way for the more serious diseases that so often follow. Chamberlain's Cough Remedy is famous for its cures, and is pleasant and safe to take. For sale by all dealers.

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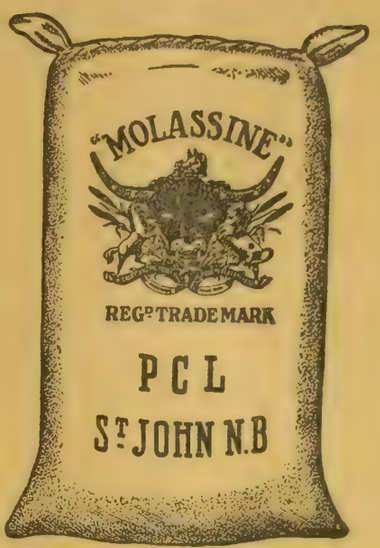
Send to the Department of Inland Revenue, Ottawa, and ask for Bulletin No. 241 on Registered Stock Foods. It will be sent you FREE of all costs. In this Bulletin you will find the analysis of the different livestock preparations. You will also find that MOLASSINE MEAL, referred to on pages 6, 7, 12 and 13, is found to be 50% above the guarantee in protides and fat—and below its allowance of fibre or waste matter.



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FOR SALE—Pure bred Shorthorn, males and females, all ages. GUY DIXON. Point deBute, N. B.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Four Ayrshire bulls, five to eleven months old from good producing stock. JOHN F. FROST, Hampton, N. B.

FOR SALE—Clydesdale stallion 3 1-2 years old weighs 1600 lbs. sired by the renowned Charming Lad. PETER FERGUSON, Graham Road, P.E.I.

FOR SALE—Two yearling pure bred Guernsey Bulls from good size stock. T. D. BLAIKIE, Great Village, N. S.

FOR SALE.—A handsome Jersey Bull, 11 mos. old, both sire and dam imported from United States.—R. H. BYERS, Harvey, York Co., N. B

FOR SALE.—One pure bred Shorthorn bull, eighteen months old, color red, good size. Apply to C. H. RIPLEY, Rossendale, Cum. Co., N S.

FOR SALE—One Holstein bull, twenty-one months. Four Ayrshire bulls from nine to fifteen months. JOHN A. HUGHES, Petitcodiac, N B.

RICHLY BRED AYRSHIRE BULL, three, four and ten months old for sale cheap. For particulars apply to T. J. HAWKINS, Landon, P. O., Col. Co., N. S.

CHOICE WHITE ORPINGTON COCKERELS $3.00 to $5.00 each. (Philo Strain direct) May hatched. Capt. C. W. GILLIATT, Freemason's Home, Windsor, N. S.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R. J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

GUERNSEYS FOR SALE—1 yearling bull, and 4 between the ages of 4 and 10 months, all very fine animals. WILLIAM COX & SON, Canard, N. S.

FOR SALE.—One Standard bred stallion, three years old, weight 1000 lbs. Broken to drive and to sire, attractive to look at and speedy with good disposition.—E. R. STRANG, Port Clyde, Shel. Co., N. S.

VALLEY FARM HOLSTEINS FOR SALE—Two pure bred Bull calves dropped in April 1912 1 bull calf dropped in October from good producing stock. W. G. CAMPBELL, Salisbury, N. B.

WANTED—Ladies to do plain and light sewing at home; whole or spare time; good pay; work sent any distance; charges paid. Send stamps for full particulars. — NATIONAL MANUFACTURING COMPANY, Montreal.

ENGINES for all purposes such as pumping water, spraying, wood sawing, motor boats, etc. Cut out the drudgery and let the engines do the work.—GUARANTEE MOTOR CO., 371 Bay N, Hamilton, Ont.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

25,000 RODS WIRE FENCING FOR SALE.—at 25 p.c. to 40 p.c. cheaper than elsewhere, new, all No. 9 galvanized steel wire, list and prices free, also belting, pipe, etc. IMPERIAL METAL Co,, Queen Street, Montreal.

CHIPMAN BLACK FOX COMPANY, Limited, are offering shares at $100.00 snap. We have one yearling female bear at $25.00. Our R. I. Reds paid $1.52 profit in 1912 Eggs 75c for 13. Box 54, Chipman, N. B.

SAMPLE ENGINES AT SPECIAL PRICES.—1 1-2, 3 1-2 and 6 H. P. sizes. They have been only slightly used. They will be adjusted and in perfect condition and just like new before leaving our factory. Prices and further particulars on request.—THE PAGE WIRE FENCE COMPANY LIMITED, Walkerville, Ont.

BELTING FOR SALE—500,000 feet, all kinds and sizes. New and second hand. Also 500,000 iron pipe. All sizes, good as new for water, steam-heating, greenhouses. construction, fencing posts, etc. Also enormous stock of wire fencing, gates, pulleys, cable, rails, new roofing, saws, vises, forges, all at 25 p.c. to 75 p.c. less than regular value. Catalogue on request. IMPERIAL WASTE & METAL CO., 5 Queen St., Montreal.

FOR SALE—Pure bred and grade Shorthorns of good milking qualities along with good beef type. Males and females all ages. Also extra well bred grade Clydesdale mare six years old bred to foal in June after an extra good pure Clydesdale stallion. Also her seven months old filly sired by same horse which she is in foal after at present. This stock is extra large and perfectly sound. LAURIE M. ANDERSON, Sackville, N. B.

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Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

Holstein Bulls For Sale

We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

Price if taken before April 1st, $40.00

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
Loch Lomond West **Nova Scotia**

SPRINGVALE FARM AYRSHIRES

Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd. A few bull calves and yearling heifers for sale.

FRED S. BLACK, Amherst, N. S.

IF THE FARMERS IN THE MARITIME PROVINCES

will mail one cent post card, they will receive valuable information by return mail.

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Blue Bell View Farm offers for sale; one pure bred Holstein bull, 12 months old, also some nice S. C. Rhode Island Red Cockerels from good laying strain.

Price of bull $80; Cockerels $1.50 each f. o. b.

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We offer at present a few young heifers and bulls, as well as three cows, all bred in the purple.

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A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

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We have the type that gives best profit. Write your wants to

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Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

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offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

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A cent spent now may be the means of saving you three calves next fall. Send your name and address for free sample of Ear Tag and circular. It is no trouble and you can then judge for yourself. Write to-day

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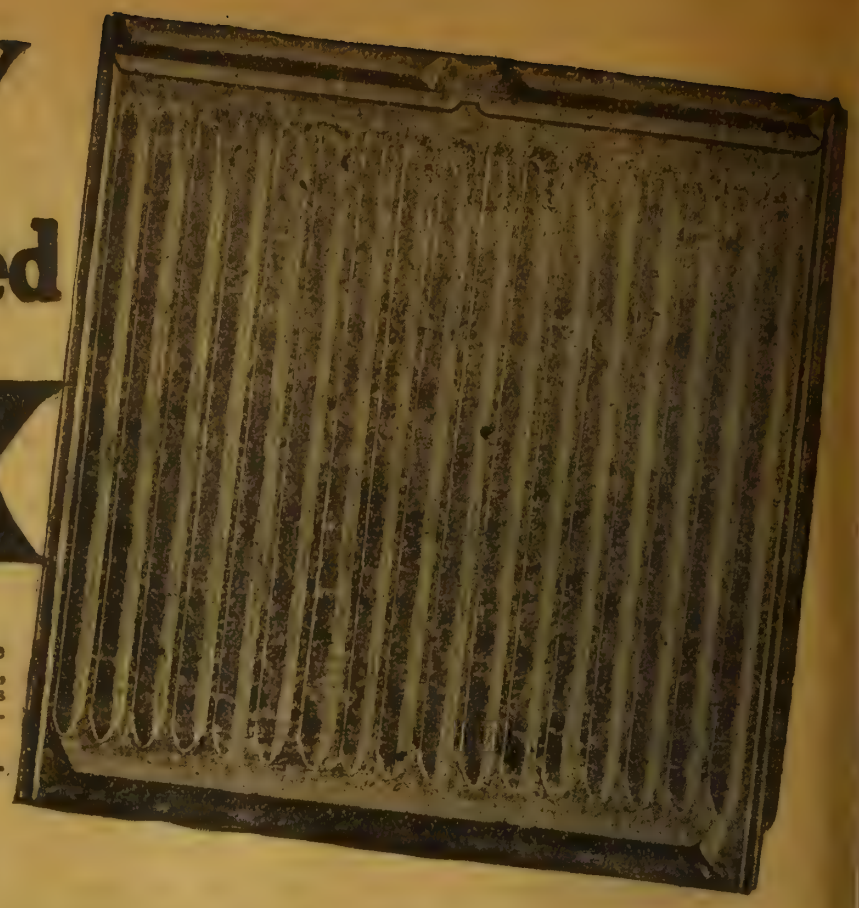

"I HAVE just gotten out this new, big shingle for barns in 24 x 24 inch size. My son, the late Geo. H. Pedlar, Jr., invented it. It saves immense labor, and makes a fire-proof, lightning-proof barn roof, at about the cost of cedar shingle. It needs neither paint nor repairs. You can get it from any of my branch offices."

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"I HAVE been making metal shingles for two generations to give farmers barn roofs that would not burn or leak. I put improvements into my shingle, year by year. Today my 'Oshawa' 16 x 20 inch shingle is sold all over the world, from Arctics to Tropics. It is made in metal that will last 100 years, and that it took me fifty years to find."

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"I want to save you this money. You not only save money on your barn roof, but you make your roof fire-proof, perfect, clean and avoid repairs or leakage or paint cost for the future. Get my new big 'George' Shingle."

"I want you to go still further in saving money and getting a better barn. Instead of wood siding, put my 'Perfect Galvanized Corrugated Iron' on your barn walls. Because it is in big sheets, labor time and cost is saved to more than pay the difference between good lumber for siding and my iron, as siding."

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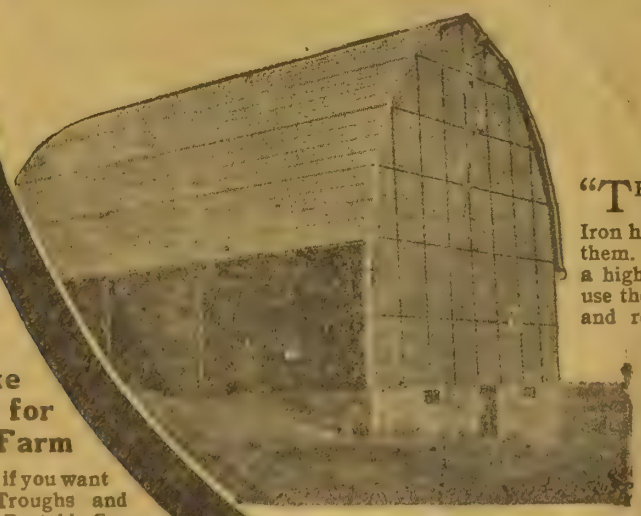

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Vol. 18. SUSSEX, N. B., MARCH 11, 1913 No. 11

A "Cockshutt" Drill Makes a Bumper Harvest

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You sow in rows six inches apart. This means you get three to five extra bushels, just by using a Cockshutt drill. Remember this is profit. These extra bushels are found money for every acre you seed with a Cockshutt.

Plan right now for a new seeder—write us a letter asking for details. Remember, this means $50 to $100 of extra profit for you for years to come.

SEND US A POSTAL!

Write us a card. Say "I want more information on Cockshutt drills." This does not obligate you to buy. It will get you facts about the Cockshutt—show you how perfectly designed it is. This is one of the lightest draft drills on the market. That alone ought to give it the preference. But when you consider its effectiveness—the harvest it brings you, the crop it protects, the early spring growth it insures, the Cockshutt Seeder is THE DRILL. Write that card to us to-day, please. Now is the time to investigate.

THE Cockshutt Drill is made with a strong I-beam frame that keeps all discs at the same height. It is carried on wide-tire wheels revolving on short axles with renewable bushings. The draft is always light. The discs are self-cleaning. They drop trash automatically. The boots cannot clog with mud. The discs sre self-oiling. The feed won't smash, break or bruise the kernels--is always accurate.

Your Crop Needs a "Square Deal"

The Cockshutt Feed gives you perfect control of the seeder. The feed is always just right for your land. The "I"-beam keeps your drills up, without sagging. This means that you sow just enough seed at just the right depth for a quick start. You get prompt, early, even growth—half the battle for a big harvest.

KEEP YOUR TEAM GOING

The Cockshutt disc "draws away" from the trouble-proof grain boot. As trash rises on a disc, it simply falls off, instead of wedging. This keeps your drills running steadily. You have no stops. You sow without an hour's delay from the day you start seeding till you are done. This means big money saved in wages, and full advantage of spring growth.

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"Listen, Rose."
Bud reads:
"Madam, your own white hands are the *first* to touch FIVE ROSES.
"For nearly one mile it travels through "hygienic *automatic* processes—more "and *more* spotless.
"Till in a clear *creamy* stream it flows into "clean *new* packages, filled *full-weight* by "infallible machinery—sewed automatically."
"Goodness!" said round-eyed Rose.
Bud reads eagerly:
"Hand-proof, *germ-proof*. Every littlest "bit of machinery is bright—polished like "those piano keys of yours. FIVE ROSES is "healthy flour, wholesome, *none* like it. "*Unbleached*, too."
"Nobody touches *my* flour—but me" said Rose.
Imagine such *purity*—get FIVE ROSES.

Five Roses Flour

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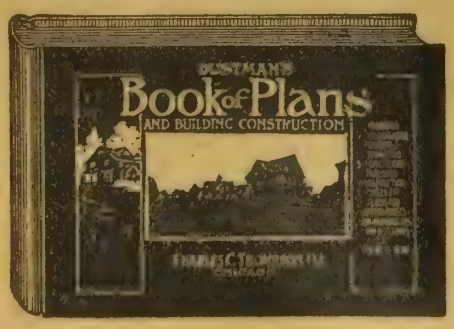

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EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

We do not sell these burners but each subscriber may get two beside one we furnish free by sending 35 cents for each additional one wanted.

OUR VALUES

are summed up briefly under the following captions:

Style and Quality

Our goods are made to suit you no matter what your occupation may be or what they are needed for.

We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited

HALIFAX, N. S.

Put in a BT MANURE CARRIER for the SPRING

YOUR cows will be in the barn for two months more—and its slow, heavy work *wheeling* the manure through the muddy yard. A BT Manure Carrier will do the work in *half* the time and without *any* hard work on your part. You can load it, run it out, and dump it on the pile or into the spreader *in a jiffy*—half-a-ton of manure at a time—one big load cleans your stable. It's easy to get the manure *rods* away from the barn for the level overhead track is not affected by any condition of the yard.

NOW IS THE TIME TO INSTALL A BT MANURE CARRIER. It will save you enough time and enough tedious work in the spring months alone to almost pay for itself. Mail the coupon to-day for our Catalog and investigate

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If you will put in a BT Manure Carrier *now*, we will give you our best cash price, and make it payable in the fall. This offer gives you three months' use of the BT Carrier, without costing you anything. The spring is your busy time. Get a BT Manure Carrier to help you with your chores—get it now on easy fall terms.

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Tell us number of feet of track you will require, and we'll send catalogs and full information by return mail. Address

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Please send me your Catalogue on Manure Carriers by return mail.

I will need ..... feet of track

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P. O. .....

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SEE AND TRY A DE LAVAL CREAM SEPARATOR

Be Your Own Judge

We cannot believe that there is a sensible man living who would purchase any other than a De Laval Cream Separator for his own use if he would but SEE and TRY an improved DE LAVAL machine before buying.

It is a fact that 99% of all separator buyers who do SEE and TRY a DE LAVAL machine before buying purchase the DE LAVAL and will have no other separator. The 1% who do not buy the DE LAVAL are those who allow themselves to be influenced by something other than real genuine separator merit.

Every responsible person who wishes it may have the Free Trial of a DE LAVAL machine at his own home without advance payment or any obligation whatsoever. Simply ask the DE LAVAL agent in your nearest town or write direct to the nearest DE LAVAL office.

DE LAVAL DAIRY SUPPLY CO., LIMITED

173 William St., MONTREAL 128 James St., WINNIPEG

Silage Would Increase Your Dairy Profits

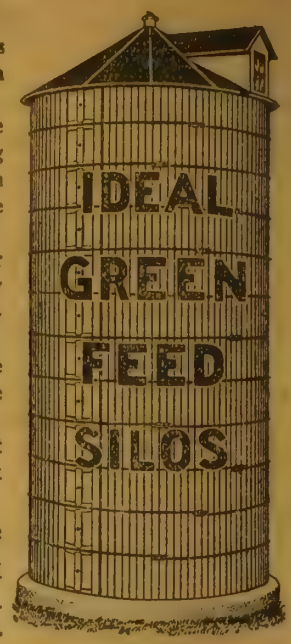
This winter weather, when dry feeding is reducing your dairy out-put, don't you often wish that you had erected a silo last summer?

If you had done so you would right now be feeding your cows succulent and milk-producing silage, just as good a milk-producing food as green summer pasturage, and getting a good deal more milk and making more profit out of your dairy.

All successful dairy men now-a-days consider a good silo a very necessary part of their dairy equipment and there is no question but that feeding silage greatly increases the milk flow.

If you haven't a silo perhaps you have made up your mind that this is the last year you are going to get along without one.

If so, don't put off ordering it until late next summer and perhaps find yourself in the same fix next year.



Write to-day for 48 page Ideal Green Feed Silo Book

This book contains much interesting and valuable information about silos, silage and silage feeding, and even if you are not yet ready to buy, you will find the book interesting and instructive.

More than twice as many Ideal Green Feed Silos were sold last year than in any previous year. If you keep cows you need a Silo. Full specifications are given in the Silo book. Be sure to write for it.

We are exclusive distributers in Canada of the World's Standard De Laval Cream Separators, and also carry a complete line of creamery and dairy machinery and supplies. If interested write for separate catalogs.

DE LAVAL DAIRY SUPPLY CO., Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA

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"Ideal" Gas and Gasoline Engines

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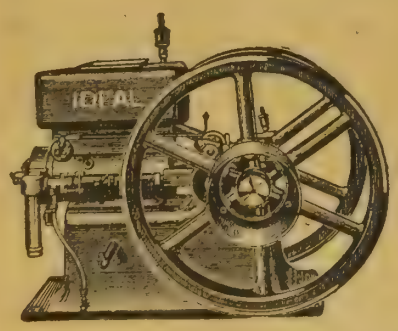

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We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

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A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

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SPRAMOTORS

That's ***the big reason*** why you only hear of ***Spramotors*** and ordinary spraying outfits now-a-days. The ***supremacy*** of the ***Spramotor*** in every class is unquestionable. It would be marvellous if we couldn't produce ***more efficient, economical and durable*** machines than our competitors—since they look on the manufacture of spraying outfits as a ***side*** line. —while we have ***concentrated our capital, energies*** and ***brains*** on the ***perfecting*** of ***Spramotors*** for seventeen years.

It does not matter what your spraying needs may be there's a ***Spramotor specifically built*** for ***your purpose***—a machine that ***will do more*** and ***better*** work than any other spraying outfit in its class—a machine that will give you ***endless satisfaction*** because ***it is built to endure.***

Hundreds of farmers have proven the H.P. Spramotor (see cut) to be a very profitable investment. The horse does everything but direct the nozzles. This machine can be operated by hand where preferred. Has 8 nozzles that cannot clog—the number can be arranged to suit requirements. Prices range from $6.00 to $350.00. Equally effective for vineyards, row crops, or grain work.

State requirements and we will forward interesting facts without placing you under obligation to buy.

SPRAMOTOR COMPANY

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THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 18. SUSSEX, NEW BRUNSWICK, MARCH 11, 1913. Number 11.

The Beneficial Effects of Drainage.

An Addrrss by D. C. J. Lynde, McDonald College, Before the Recent N. B. F- &. D. A., Fredericton, N. B.

AS the president has said, I am to speak to you to-night on drainage, and I should like to introduce my talk by giving you extracts from Bulletin 174 of Ontario Department of Agriculture. In 1906 the Ontario Agricultural College, with the aid of the Provincial Government, offered to make free drainage surveys for the farmers of Ontario. This offer has been made and widely accepted every year since.

In 1909 Prof. H. H. Day, who had this work in charge, wrote to a number of the farmers for whom surveys had been made, and asked them to state what the returns has been in crops. These replies were published in Bulletin 174. I give you a few.

QUOTATIONS FROM REPORTS BY MEN WHO HAVE DRAINED.

William Bell, Washago, Simcoe: "I drained eight acres you surveyed for me in 1907. It had produced nothing previously. Last year I grew a fairly good crop of oats on it, which yielded 33 bushels per acre. Following is a statement of outlay and results:

Cost of draining 8 acres, $290.90—$35.11 per acre, including a 6 inch main to drain other land as well as this.

Returns—33 bushels oats at 45 cents—$118.80, nearly half cost of drainage, and straw yet to be accounted."

T. S. Biggar, Manager, Walker Sons, Walkerville, Essex: "On our drained land this year, 1909, we had 80 bushels of shelled corn per acre, while the undrained gave us only 56 bushels. Of oats we had 66 bushels on drained and 37 on undrained. In 1908 the drained land gave us twice as much as the undrained. We have tiled 87 acres this year, and purpose tiling much more next year."

J. H. Clare, Chapman, Hastings: "Fields that previously were unfit for crops at all can now be seeded on even date with high land; and, while before they grew nothing but coarse grass, now they yield per acre:

Hay—2 to 3 tons. Oats—40 to 100 bushels.

Barley—30 to 50 bushels. Corn—14 feet high."

James Clayton, Cedar Springs, Kent: "In 1901 I drained 8 acres at a cost of $112 or $14 per acre; 8 acres right across the fence was not drained. In 1902 both fields were sowed to beans; 8 acres drained land gave 302 bushels, which sold for $456; 8 acres undrained land gave 24 bushels, which sold for $37.

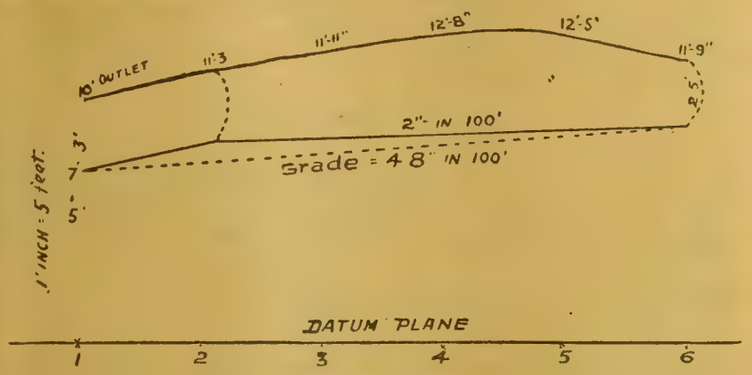
"Gain, $419, nearly four times the cost of drainage.

Author's Note: This example shows the value of underdrainage in specialized agriculture.

"In 1903 both fields grew fall wheat. Eight acres drained land gave 45 bushels per acres; 8 acres undrained land gave 25 bushels per acre. Gain, 20 bushels of wheat per acre. 1904—There was drained land on botg sides of that fence."

W. J. Cohoe, New Durham, Brant: "About two-thirds of the oat field was drained last fall, and this went in in good condition, April 30th. The rest of the field is porous soil, but rather level and higher than the drained part, and we sowed it three weeks later; and I must say it was not really fit then, but, anxious to get it sowed, we 'mudded it in.'"

Nathan Day, Powles' Corners, Victoria: "I drained a 10-acre field some fifteen years ago, at a total cost of $145 or $14.50 an acre, the drains being four rods apart and two and a half feet deep. It was a muck soil, from a foot to a foot and a half deep, underlaid with a heavy clay. Before draining it was the wettest field on the farm, and would grow only hay and oats, and never more than a half crop of them, and often not that, and was never sowed before June. Since draining it is the second driest field we have, and will grow a full crop of anything that can be grown on the high land on the farm. It has been sowed in April every year but one since it was drained. The drains paid for themselves in two years. If I were draining this field again I would put a drain every two rods, for the crops are always better right over the drains than halfway between."



Drainage Plan

F. W. Huntley, Sutton, York: "We drained part of the land surveyed, and this year a fine crop of fall wheat is growing on land that formerly was counted too wet for anything but meadow."

William Lamb, Brantford, Brant: "I think underdraining the best investment I can make on my farm."

Joseph Lapp, Cedar Grove, York: "I drained five acres, with drains 120 feet apart (110 rods on five acres). Drained another field, with drains 30 feet apart and 3 feet deep. In each case the gain in the first crop paid the full cost of the drainage.

"My general conclusion is this: Where drainage is at all required, its entire cost will be repaid by the increase in the first two crops, but in most cases by the increase in the first crop alone. Our own experience is the latter."

A. Leach, Farm Manager for W. F. Maclean, M. P., Donlands, York: "The cedar swamp field south of the barn, which you surveyed, and which, as you will remember, was so wet, even in the driest part of the summer, that one could not walk on it without getting wet, was drained last fall; and this year, in spite of the heavy rains which delayed all spring farming operations, it was the driest field we had when we came to cultivate it, although much of our land is high and rolling. The crop sowed on it is coming on fine, and gives every indication of good, stiff strong growth."

James Marshall, Hamilton, Wentworth: "In fifteen years I have put in over twenty miles of drains on my farm, and my only regret is that I have not used more of my spare time and attention to complete the underdraining and bring the whole farm into a better state of cultivation. In 1897 I drained a 12-acre field, at a cost of $460, almost $40 an acre, drains being 25 to 30 feet apart and 3 feet deep. The next year this field yielded 80 bushels of oats per acre, while the adjoining field of similar soil, but not drained, yielded only 45 bushels per acre, thus gaining 35 bushels of oats per acre by drainage."

Author's note: Price of oats by to-day's paper, 44 cents. Value of 35 bushels at 44 cents, $15.40, considerably more than one-third price of drainage, and the increase of straw yet to be counted.

"Another year I got the following results; 35 bushels wheat on drained; 25 bushels on undrained, thus gaining 20 bushels."

Author's note: Wheat to-day, price $1. Value of 20 bushels, $20, over half cost of drainage, and straw yet to be accounted.

R. H. McCurdy, Vienna, Elgin: "Last fall I drained two acres that formerly would grow nothing. They were low spots in a field. Cost $17.50 an acre. This year I had 30 bushels of fall wheat per acre on them while the higher land gave only 15 bushels. The drains more than paid for themselves with this one crop. The whole 30 bushels was gain, as those spots would grow nothing before."

Author's note: Value of 30 bushels at to-day's market price, $30.

John McIntaggert, Brechin, Ont.: "Last fall I drained the lowest of the land you surveyed, putting in over 500 rods of tile drains. Other years I was unable to work on it till the last of seeding, but this year it was the first ground I could work on, and was all of a month ahead of high land."

These replies go to show that the farmers of Ontario consider underdrainage a good investment.

I have had charge of the drainage survey work at Macdonald College for the last four years. During that time I have met many farmers who were interested in drainage, and they have asked me many questions. For my talk to-night I have made a list of the questions most frequently asked, and I shall answer them to the best of my ability. I believe that this is the best way in which I can answer the questions which you probably have in mind, and which you would ask if we had the time to talk it over man to man.

These questions and their answers are as follows:

Why should I underdrain my farm?

(Continued on page 381)

Busy Ayrshires on Springvale Farm Near Amherst

Tried and Proved in the Dairy Test

About three miles from the town of Amherst is located Fred. S. Black's Springvale Farm. Mr. Black is nothing if he is not a lover of good stock and his farm is the home of a busy herd of Ayrshire cattle, Clydesdale horses and a splendid flock of Oxford Down sheep. To shorten the distance between the farm and the town Mr. Black believes his trappy roadster, in whose veins is found a strong dash of Thoroughbred blood more than saves the price of his keep by saving steps for his heavy farm teams besides the extra satisfaction of being able to cover the distance in a much shorter time.

Among the most phenomenal winnings in the 1912 dairy test at the Maritime Winter Fair, was a trio of the Springvale Farm Ayrshires. It was no mean honor for one breeder to capture first prizes in three sections.

The trio depicted on this page carried off these honors for their owner with the following records:—

Neta of Springvale, aged 48 months, averaged 53.5 pounds of milk per day testing 4.1 per cent. butter fat and winding up with a total score of 206.18.

Rosalind of Springvale, age 36 months, first lactation period milk average per day 42 pounds testing 4.2 per cent butter fat and a total score of 166.61.

Pinafore 4th, of Springvale, age 28 months, average production during eral high testing show cows that test, 37 pounds of 3.7 per cent. milk and totalling a score of 133.42.

The Springvale herd was started in 1895 and exhibited for the first time in St. John, N. B., in the fall of 1896. Since then Mr. Black has been quite successful as a breeder and fit- of dairy stock. We have in mind sev- have gone forth from the Springvale herd and that changed hands on several occasions at handsome prices.

While attending the 1896 St. John exhibition. Mr. Black met Mr. Robert Robertson, who later became and still is Superintendent of the Experimental Farm at Nappan, N. S. Mr. Robinson was exhibiting his choice Ayrshire herd, and from him the two-weeks old bull calf, Matchless II was bought to become the future herd header on the Spriogvale Farm. Fifty dollars was considered to be a big price for a two-weeks-old calf in those days and many of the older breeders shook their heads in disapproval at such extravagance and prophesied Mr. Black's early ruin if he persisted in such transactions. Fifty dollars is a very ordinary price for a bull calf now-a-days. In 1897, Matchless 2nd was champion bull at Halifax and was the sire of the breeder's young herds that headed the list on several occasions at Halifax and St. John. The three cows that won first prizes in their respective classes at the 1912 Maritime Winter Fair dairy test trace back through more than one line to Matchless 2nd.

As a breeder, Mr. Black has kept producing qualities in view but he also has show yard animals in his herd and on more than one occasion he has been successful in capturing herd prizes at the fairs.

Blyth, the dam of the four-year-old Neta of Springvale, won second prize in strong competition as a two-year-old at the Dominion Exhibition held in Halifax a few years ago.

In 1899 the Springvale herd was strengthened by two in-calf young cows imported direct from Scotland.

In 1905, Mr. Black purchased one of the Clydesdale mares imported by the Nova Scotia Government. Another purebred mare was purchased to mate her in 1907. One of these mares is the dam of the stallion, Flash Favorite 2nd (11269), foiled on June 1st, 1908. Flash Favorite 2nd was on two occasions a prize winner at the Maritime Horse Show, at Amherst. Although under the four year old mark in the spring of 1912 in a strong class of eight aged stallions, Flash Favorite 2nd captured fourth place. Intending purchasers will do well to keep him in mind, as Mr. Black has not the time to spare during the rush of Spring and Summer work to attend to him as a stallion.

Mr. Black's boys, now in their teens are very much interested in the farm work and raise a considerable number of Barred Plymouth Rocks and Rouen ducks. They exhibit some of their burds in the utility classes at the Winter Fair and are usually successful in landing some of the prizes.

Mr. Black is of an unassuming nature and does make much ado, but his stock get there just the same, as testify his recent winnings at Amherst.

Not long ago we heard one of the most prominent Ayrshire breeders of Canada say that he believed more good producers had gone forth from the Springvale herd than from any other herd in the Maritime Provinces, and this breeder was in a position to know whereof he spoke, as he had had several of them in his herd and they had proved to be producers of showring offspring as well as giving a good account of themselves at the pail—a trait for which all practical breeders are now striving.

Neta of Springvale **Rosalind of Springvale** **Pinafore of Springvale**

A trio of First Prize Winners in the Dairy Test at the 1912 Maritime Winter Fair. Bred, owned, and exhibited by F. S. Black, Amherst, N. S.

Hay, Turnips, Potatoes, Strawberries, Oats

Rotation on Yarmouth County Farm

Editor Maritime Farmer:—

As this is the slack time of the year, if there is any slack time on a farm, I am sending you a few notes to let you know how we are fareing in the western part of our fair Province. As you know, the past season has been wet and cold with very little clear, fine weather and crops on the whole have not been as good as in the previous year. The hay has been badly cured except with those few who commenced early and had an abundance of labor. The grazing was good and so the dairy part of our operations has been a good business. Prices are good, and just here let me say to any young man going into farming, stick to the cow and she will enrich your farm and add very materially to your income. She will be making milk while you are sleeping, besides increasing your stock without which one cannot farm successfully. Occasionally we hear men say "there is so much work in connection with the dairy and the keeping of cows." Well, suppose there is, any man who is afraid of work should have no place on this earth and he should be put aboard a flying machine and started on an angle of about 45 degrees upwards with gasoline in the tank sufficient for the voyage.

Harvesting Turnips—1200 bushels per acre

On S. A. Cook's Jersey Farm, Central Cheboque, Yarmouth Co., N. S.

The man who gets a living without work is simply a shirk. Some one else is having that much more to do. Why, the greatest joy of living is to go out in the morning and bare the arms, throw back the collar and pitch in, and when night comes to have the satisfaction of seeing a lot of work accomplished, and no one the poorer. In fact, the community in which you live, and for that matter, the world is that much better for your day's work.

I am afraid too many of our farmers do not know their calling as they should. If they did, we should see more of them in our legislative halls and more of our boys remaining on the farm, both of which would be better for the country.

Now, with conditions as they are today, there is more than one way to farm. If one is situated so as to be able to dispose of green truck there is scarcely any end to what can be raised. Then there is the small fruit end. In my opinion mixed farming, for the man who can keep things moving, in proper rotation, is the most economical system of agriculture as it evens the work throughout the year. We read of the larger profits in the sheep business which may be all right if one has a range large enough of land not suitable for tillage, but a man whose holding is small and suitable for tillage should never think of going into sheep raising.

The rotation practised on my farm is as follows:—

(Continued on page 407)

Raising Poultry For Profit---How to Begin

Hens are not what they used to be. There is MONEY IN HENS to-day, and for that reason farmers and others should raise more of them than they are doing at present. There are not nearly enough hens in New Brunswick to-day, and a good many that are here are unprofitable servants. Some of them not only eat their eggs, but they eat their own heads off also. Now the only way to make money out of those hens is to use the hatchet yourself, and use it right away. Do not put this matter off until tomorrow unless you happen to run across this issue of THE MARITIME FARMER on Sunday, and even then there might be found some justification of the act on the ground of NECESSITY. A man must live, but every unprofitable hen should die instantly. That reminds me of a remark that a friend of mine in Halifax made to a gentleman who inquired of him "How are your hens doing this winter?" "Better, thank you, much better. My eggs are only costing me three dollars a dozen this winter. Last winter they cost me five."

The unprofitableness in the first instance arises from the wretched practice of so many farmers who keep nothing but SCRUB—inbred, criss-cross—and consequently, semi-barren stock. There is no money in that kind of hens.

In the second case, my friends eggs cost him a very fancy price because, in the first place he bought very fancy birds—birds that were bred "to show" instead of buying birds that were bred "to lay." Then he housed them too expensively and fed them on too expensive food-stuffs. It is not always the food that costs the most that is the best food for laying hens.

Nevertheless, it is possible to raise hens that pay, and that pay handsomely, winter and summer. The writer is willing to confess that he has in former times succeeded in making hens pay, that he is making them pay today, and that he, after twelve years experience in the business of keeping poultry for profit, believes hens to be—next to black foxes—one of the most profitable things about any house or farm. We have in Canada today perhaps about fifty million hens, but to be moderate, for statistics are not at hand, let me say forty million, and on the basis of one dollar a head profit—and almost any blockhead can make that much these days—we have a cash value of forty million dollars a year. Do you wonder now why roosters crow so early in the morning?

With these few introductory remarks we will now proceed to business.

My advice to any one who has never raised "Poultry For Profit" is to begin with a few hens and work up. Learn the business with a few hens and then you will be able to look after a large number and make them pay you a handsome profit. But you must first make the smaller number pay, else it would be folly to hatch out a large number. If you cannot make twenty hens pay their keep, you will never make a thousand keep you.

The first thing necessary is a suitable house and run. For a few hens, 15 or 20 a small house (8x10) with a window facing south will do nicely. Do not make the house too warm, but make it tight, and put a floor in it so that the hens will be free from dampness at all seasons of the year. A hen will thrive in ten degree of frost, and lay regularly, but she will not thrive at all in a damp house or one that has open cracks through which the wind blows. If the house is well made, the window may be removed and left open every fine day winter and summer. If a hen has plenty of fresh air it does not matter so much about the amount of floor space she has, though it is well to give each hen at least three square feet.

For a pen of 25 hens of the larger breeds, such as Rocks, Wyandottes, Reds, etc., the house should be about (8x14) or (8x15) though the latter is quite large enough. For a pen of from 40 to 50 the house must not be less than (8x16), but better (9x18) or 20x17. It is not well to keep over 50 hens in any one pen. It will pay you to divide them into two pens. The lighter breeds, such as Leghorns, will stand crowding better than the others, but it never pays to crowd any breed too much.

There is a little gold mine in hens for the man on the farm who will give a little time and attention to them, and even the city dweller who has a good back yard to his lot and a little ingenuity in his head can make hens pay well, and provide for himself a most interesting diversion at the same time. Here is the experience of one city breeder who had only a city lot, 30x120 feet:—

Average number of hens kept during the year, ...	25
Average number of eggs laid by each hen;	138
Received for eggs and poultry sold	$162.89
Paid for grain, fixtures, etc. ...72.36	
	$90.53
Increase in value of stock on hand	40.00
Net profit	$130.53

Many others have done as well or better than this, and no man knows just what he may do until he tries.

In August 1911 the writer bought 170 Rhode Island Red chickens that had been hatched in an incubator in June and July (two months too late) and raised them out of doors until November, when all were killed except 75 pullets. I did not want to buy those 170 chickens for two reasons. First, because they were hatched late in the season, and, secondly, because I had only a town lot, though a pretty large one to raise them on, and it contained only one hen house capable of containing about thirty hens; but the man who hatched had contracted "cold feet" and wanted to sell out, so that when I tried to buy thirty pullets, for which I was willing to pay $25.00 or $30.00 he absolutely refused to sell unless I would take the whole lot. I asked "How much for the bunch?" The reply was, "give me $20.00 and I will throw in a whole roll of chicken wire to boot." I protested that the price was too low and paid him considerably more than he asked. The chickens were removed to my lot and raised in packing boxes until I had time to build a winter laying house for them. The pullets laid two eggs on Dec. 17th and by Jan. 17th they were running about two dozen a day. By the middle of Feb. they were yielding from three to three and one-half dozen per day. In March they averaged about four dozen a day. In April and May they had increased to nearly five dozen a day and laid like clockwork. On August 23rd (12 months from date of purchase) I balanced my books, and found that on the whole transaction I had made $114.00 over original cost of chicks and feed for twelve months—that is $1.52 per each laying head. Do you wonder now that I am wintering 135 head of laying stock this winter?

W. H. Moore, Scotch Lake, N. B.

Newly elected President of the New Brunswick Farmers' and Dairymen's Association.

And to-day, Feb. 13th, though the thermometer must have registered away below zero, I had the pleasure of bringing in 40 eggs at 3 p. m., and 10 more at 5.30 p. m. making a total of 50 eggs, which at 30 cents per dozen are worth $1.25. My feed bill is running now about 60 cents per day during the hard winter months, so that to-day I have made a clear profit of .65 cents, or at the rate of $4.55 per week. The fourth commandment does not apply to hens in this country, or at least mine do not obey it, for they laid their first eggs on Sabbath, and often Sunday is "high day" with them. Strange to relate, I generally get the largest number of eggs on the coldest days in the week or month. In this respect my hens have been a wonder unto many.

WHAT BREED SHALL I KEEP?

The beginner is often perplexed to know what breed to keep. After twelve years of experience and careful observation, I have come to the conclusion that there is no "best breed" of hens, as almost any breed will give good satisfaction if properly cared for. Any of the American breeders, Rocks, Wyandottes, Reds, etc., are good winter layers but persistent setters during spring and summer months. That is, they will lay well when eggs are high in price, and ease off when eggs are low in price, and this, you will observe, is far from being a defect.

The Mediterranean breeds, e. g. Leghorns, Minorcas, etc., while not so hardy as the American breeds, have this excellent virtue that they do not set at all, and while fair winter layers, do their best work in spring and summer, when the Rocks and Reds are hatching out a new supply of chickens. By keeping a small pen of Rocks or Reds and another of Leghorns, one should have fresh eggs all the year round.

It may be worth mentioning here that since the 17th of Dec. 1911, there has never been a day, rain or shine, hot or cold, that we did not bring in a number of new laid eggs. During the first week of November, 1912, they were laying only about half a dozen a day, but by the middle of December they were averaging two dozen per day, and have been increasing gradually ever since. By the middle of next month I hope to bring in from eight to ten dozen per day and since I have a yearly contract for strictly fresh eggs my profits will materially increase for the remainder of the year.

SETTING HENS AND RAISING YOUNG CHICKENS.

Perhaps some knowing ones who read this article will smile at this sub-title and think it quite unnecessary to tell anyone these days "how to set a hen." Others may think that the "best way to set a hen is to let her set." Well, despite the smile it is still necessary to instruct a good many people how to set a hen properly, and I am safe in saying that not one hen out of every fifty is set properly. And, as to the motto that "the best way to set a hen is to let her set,-' I may say, that is quite true if you have only one hen, but where you have a large number it is a poor policy. First, then, to set a hen properly, you must have a box not less than 12x15 inches, but better 15x15 inches, into which put a couple of inches of good clean soil. Next, put in chaff or fine straw sufficient to make a comfortable receptacle for the eggs. The soil is necessary to supply moisture, and without a certain amount of moisture the chickens will not hatch at all, or if they do, they will always lack vigor and will prove unprofitable servants. A large percentage of the mortality with young chickens is due to the lack of moisture during incubation. Next put a couple of eggs into the nest and then place the box where the broody hen will easily find it, and if she does not find it within a reasonable time, then find the hen and place her on the nest. If she settles down upon the eggs and remains there for a day, you may safely give her the eggs intended for incubation, and then remove the box to some place where she will be entirely sepfood and water within easy reach and you will have the best kind of arate from the laying hens. Place incubator now on the market. The hen will come off and go on again if she is left undisturbed, and will require no further attention. On the tenth, and again on the seventeenth day after setting, the eggs should be sprinkled with warm water, and if any eggs are broken see that all the contents are removed from the nest and eggs, otherwise the eggs will rot and not hatch at all.

On the twenty-first day the chickens should hatch out, but do not disturb the hen before the twenty-second day and then it is well to remove the broken shells so that the newly hatched chickens may have more room and comfort in the nest. When the chickens are from twenty-four to forty-eight hours old they should be fed with finely-ground, hard-boiled egg and oatmeal mixed with a little sand. Place both new milk and water within easy reach. The drinking fountain should be of such a nature that the chickens cannot run into it, for wet feet are just as dangerous as to children. A cup turned upside down in a saucer will answer very well for the first few days anyway. When the chickens are a week old they may be fed a dry mash consisting of ground wheat, oats, cornmeal, middlings, bran, with a small quantity of finely ground oyster shells and beef scrap.

(Continued on page 402.)

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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MARCH 11, 1913.

DATES OF ISSUE.

March 25
April 15-29

THE SEED WE SOW.

Good farm land is too valuable to be used in the production of weeds and unprofitable crops. As long as present prices prevail, and they are bound to go higher rather than lower, the farm must be made to yield to the full extent of its capacity in order to make the largest dividend possible.

Farmers, like other business men, are not working for their health. Love of profit is a characteristic common to all humanity. It is this struggle for increased wealth that makes commercial and business life what it is, and the farm is no longer exempt from this condition.

There are various ways of increasing the capacity of the farm but the one that appeals most strongly to the practical man at the season of seedtime is the quality of the grain planted. With every harvest there is a certain amount of light grain, weak in germinating qualities and if allowed to grow this grain will reproduce its kind in succeeding years. This light grain finds its way into the feed bins and has some value as a feed but never as much as the large, plump, strong kernels. The harvest that contains nothing but grain of the first quality would be ideal and the way to approach this condition is to guard closely the seed planted.

Much has been said about saving the seed grain, grading it so as to secure an even stand and planting nothing but seed that contains strong germinating qualities. Farmers understand this situation and they are putting into practice the teachings that have been given on the lecture platforms and through the short courses and farm papers. They realize the importance of good seed and are profiting by the advice of these teachers through increased harvests and larger yields.

It is just as important that the small grain seed should be carefully handled and all the light kernels, the chaff and the weed seed separated before the grain is sown. In speaking of the wheat situation of the United States the assistant secretary of agriculture says that the yield should be increased from 15 to 25 bushels per acre. This increase of 10 bushels might be obtained by the use of better seed and by better preparation of the soil.

The same authority says: "The five bushels gained from breeding and planting good seed will not cost 10c. an acre." Just imagine the purchase of wheat at the cost of 2c. per bushel. Does it not look as if the investment were worth while, especially when one takes into consideration the fact that the principal item is the more careful handling of the seed? The same thing is proportionately true of other small grains.

In this connection it may well be said that the fanning mill is one of the most important machines on the farm just at this season. The corn grader unquestionably has its place, but the fanning mill is just as important in connection with the small grain crop as the corn grader is with that crop. In bye-gone days the fanning mill was used principally on the grain that went to market. Today it should be used on the grain that goes back on the farm. The modern thresher cleans the seed well but it cannot fit it for planting. Before sowing all the shrunken, weak and poorly developed kernels must be cleaned out if the best of results are hoped for at harvest time. It is poor policy to use high priced land, high priced implements and high priced labor to raise crops that are not of the highest quality. It is a problem to get the interest back on the land even under the best of conditions. It can never be done by following indifferent, slipshod methods.

Small grain has a place in the economy of every farm and wherever small grain is used the fanning mill is an important factor.

The only way to make the farm profitable is to use its entire crop yielding capacity. Before seed time this year look well to the small grain. Separate the weak from the strong, plant only the latter and the reward that comes at harvest time will be worth while.

THE FARMER AND HONEST BUSINESS.

The evolution of business and the consequent improvements made in business methods is one of the surest indications of progress. The growth of advertising and its vast opportunities for enlarging and building up a legitimate business is largely responsible for our growth in business ethics and the honesty and good intentions demanded by our people. People want those who manufacture, sell and distribute products to come out in the open, tell what they have for sale and give good reasons, if there are any, why their goods should be used. And this has driven out many unworthy articles and given merit in men and quality in products the advantage.

Farmers have been doubly benefited by honesty in business and quality in articles. In fact the farmer is very largely responsible for the evolution in our business system. So long as farmers were satisfied with shoddy goods at extortionate prices these flooded the market. But when the demand came for merit, for value and for service from those who supplied his wants, these were forthcoming.

Today the fraudulent dealer can not long remain in business. His only hope is to remain under cover and wait for those who do not read and keep themselves posted to accidentally get in touch with him. The up-to-date look for what they need, demand articles of value at reasonable prices and thus force the dealer to stand by his recommendations.

Another and a very important reason why farmers have derived great benefit from our improved code of ethics in business is that the progressive farmer of today is not a buyer only, but a seller as well. He produces articles which business men need and must have. The food supply of this nation must be produced on our farms and it must be delivered finally upon the tables of those who consume it. Livestock must be sold and many farm products converted into finished products before they leave te farm. Butter, bacon, hams, canned and evaporated fruits and many other articles are made on the farm and distributed, some of them direct to the consumer. This gives progressive farmers an opportunity to reap the rewards of honest business by getting his products before the people and selling these upon their merits. This widens ones circumference of selling and permits him to specialize in fields that offer the best opportunity for business service.

With the opportunity for advertising farm products has come a great need in education. It is highly desirable that one acquire a plain intelligible way of expressing himself; he should write a fair hand, use good language and impress his customers with his honesty and fair methods of dealing.

Our public and private schools have not always been as good as they are now and yet they are not now efficient. Many successful business men have been deprived of a practical education in youth, but this need not remain a handicap. By reading the agricultural paper and other good literature and giving close attention to correct English one can soon acquire a fair vocabulary. Practice in writing will be absolutely necessary in order that one may acquire the art of writing a correct and suitable business letter.

The lack of a practical education in youth is a great misfortune, but the progressive farmer will overcome such a handicap and take his position with business people. Success depends upon it, self-respect demands it.

THE ART OF FARMING.

In the minds of too many people the thought of art is associated with painting, sculpture, architecture; something lofty, sublimely ideal. But the old people of other days who gave us our language, had truer, juster ideas than we do now, for they comprehend the spirit of art in the word "artisan" as well as artist. But it remains for us to see that no man ever becomes a true artisan unless he has in him for guidance and inspiration the spirit of the artist. This is essentailly true in farming.

"Show me the true farmer and I will show you an artist," says a French writer. The artist will show in his plowing, harrowing and tillage generally. It will show in the character and arrangement of his buildings, in the form and finish of his animals, in the entire harmony and completeness of the farm. For what is art, but the perfectness of human effort?

Here is another thought: Art is born of and clings to human effort. It cannot be expressed in any other way. It shows only in the doing of a thing.

There is just as great a field for its unfolding on a farm as there is in a studio, only we have not thought or believed so. As farmers, we need to see the art side of farming more than we do. When we see that, we will lose sight of the drudgery view of farming. Said an English plowman when complimented on the perfectness of his plowing: —

"It's not so tiring sir, to plow well, for your mind is interested."

We do not wonder that some men get everlastingly weary of their work, for they do it so poorly. Of course they cannot take any interest in or receive any satisfaction for such work. They go to their bed ashamed every night. That must be very exhausting. We need more artisans, filled with the artistic spirit for the pleasure and profit of farming and the development of the farmer to be the man he should be.

IMPROVE THE OLD PLACE.

If you feel discontented and would like to try some other place or state for a home, don't let go of what you have until you feel sure you have found the right thing. This selling out and taking chances may make it necessary for you to spend a thousand dollars moving and then be obliged to come back and buy back the old place at a considerable advance in price. We have known this thing to happen a good many times. The truth is there is no best place. A man's success and comfort in living depends largely upon his ability to be contented and to make the best of what he has. The discontented man is far more likely to find the thing which he craves by an intelligent improvement of the land which he has and his unused opportunities than he is by racing all over kingdom come after it. There is hardly a farm anywhere which cannot be made more productive, more attractive, more valuable.

STOP THE WASTE OF MONEY.

One does not have to travel far to find farm implements out in the fields where last used. Hay loaders stay out all winter, plows are rusting in the furrows, harrows stand in some fields where stock may injure their feet by running upon them threshing machines often stand out in the elements for months.

Take care of farm implements and you will have nothing to say about a farm implement trust. The farm implement rust is costing the farmers ten fold more than the so-called trust.

The New Brunswick Department of Agriculture has been empowered to employ a qualified veterinary surgeon to examine any dairy herds suspected of being affected with tuberculosis.

The Beneficial Effect of Drainage.

(Continued from page 377)

Because you will get larger crops with the same or less labor.

Why does underdrainage increase the crops ?

(1) Because you can get on your land earlier in the spring and early planting gives larger crops.

Results obtained at Macdonald College, average of five years. Dates of seeding one week apart.

	Wheat Red Fife Bus.	Barley Mands. Bus.	Oats E.Triumph Bus.	Peas Prussian Blue Bus.	Emmer Common Lbs.	Spelt Red Lbs.
First Seeding	38.12	65.52	76.28	51.61	3433	3166
Second "	29.69	64.51	67.46	52.03	3091	2758
Third " 4 years.....	29.58	60.47	67.92	54.90	2783	2533
Fourth "	25.93	58.39	65 07	50.98	2733	1800
Fifth "	19.63	61 75	61.85	43.18	2600	1341
Sixth " 3 years.....	18.95	64.19	56.97	39.37	2317	1075

(2) Because none of your seed will rot, seed rots chiefly because it lies in water after being planted.

(3) Because the plants can root deeper and thus they have a deeper feeding ground. The drains lower the water to three feet below the surface and the plants can send their roots down this depth.

(4) Because the plants stand a drought better on drained land than on land not drained. The roots of land plants will not grow in water. Therefore on land not drained the plants root shallow. When a drought comes the plants suffer or die. On drained lands, the roots go down at least three feet. They are thus nearer the water and stand a drought better.

A man who has his land drained fears neither wet weather nor dry weather. He does not fear wet weather because the drains carry off the water. He does not fear dry weather because his plants root deep and live through a drought.

(5) Because when land is drained to a depth of three feet, the soil bacteria thrive to this depth. Soil bacteria produce plant food. Thus in drained land there is more plant food than in undrained land, and this increases the crop.

Are there other benefits of underdrainage ?

Yes, there are other benefits as follows :

(1) The land is more mellow and is easier worked. This saves time and labor.

(2) You can work a whole field at once. You do not need to work around the wet spots.

This saves time and labor.

(3) You do not need to leave furrows and surface ditches to carry off the water. This saves wear and tear on machinery.

How deep are the drains laid ?

The drains are put, on the average, three feet underground.

How far apart are the drains laid?

The drains are placed from 66 to 100 feet apart that is, 66 feet in clay or heavy loam and 100 feet in lighter soils.

At what grade should the drains be laid ?

The drains are laid on as steep a grade as you can get, but 3 inches in 100 feet will give good results.

How are the tiles laid?

The tiles are laid end to end in the ditch and covered up. It is not necessary to cover the joints except in very fine sand.

Where does the water enter the the tiles?

The water enters the tiles at every joint. The tiles are one foot long and therefore in a drain 500 feet long there are 500 joints and water enters at each of these joints. This drains the land uniformly.

What is the cost per acre?

With the drains 66 feet apart, it costs from $10 to $15 per acre for the tiles. The cost of digging and filling depends upon the soil. There are 40 rods (660 feet) of drains required per acre. If this costs 50c. a rod to dig and fill, the cost is $20 per acre. The total cost is then $30 to $35 per acre. This is about the average.

How long will it take for the drains to pay for themselves?

For the years 1910 and 1911, it was found in the Province of Ontario that the value of the increase in crop per acre was over $15 per acre. That is, on the average, the crop on land after drainage was worth $15 per acre more than the crop on the same land before it was drained. At this rate the drains pay for themselves, on the average, in two years time.

If the drain becomes blocked, how can I tell where to dig to clear it?

If a drain becomes blocked, the water coming down from higher up cannot pass and therefore it rises to the surface and causes a wet spot in the field. You dig down in the wet spot, clear out the clogged tiles and put them back, and your drain is clear again.

TILES.

Which is the better, clay or cement tiles ?

One is as good as the other. Clay tiles have been down a hundred years in some parts of England and appear as good as ever. Cement tile has not been in use as long as clay tile, but cement is good everywhere we have tried it. All the evidence we have goes to show that cement tile, well made, is as good as clay tile.

Where can I get the tile ?

This is a question I am unable to answer for New Brunswick. I understand that clay and cement tile are made in some parts of the province. Those of you who live near the ocean can import good Scotch clay tile at a reasonable price.

If you live in parts of the country where tile are not made, I advise you to try to get your brick makers to make clay tile, and your concrete men to make concrete tile. If this cannot be done, I advise you to look into the question of making tile for yourself and for the country around you. The machinery needed to make clay tile is not expensive, and if you have good brick clay on your land and are handy to the railroad you may share a profitable business.

If you have good sand near at hand you can make cement tile. You can get a good cement tile machine, worked by hand power for $35.00, and a power attachment for $15.00 extra. This makes 3 in. tile. The extra attachments to make 4, 5, 6 and 8 in. tile cost about $40.00. A man can make about 380 to 500 3 in. tile per day. The smaller tile are made with a 5 to 1 mixture, and the larger tile 4 to 1.

The proportions are as follows:—

2 bbls. cement, 1 1-3 yds. sand make 1000 3 in. tile.

3½ bbls. cement, 2 yds. sand make 1000 4 in. tile.

4 bbls. cement, 2 2-3 yds. sand make 1000 5 in. tile.

5 bbls. cement, 4 yds. sand make 1000 6 in. tile.

The above is 5 to 1 mixture.

6½ bbls. cement, 4 yds. sand make 1000 6 in. tile.

10 bbls. cement, 7 yds. sand make 1000 8 in. tile.

Based on 4 to 1 mixture.

With cement at $2.00 a barrel, 1000 3 in. tile will cost you $4.00, plus the cost of the sand and your labour.

Cement tile must be cured slowly. They must be placed on wet planks, out of the sun, and way from dry winds. They must be kept moist for about one week.

Experts on cement tile recommend power machines, because it is difficult to compress the tile sufficiently with a hand machine.

How should I start to drain my farm?

The first thing to do is to have a drainage survey made of your farm. This leads me to the next part of my talk, namely,

HOW CAN THE GOVERNMENT HELP FARMERS DRAIN THEIR LAND.

The government can help farmers drain their land in three ways.

FIRST. The government can have free drainage surveys made for those who wish to drain their land.

I can best illustrate this by explaining how this is done in Ontario.

The Ontario Agricultural College trains a corps of drainage experts each spring. On application, one of these experts is sent to make a drainage survey of a farm.

There is no charge for the services of this expert, as his salary is paid by the Ontario Government. The farmer, however, pays his railroad fare at the rate of one cent a mile each way, meals, cartage, etc. He meets the expert at the station and re turns him to it, and provides any assistance necessary for the work.

The expert makes a complete survey of the farm, and prepares a map showing the location of the drains needed, the grade of each drain, and the number and sizes of tile needed. He also shows the farmer how to dig his drains true to grade, how to lay the tile, how to make joints, etc. The cost to the farmer averages about $2.00.

SECOND. The government can pass an Act similar to the Tile, Stone and Timber Drainage Act of Ontario. This Act enables a man to borrow money to drain his land.

Under this Act if a man wants to borrow money for drainage, he applies to the Township Council. If they approve, they issue debentures which are bought by the Provincial Government out of the Consolidated revenue Fund. A man can borrow up to $1000.00 at 4 per cent. compound interest. He pays it back in twenty annual instalments. These amount to $7.36 for each $100.00 he borrows.

Now $100.00 will drain 3 acres or more. If each acre returns $15.00 more than it did before it was drained the farmer gets $45.00 extra from the three acres, and it costs him $7.36. This is a profitable investment.

THIRD.—The government can encourage the introduction of traction ditchers. One way in which it can do this is to urge the Federal government to remove the duty from traction ditchers. A good sized traction ditcher costs $1700.00, F. O. B. at the factory. The duty is about 30 per cent., which adds $510.00 to the price.

If there is any considerable amount of drainage to be done in the province, a traction ditcher is a profitable investment for the individual. In this connection I may say that I have a friend in Ontario who started out with a half interest in one traction ditcher, and now has a half interest in eight of them. They are all busy all summer long, and all make money for him.

Agriculture for Clergymen.

Much is being said and some things being done to-day regarding the training of teachers for rural schools. But what is being done in the way of providing special training for the country ministers? The need for it is fully as great as for the teacher and the same argument holds good for both—namely, that any leader or public servant, to be truly efficient, must be in full sympathy with; must understand; and must live the daily life of those with whom and for whom he works. Farmers do not lead farmers, and here comes in the minister's opportunity. The country minister has become a leader, yes, a leader in better farming. For this leadership he has some advantages not possessed by the teacher. He is associated with the adults as well as with the children and young people, and he is not likely to be so migratory as the present country teacher, however, both teachers and preachers must know agriculture, and the social and economic conditions of farm life. This is positively fundamental. The minister of the country church ought to know more of what Jesus knew and what Zavitz, Cumming, Howitt, Dean and the Days know; that is, a great deal about farm crops, the flowers of the field, the cattle and the soil; in fact, he should know the science of agriculture right up to date. Arrangements should be made to give young ministers contemplating work in rural districts a course in agriculture. For much of the present neglect in the matter of special training for rural pastors our universities are accountable. The work of the theological school is not planned to meet the specific need of those entering the rural field. Perhaps the nucleus of the situation is that too few students purposely and consistently plan to undertake rural work, or to make it a serious life study. The country parish is regarded as a stepping stone, the sooner passed the better. We need a country clergy who will study the problems of rural life as city clergy study those of urban life.

It is an entirely wrong idea that the "back numbers" and the very very young among ministers will do for the country. There is no greater opportunity in the wide world for noble work by the young minister than in the rural field if he is properly trained for it. The sooner that students generally and theological students particularly appreciate the fact that the profession of agriculture is just as dignified as any other profession, and that the farmer is, in truth, God's best expression of an ordinary man, the better it will be for all concerned. There are many problems that a minister can help to solve. Business principles must be applied to farming; improved methods put into operation, and the farmer himself aroused from his indif' ference. These things cannot be accomplished by talk and bulletins; the farmer must be reached by the personal touch, and that through the occupation whereby he lives.

The church can inspire the country people with a desire to know and appreciate nature and rural life, and can also inspire the ideal of self-culture, but it must not neglect to encourage the use of such means and methods as will improve the quality and quantity of the products of the farm. Social, church and school prosperity rises and falls with production on the farms. It is very well to say that the farmer must give of his time and means for the enterprises which make for the good of the community, and that the salary of the [illegible] increased and the roads should be improved. But these things will be slow in coming, and society can have small claim upon the farmer until farming is made more profitable and the farmer is receiving a reasonable income for his labor.—F. C. Nunnick, Agriculturist Canadian Conservation Commission.

HORTICULTURE.

Some Pruning Notes.

Editor Maritime Farmer:—

In successful orchard management we now recognize three essentials: pruning, spraying and cultivation, and it is hard to say which is the most important. There is no question whatever which is the oldest practice, for pruning has been part of the orchard work as far back as the Garden of Eden it self. The Bible makes frequent mention of the pruning hook, and with an art so long established, it is strange that today we have so little definite knowledge as to what method to pursue to get the best results in both quality and quantity from our orchards.

We have advocates aplenty of all times and systems from those who practice no pruning at all, to those who every spring carve away at their trees until only a few whippy branches are left, and the unfortunate trees, instead of producing fruit, has to give its whole attention to trying to replace some of the leaf-bearing wood, that has so ruthlessly been robbed from it. No one who gives the question any thought can doubt but that work that is nearly criminal has been done in some of our orchards with a pruning saw.

Dr. Stewart, at the Fruit Growers' meeting in Middleton, got a laugh when he said, "prune just as little as you possibly can, as long as you prune enough." This may look like a joke but it isn't, and coming from whence it did, the statement deserves some thought.

When have we pruned enough? No one will deny that different varieties of trees call for different treatment. The King and the Wagner, for instance, are two extreme types, and the Golden Russett is in no respect like the Gravenstein, and to prune the King tree with its long, rangy limbs and spreading branches the same as you would the Wagner, a tree that grows straight up and makes little wood is to court disaster. Fifteen or twenty years ago it was the practice to cut out all suckers, and branches along the inside limbs of the tree, evidently with the idea that so much wood needed to be removed anyway, and it did not matter much where it came from. The results of these ideas we can see today expressed in old orchards all over the Valley, old trees with long, bare limbs, and a bunch of fruit bearing wood on the end like a paint brush. Evidently, something is wrong here, these trees have been pruned too much and in the wrong place.

Mr. A. McNeil, the veteran Chief of Fruit Division recommends that we should prune from the outside in, and not from the inside out, not to cut away large limbs disturbing the balance of the tree, but to thin out the small branches, such as can quickly be removed with the two-handed pruners familiar to every orchardist.

In his method of pruning a saw is seldom needed if the work is done systematically.

But perhaps Dr. Stewart had some idea like this in mind when he said, "as long as you prune enough," that one has done enough when he has thinned out the small branches so the sun and air are freely admitted to all parts of the tree.

Of course, any practical man understands that each tree is a separate problem. One is a strong upright grower and must be cut very lightly, another is not making sufficient growth and you can afford to use the saw in a more vigorous manner, for nothing will stimulate a sick tree like a severe cutting. Be sure to remove every trace of a diseased limb back to bright live wood. These should be taken from the orchard and burned as soon as possible, for such diseases as fire blight, cancer, etc., are very infectious and if not removed at once will soon infect other trees. If cut out as soon as seen, however, this trouble is not a serious one.

The King, under good cultivation, will have fruit almost too large for general use, so all the bearing wood possible should be encouraged. As a rule, a King tree heavily pruned is not a good croper. I had this forcibly brought to my attention some years ago in an experiment in my own orchard. Of three rows of Kings of the same number and age extending through the orchard, one row through press of work was not pruned. That row the following year had as many barrels of apples and as good quality as the other two rows taken together. I saw the point and have been very careful with the pruners when in King trees ever since. You can get any man's attention if you hit him with a brick.

We are now beginning to accept the idea that the suckers on the inside of the tree are not the enemy we once thought them. A sucker can soon be developed into bearing wood by pinching off the terminal bud thus causing fruit spurs to develop from the buds on the sides. In fact, an old tree can in a few years have its whole top removed by gradually cutting out the old wood and allowing new wood from developed suckers to take its place. Immensely better apples will be bourn on this new top and the life and usefulness of the tree greatly extended. The cutting back of young trees is not to be commended. I heard Dr. Stewart say it did not seem right to compel the tree to make the same wood twice. After it has attained full bearing size, however, the cutting back system gives good results. More fruit spurs are developed in the middle of the tree and the fruit is easiest to pick, to spray, and to thin. This system has not been tried out very extensively in the Valley as yet, but so far seems to be giving good satisfaction.

To prune the tree, however, will not take the place of thinning the fruit. Primarily, pruning stimulates a more vigorous growth, the balance between root and top is disturbed and nature ae once tries to destroy that balance by throwing out more wood. There must be a large leaf surface to digest the sap supplied by the roots for the roots are the mouth while the leaves are the stomach of the tree, and it is a fact worthy of notice that the men in this Valley who are getting the best results from their orchards in the way of annual crops, are those who are following the first part of Dr. Stewart's advice "Prune as little as you possibly can." This does not mean that they do not prune at all, far from it, but the work is done with brains as well as brawn and no limbs are removed without reason, nor is the work left entirely to the hired man. The problem is an important one to every orchardist. A certain number of branches must be removed each year. The question is how far to go and when to stop. It is an individual problem, too, and must be settled by each one for himself. The solution seems to be in watching results not only in one's own orchard but also in one's neighbors. If he is getting good results are we not to try to find out why the difference, and in the course of time, what is now dark will be made clear, if we faint not.—M. K. E.

San Jose Scale in Nova Scotia.

The editorial in the November issue of the Canadian Horticulturist gives a fair statement of the situation in this province. Your conclusions, however, do not agree with the ideas of the fruit interests here. The Nova Scotia Government, backed unanimously by the fruit men, are prepared to go to any extremes to eradicate the scale if possible, and provide against its further spread.

There is no panic but a straight business proposition on the part of all interested to cut out this scourge in the beginning, if effort and money will do it. Our Ontario friends, who have supplied us with one hundred and fifty thousand trees annually for the past few years, assure us that the scale is easily kept in check by dormant spraying, that it is a "blessing in disguise," etc. However this is one of the blessings that we would like to be spared, and are perfectly willing for Ontario to enjoy alone, rather than share with us. The fruit men are practically unanimous in agreeing to cease planting for a few years if necessary, till we see where we are at. We have been living in a fool's paradise, baying largely from Ontario nurserymen, depending on local inspection and fumigation, and we find that criminal negligence and carelessness have been the result. For instance, a Nova Scotia buyer in a large Ontario yard selecting trees, heard orders given by the manager to fumigate a lot of stock in a "box car!"

Of some one hundred and fifty thousand trees from Ontario nurseries received here this spring about twenty-five per cent. had scale on them—some literally encrusted. To be sure most of the scale was dead, but we do not propose to pay for any more apple trees from Ontario or anywhere else with scale on them, dead or alive. The "blessing" will have to be disguised more carefully in the future before it will pass current here. The "three large nurseries that furnished ninty-eight per cent. of the stock planted in Nova Scotia," must get busy and clean up the stuff before any more of it comes this way. We want the trees, and are willing to pay the price, but we do not want any "blessings" thrown in. While they are cleaning up we will mark time and take stock, incidentally doing a little in the nursery business on our own account.

Early in 1912, while pursuing Brown Tail Moth, Mr. Saunders found live San Jose Scale on apple trees brought from Ontario in 1911. One blessing—not in disguise—we have in Nova Scotia is a live Secretary of Agriculture. There was something doing in horticultural lines almost immediately Secretary Cumming soon had a good staff at work running down the trees planted in 1911. The inspectors soon found that 1910 plantings were also infested, and 1912 plantings were "lousy."

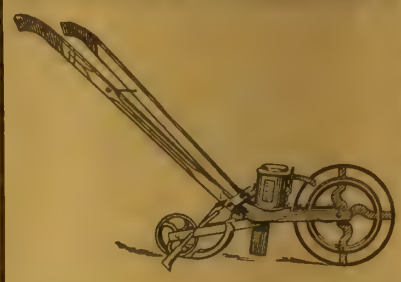
As fast as competent men could be obtained they were put into the field, and spent the summer in hard work. The net results were eight hundred and fifty trees found infested with live scale, torn out and burned root and branch. Mr. Saunders, who has had charge of the field operations, is sanguine that in two or three years the scale can be exterminated, and every fruit grower is willing and anxious to give him a chance to try.

The Provincial Government, on petition of the Fruit Growers' Association, took power last session to control the San Jose Scale and other insect pests.

The Order in Council, as promulgated on October 25, 1912, provides that all nursery stock coming into the Province shall pass through either Digby or Truro as ports of entry, and no imported nursery stock will be delivered to any importer or consignee within the Province of Nova Scotia unless the same is accompanied by a certificate signed by the Provincial Entomologist or other authorized Government officer, that the nursery or other premises on which the same was grown was inspected between the fifteenth day of June and fifteenth day of September next preceding the shipment thereof, and that said nursery or other premises were found to be apparently free from San Jose Scale.

The Regulations as promulgated are drastic and will mean prohibition to trees from Ontario during the coming season at least.—S. C. Parker, President N. S. F. G. A., Berwick, N. S., in Canadian Horticulturist.

GARDEN SEEDERS



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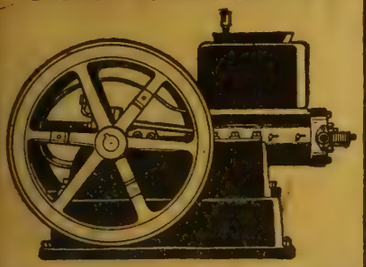

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N. B. F. G. A. President's Address.

Officers and members of the Fruit Growers' Association—

Gentlemen:

I am glad to welcome you to another annual meeting of the Association.

Before dealing with other matters, I wish to say a word in reference to a familiar face which will be missed from our future sessions. I refer to the late J. C. Gilman, who passed from the active affairs of this life on March 1st. Mr. Gilman was one of the pioneers of this Association. He was elected president at the organization of the Association in 1904 and held the office for several years. One of the most extensive and most progressive orchardists in the Province, his advice was often sought by others younger in the business and was cheerfully given at all times. His influence for good survives him, and I feel that we may all be the better for the good example he set us. On behalf of the Association I sent a letter of condolence to Mrs. Gilman, and filed a copy of the same with the Secretary of the Association.

As to our business of fruit growing, the past year has not been one of the most prosperous. While in some parts of the province the crop of small fruits and of apples were fairly good, the weather conditions generally were against us. This resulted in incomplete fertilization of the blossoms and a consequent small set of fruit, much of which was inferior in quality, and later in much fungus growth which was not wholly controlled by spraying, although as is usual the fruit which was carefully sprayed showed to great advantage over that which was not so cared for.

The concensus of opinion among the members of the Fruit Growers' Association, obtained by the Secretary, was against the holding of an Exhibition last year, and the Department of Agriculture in the absence of the exhibition, made exhibits of fruit in different sections, which attracted much attention, and gave a good advertisement to the fruit growing capabilities of the province.

I am glad to be able to report to you that the setting of new orchards is steadily increasing. Last year the Association through its Secretary, handled 15,000 trees which were distributed to members at cost, at a large saving of money to the members, and an assurance to them of good stock, correctly named. This, and the providing of spraying materials, have been important points in the Association's work.

There is no doubt that the education stimulated by the Association, and the interest awakened by its meetings and exhibits is bearing fruit, and we may hope soon to see New Brunswick ranking where it belongs, as one of the important fruit growing sections of the Dominion.

The Executive has prepared amendments to the Constitution and Bye-Laws which will be submitted to this meeting for approval.

I hope that the Association will also arrange for the holding of an exhibition in the Fall of this year. These exhibitions serve the double purpose of advertising the advantages of our Province for the fruit industry, and of interesting our farmers in this special line of work, which I believe is the most profitable in which they can engage.

Respectfully submitted,
(sgd) C. N. Vroom,
President.

Fredericton, N. B., Feb. 18, 1913.

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I will mail, **free** of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure — **you,** my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience,** we know better than any doctor. **I know** that my home treatment is a safe and sure cure for **Leucorrhoea** or **Whitish discharges, Ulceration, Displacement** or **Falling** of the **Womb, Profuse, Scanty** or **Painful Periods, Uterine** or **Ovarian Tumors** or **Growths,** also **pains in the head; back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar** to our sex.

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address,** tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost,** my book—"**WOMAN'S OWN MEDICAL ADVISER**" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers** or **Daughters,** I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

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DAIRYING.

Marketing Dairy Produce.

Mr. Chairman and Gentlemen:

I feel somewhat out of place with my short experience in the dairy business in attempting to say anything on the subject assigned me, namely, The Marketing of Dairy Produce, especially when I see before me men who have spent their lives in the business.

I will attempt to give you in as few words as possible some of the things which have impressed me most and some of the difficulties we have met during the past years work, hoping that an exchange of experiences and ideas may benefit us all. Marketing butter, I say butter for that is the main product of our dairies and the one we are most interested in, is the most vital part of the creamery business. As soon as a locality is capable of producing more butter than the local market can consume a creamery becomes a necessity and is required to manufacture a uniform article which can be shipped readily.

We have entered upon a period when there will be a large increase in the dairy industry in the Province. The management of the factory that undertakes to market the output of one or three hundred farmers assumes a large responsibility and as the business increases must come an increase in efficiency and usefulness.

Young men are not likely to connect themselves with business or older farmers to increase their herds if it does not hold out fair financial inducements. The interests of the dairy farmer and the creamery which he patronizes are one and they should join hands in endeavoring to put out the best article and manufacture at as small a cost as possible with the idea of being fair to the producer and fair to the consumer.

One of the difficulties we have met is the lack of definite information regarding market prices of butter in the Province and unreliability of the newspaper quotations as compared with what the factories were receiving. I recall a couple of instances for illustration. At one time during the summer, we were getting the highest prices quoted by the Montreal and St. John markets and we were tola by the wholesale firms we were dealing with that they were getting butter from a certain creamery one cent per lb. less. That particular creamery not only might have been getting more themselves but had a tendency to prevent us from getting the market price.

At another time we were receiving the highest price quoted, Mr. MacKay came down and told us that we were selling less than some of the other factories of the Province. Of course, that was a loss to us and may have been a hindrance to others.

Right here I would like to make a suggestion for consideration. Would it be practical for every creamery to report in the strictest confidence, of course, to Mr. MacKay, or some other person who might be chosen, once each week that they were getting for butter and have him strike an average of these and report to each creamery together with the latest market reports. This would form a basis of information to each manager and would be particularly valuable to younger creameries and would not be divulging the secrets of any company.

Another and probably the most serious problem we had to meet in marketing our butter was the lack of a refrigerator car service. There seems to be an almost unlimited demand for print butter in Cape Breton but it is a five days' trip by frieght from Yarmouth to Sydney and two days from Yarmouth to Halifax. The distance makes it impossible to use the tray system of package on account of the returning of the empties. Prints packed in sixty lb. boxes which the market requires, no matter how well hardened before starting, if closed in a box car for five days in warm weather are badly defaced as well as reduced in quality and marketing value. If it were possible to get the service of a refrigerator car once a week we could harden our prints twenty-four hours before packing and remove them from the refrigerator to the iced car, we would have a system better than the tray system and much cheaper. lb

Any decrease in price which is due to defects in transit is a dead economic loss by which no man profits and in the end the farming community must bear the expense. If we estimate this at one-half cent per lb., that on our make alone during the past ten months would amount to $330.00. Between Yarmouth town and Halifax there are five creameries and one car could pick up the output of each week by making regular weekly trips. I am not so well acquainted with the other parts of the Province, but no doubt similar system could be worked out.

I will advance one more suggestion for discussion and I am done.

The creameries seem to be too far removed from the consumer. There is from 10 to 12 cents per lb. between the price which the farmer receives for the butter in their cream and that which the consumer pays.

The creameries are receiving only 25 per cent. to 30 per cent. of this for collecting the cream and all the expense of material and labor of manufacturing and selling. The other 75 per cent. is consumed between factory and consumer. Who gets it? —A paper read by F. E. Porter, Yarmouth, before the Convention of Nova Scotia Dairymen, at Truro, Jan. 10th, 1913.

The Vitality of Dairy Cows.

The vital function in dairy cows is one of reproduction. We have developed and intensified the correlated function of milk production in the dairy cow until she has taken on what I like to term, a motherly makeup, type, or conformation which is indicative of great milk production. It is this function that gives our animals the power they have of making the great milk records they do.

Now the question, and it is one of deep study, is, have we in a measure developed the function of milk production at the expense of that of reproduction? Some say, truly, that two functions in a living thing can't be developed to their highest state without a sacrifice of the one or the other. I like the view though that these functions are so closely correlated that they are one function, not two distinct functions. Milk production is the greatest result of reproduction. We can develop the both to a very high state in the same animal and not at a sacrifice to either. This is a vital problem. Seemingly we have neglected the study of the reproductive function for we are having epidemics in many herds that ought not to occur.

These epidemics are a serious thing to the industry of dairying not only in the loss of vitality of the dairy animals but also in the income of the dairyman where the epidemic occurs. Contagious abortion, failure to breed and the like ought to be under control. A closer study of the reproductive organs of the dairy cow, the performance of their function, the diseases of the same, their development, in brief, a closer insight into our dairy animals is before us. It must be made.

Is it policy to have our cows freshen once a year? Thousands of cows are bred when their reproductive organs are not in a vital condition to commence their function or reproduction again. The average dairyman breeds his dairy animal about as soon as she comes in heat the first time, after she has reproduced, regardless of the condition she is in. They should be bred when they begin to take on marks of vitality. The keen perceptive dairyman can tell when the vitality marke begin to show. Your animals should be as strong at the beginning as at the end of service. You should feed and handle your animals with the idea that they are growing offspring as well as producing milk. As the time of birth of the young draws near the blood that went to be transformed into milk goes to develop the foetus. You should drive the blood if possible from the udder to the foetus two months before birth so that the maternal organs will be strengthened and the foetus developed to the very best. The longer you milk an animal up toward the birth period the more you are sapping her vitality.

At this time such rich energy foods should be fed rather than oat straw, those foods that will incite the maternal organs and give them the most healthful development. We should be very particular about the vitality and healthful condition of our dairy mother to be. The stronger, the better condition that we can get her in at this time, the stronger and lustier will be the offspring and the incentive to a great milk production. She will have strength to calve easily and

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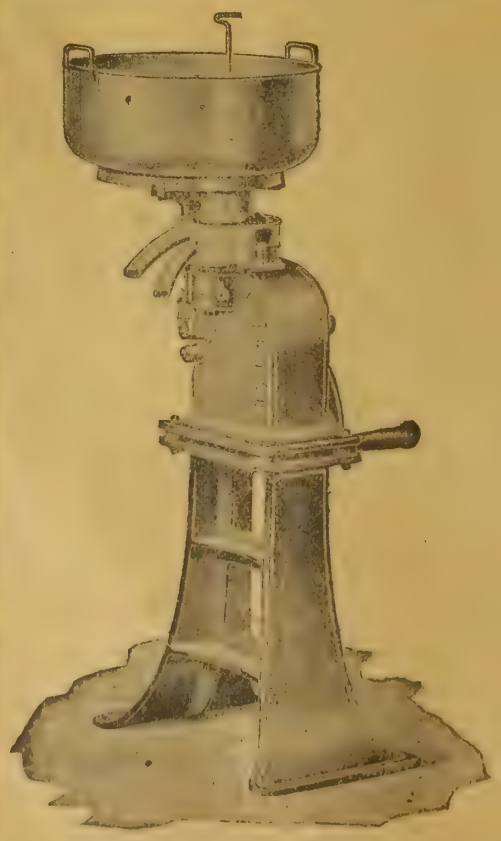

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We can positively guarantee that there is no Separator on the market,

That skims closer; That is eas er to turn;

That is made of better material in every detail;

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PRICES:—**300 lbs.** - **$35.00**

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in an hour or so she will deliver herself of her afterbirth. Then this wonderful function of milk production begins. We should develop it to the very highest possible extent. At this time the heifer should be milked every six hours for at least two months. It is wonderful to see what a motherly and milk producing young heifer you can make by this method of handling and liberally feeding. You will be gladly surprised at the way this motherly function is excited, and the way the vitality of the dairy mother is kept up. Not only are the owners of pure-bred stock who officially test each animal as it freshens but also in this great dairy section, the owners of high grades are beginning to milk their best cows four times a day. They are hiring extra men so that they can do it. They are handling their herds in this best possible manner.

It has become a recognized fact that to keep the dairy cow in the best possible condition she must be liberally fed the year through. It is essential in times of drought when animals are pastured that supplemental feeds as soiling crops and the like be on hand and where we dairymen feed so much grain it is necessary that our animals be fed a little grain the whole year to keep them up in the best possible condition. If we do this our animals will be in a vital condition. We will have very little trouble with the dreaded diseases that are a scourge to the dairyman. Our net profits will be higher for our dairy animals will be in condition the year through to render us the best they can. "Vitality" will be the keynote that makes us successful dairymen.—Harry Mason Knox.

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IRON AGE (Improved Robbins) Potato Planter (Now made in Canada)

This machine soon pays for itself and yet puts real money into your pocket. One seed piece in every space and one only. Uniform spacing. No injury to seed. Ask your dealer to show it and write us for free booklet, "*100 per cent Potato Planting.*" We make full line Potato machines, Garden tools.

The Bateman-Wilkinson Co., Limited 438 Symington Ave. Toronto Ontario

Trials of Milking Machines.

Trials of milking machines, arranged by the Royal Agricultural Society, will be held in the county of Durham, England, in April or May, 1913. The exact place and date have not yet be fixed. It is required that the machines presented at the show should be capable of milking at least two cows at a time. In the award special account will be taken of the following accounts: (a) Time taken in milking. (b) Weight of milk exclusive of strippings. (c) Convenience in attachment to the cows, taking into account ease of replacing where the machines has become detached from any cause. (d) Security of attachment to teats. (e) Gentleness of operation. (f) Ease in regulating speed of machine. (g) Condition of milk. (h) Ease and thoroughness of cleansing. (i) Lightness of milk receptacles. (j) Minimum of supervision during milking, so that man in charge can leave cows to carry milk away to the dairy, &c. (k) Price of machine with cheapness of renewal and durability of working parts.

Buy a Good Sire.

It has been demonstrated again and again that the cheapest investment that can be made by a farmer who is trying to build up the standard of a herd of cattle lies in the purchase of a godd purebred bull. It is not necessary to buy several high-priced females as a basis for the average herd, nor is it economical. The most economical results can be obtained by buying a bull with masculinity enough behind his good breeding to stamp his likeness upon the calves secured.

A striking proof of this has been shown on the cattle show circuit at various state fairs this fall. One of the many instances will suffice. Recently a prominent state fair judge had to choose between two cows with the same dam, but sired by different bulls, for the female championship of the breed. So strikingly similar in type was each of them to its own sire, though the dam was the same, that there was no trouble in distinguishing between the two. The one that had been produced by the more outstanding sire was so superior to the one that had been produced by the less superior bull that there was no trouble about the selection.

The principle illustrated is of practical value to the farmer who is thinking of beginning a herd with limited capital, or who has a very common herd that he desires to grade up. An average group of calves will be far superior to their commonly-bred mothers if a good purebred bull is used. Such a bull can be purchased very reasonably if proper care is taken by the purchaser.—Ray P. Speer, Minnesota College of Agriculture.

Dairy Strippings.

There's prosperity for the farmer who gets rid of his scrub cows and replaces them with a good dairy breed; there's hope for the farmer who keeps his common stock but tries to make the most of them by adopting newer and better dairy practice; but for the farmer who obstinately sticks to his scrub cow and scrubber ways, there's—well, "Raus mit him!"

* * * *

The good dairyman believes in the gospel of the "little thing." Close attentihn to "trifles" makes a dairy profitable; but a profitable dairy is no trifle.

Your Soil Is Alive

TO all intents and purposes, soil is alive. It breathes, works, rests; it drinks, and, most important of all, it feeds. It responds to good or bad treatment. It pays its debts, and pays with interest many times compounded. Being alive, to work it must be fed. During the non-growing seasons certain chemical changes take place which make the fertility in the soil available for the next season's crop. But this process adds no plant food to the soil. Unless plant food is added to soil on which crops are grown, unless the soil is fed, in time it starves. There is one best way to feed your soil. Stable manure, which contains all the essentials of plant life, should be spread evenly and in the proper quantity with an

I H C Manure Spreader

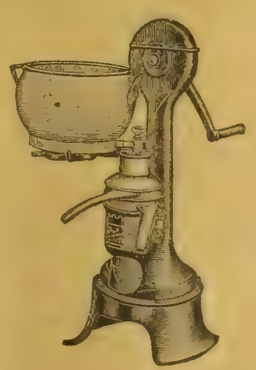
I H C manure spreaders—**Corn King or Cloverleaf**—are made in all styles and sizes. Sizes run from small, narrow machines for orchard and vineyard spreading, to machines of capacity for large farms. The rear axle is placed well under the box, where it carries over 70 per cent of the load, insuring plenty of tractive power at all times. Beaters are of large diameter to prevent winding. The teeth that cut and pulverize the manure are square and chisel pointed. The apron drive controls the load, insuring even spreading whether the machine is working up or down hill, or on the level. I H C spreaders have a rear axle differential, enabling them to spread evenly when turning corners.

The I H C local agent will show you all their good points, and will help you decide on the one that will do your work best. Get literature and full information from him, or, write the nearest branch house.

International Harvester Company of Canada, Ltd
BRANCH HOUSES

At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton

The Quiet One



Your hand and ear are wonderful judges of mechanical perfection. They detect poor construction no human eye could see.

Five seconds after you touch the crank of the quiet running Waterloo Boy cream separator you know it is perfectly designed, otherwise it could not run with such remarkable ease.

While you hold one ear within a foot of a Waterloo cream separator running at full speed you can hear the ticking of a watch held near your other ear.

That is excellent proof of perfection.

Insist on getting the clean skimming, easy running Waterloo Boy if you want the best.

Sussex Motor Co. Ltd., Sussex, N. B.

WRITE FOR CATALOG AND PRICES.

AGENTS WANTED IN UNREPRESENTED TERRITORIES

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and send them in

LIVE STOCK.

Amended Regulations in Regard to the Free Entry of Animals for the Improvement of Stock, in Effect 1st. April, 1913.

Memo. No. 1522 B. of 27th January, 1909, is cancelled and the following Regulations and Instructions in the above matter are prescribed and in effect from 1st April, 1913:—

REGULATIONS.

1. No animal imported for the improvement of stock shall be admitted free of duty unless the owner is a British subject, resident in the British Empire, or if more than one owner, each is a British subject, resident in the British Empire and there is furnished an import certificate stating that the animal is recorded in a Canadian National Record or in a Foreign Record recognized as reliable by the National Record Committee.

A statutory Declaration by the owner or one of the owners, that he is a British subject, or that each is a British subject, resident in the British Empire and that such animal is the identical animal described in such certificate must be provided, and that such animal is being imported into Canada for the improvement of stock.

2. In case such certificate is not at hand at the time of the arrival of the animals, entry for duty may be accepted subject to the refund of the duty upon the production of the requisite certificates and proofs in due form satisfactory to the collector within one year from the time of entry.

3. The form of certificate to be accepted for the free importation of animals for the improvement of stock and the Customs procedure in connection therewith shall be subject to the direction of the Minister of Customs.

4. The above declaration shall be attached to the Free Import Entry and may be made before the Collector, Sub-Collector, Surveyor or Chief Clerk at the port where the goods are entered or before any functionary authorized by law to administer oaths.

INSTRUCTIONS.

(a) Import Certificates required are those bearing the signature of the Accountant of the Canadian National Records, for horses, cattle, sheep, goats, asses and swine (but not including the Holstein-Friesian cattle). Import certificates required for Holstein-Friesian cattle are those bearing the signature of the Secretary of the Holstein-Friesian Association of Canada.

(b) The Import Certificate and declaration to be delivered to the Collector of Customs before free entry of animals is allowed, shall be in one of the forms in the schedule hereto.

(c) The Import Certificate for horses shall specify the colour and natural markings, if any, if there are no markings the word "solid" shall be inserted: The Collector of Customs is required to compare the description given on the Import Certificates with the animal and if the colour and markings do not agree, free etry must be refused and duty collected.

(d) The Import Certificate shall be attached to the free Customs entry for transmission by the Collector to the Department of Customs, Ottawa.

The said certificate shall be marked in each case with the Customs entry number and the office dating stamp.

The Collector of Customs shall not demand or accept any certificate as to pedigree, other than in one of the "Import Certificates" forms herein prescribed and the Declaration of Ownership.

(e) Animals may be shipped in bond from the Canadian Frontier port to the Customs port of destination, subject to Quarantine Requirements.

(f) Import certificates for Holstein Friesian cattle are issued by the Secretary of the Holstein-Friesian Association of Canada, St. George, Ont.

(g) Import certificates for Live Stock other than Holstein-Friesian cattle may be procured on application to "Accountant" Canadian National Records, Ottawa, from whom there may also be obtained a list of Canadian Records and other information concerning the importation of pure bred animals for the improvement of stock.

(sgd) John McDougall,
Commissioner of Customs.

Mailed to outports.
Vide Forms in Schedule hereto.

SCHEDULE OF FORMS.

Form 1. For Live Stock other than Holstein-Friesian Cattle.

IMPORT CERTIFICATE.
CANADIAN NATIONAL RECORDS.

I hereby certify that the animal (name)
(colour) , markings
(Number) is pure bred and is registered in the (state Book of Record) of the Canadian Book of Record for (state breed)

(SIGNATURE)
Accountant,
Canadian National Records.

Issued to the Owner.
Address.
Ottawa, Canada 19

Form 1. A.

IMPORT CERTIFICATE.

Canadaian National Records.

I hereby certify that the animal (name) (colour) (markings) (number) is pure bred and is registered in the (state book of Record) a book of record recognized as reliable in the country of the origin of the breed (state breed)

(SIGNATURE)
Accountant.
Canadian National Records.

Issued to the owner
Address
Ottawa, Canada 19

Form 2

FOR HOLSTEIN FRIESIAN CATTLE.

IMPORT CERTIFICATE.

Holstein-Friesian Association of Canada.

I hereby certify that the animal (name) (number) is pure bred and is registered in the Holstein-Friesian Herd Book of Canada, the Canadian Book of Record for Holstein-Friesian Cattle.

(SIGNATURE)
Secretary,
Holstein-Friesian Breeders' Association of Canada.

Issued to the Owner
Address
Ottawa, Canada. 19

Form 3 Declaration to be made by sole owner.

Dominion of) I .... of
Canada Pro-) the ..... of .....in the
vince of) County of .....
To wit:) Occupation .....

Do solemnly declare:

1. That I am the sole owner of the animal described as follows, being the identical animal for which application is herewith made for free entry into Canada, viz:—

"Hello, Tommy! Chores done already?"
"Yep! Aint you seen our new Litter Carrier?
It's a cinch—You should write to
Dillon's for their book—same as Dad did."

You can if you work hard enough, and if you have the time and patience, keep stables perfectly clean with the help of fork, broom and wheel barrow.

But those were ways of twenty years ago —before labor was so high and hard to get.

Stable Cleaning by the Dillon Method can be cut down to less than half the time, and a quarter the labor formerly required,

Your man's time is valuable — then cut down the time he spends cleaning the stables.

Your stock is valuable—then give them cleaner and healthier surroundings.

DILLON'S Litter Carrier

Figure it out for yourself.
Get our free book.

Dillon's sell direct to the Farmer. There are no Agents and no Agents' profits. The price is the same to all, and lower than you would expect for such substantial and well-built equipment. DILLON'S BOOK ON CLEAN STABLES gives you an exact idea of what you can accomplish for a small outlay. Write for a free copy. 2

R. DILLON & SON
OSHAWA, ONT.

Description .....
.....
2. That I am a British subject resident in the British Empire.
3. That the said animal is being imported into Canada for the improvement of stock.

And I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

DECLARED before me this...)
day of .....A. D....19.....)
at .....)
Title of person authorized)
to take this declaration)

Declaration to be made by one of several owners.

Dominion of) I, ...of
Canada, Pro-) the ..... of .....in the
vince of) county of .....
To wit) Occupation.....

Do solemnly declare:

1. That.....and I are the owners of the animal described as follows being the identical animal for which application is herewith made for free entry into Canada, viz'—
Description .....
.....
2. That each of the said owners is a British subject resident in the British Empire.
3. That the said animal is being imported into Canada for the improvement of stock.

And I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

DECLARED before me this...)
day of .....A. D....19.....)
at .....)
Title of person authorized)
to take this Declaration)

Removal of Afterbirth.

Editor Maritime Farmer'

A few years ago I read in the paper something to remove the afterbirth from a cow. I think it was in your valuable paper; if not, perhaps you can give the information I wish. As I remember it, it was to use some quantity of iron in water and inject into the womb. If you can give me this information, or something better, you will oblige me very much.—J. B. M.

We do not find recommended any vaginal injections for the purpose of bringing away the retained placenta or afterbirth in a cow. Have also talked with some men who ought to know if such a method is anywhere used, none of whom have ever heard of it. Some of the works on veterinary obstetrics make mention of some emmenagogues, to be administered by the mouth, but the best method accepted by reliable stockmen seems to be simply to keep the cow in a good laxative condition, and if the afterbirth does not come away in twenty-four hours, to remove it by hand, being extremely careful not to rupture any of the other membranes in so doing. When retention is caused by drinking iced water or frozen food, the giving of hot drinks, hot mashes of wheat bran, or other laxative foods ought to be sufficient. If more of a laxative is needed, a pound and a half of Glauber salts in four quarts of water, an ounce of ginger in a quart of sweet oil, or a bottle or two of flaxseed tea, are good doses.

The removal of an afterbirth which has been retained more than twenty-four hours will be somewhat disagreeable and dangerous on account of the decomposition which will have commenced. If the trouble is of some days' standing, as occasionally happens with the cow, we would think the advice of a veterinary quite essential.

Not Always a Good One.

A pure-bred pig is not always a good one. This is because pigs are not always pure bred and because inferior specimens are always found in all kinds of breeds. The parent stock may be properly mated, may be bred on the wrong principles, or may be produced from stock that has been bred according to wrong ideals; ideals that are not conducive to the production of the best kind of a market animal. Where these conditions exist it is true improvement may be made by cross breeding, but this may also be done by good pure breeding. —W. D.

The Man Who Drives An Automobile Finds

SNAP

The Only cleaner that will effectually remove grease, oil or paint stains and leave the hands smooth and soft. 100% better than soap. Your Dealer Sells Snap. 15c. a Can. Save the Coupons.

Snap Company Limited, Montreal

THE PLAYTIME WASHER

Means a saving of money to the farmer and his wife. The time and energy spent over the wash tub could be employed more profitably in some other way. It might mean more and better butter, poultry, fruit and eggs. The "Playtime" is adapted to either hand or power operation. In either case it eliminates the HARD work of washing and saves wear and tear on the clothes.

Ask your dealer to show you the "Playtime" or send to us for full information 109

Cummer-Dowswell Ltd., Hamilton, Ont.

Sounds the 150% like West

The increase in enrollment of new students at

FREDERICTON The Business COLLEGE

W. J. OSBORNE PRINCIPAL.

for the months of January and February was 150% over that for the same months of 1912.

Spring term opens April 1st.

Send for free catalogue. Address,

W. J. OSBORNE, Principal, Fredericton, N, B.

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"The Best"

For Potatoes For Grain For Fruit

The base of our formulas is Bone-Blood and Tankage--with Chemical Salts added to give the crops an early and vigorous start.

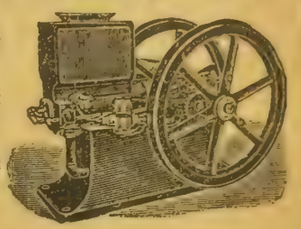
Our fertilizers will not cake and will run in the planter.

Write for prices and agents terms

COLONIAL FERTILIZER CO., WINDSOR, N. S.

Buy a "Made in Canada" Fertilizer

MAKE A "MONARCH" DO YOUR CHORES

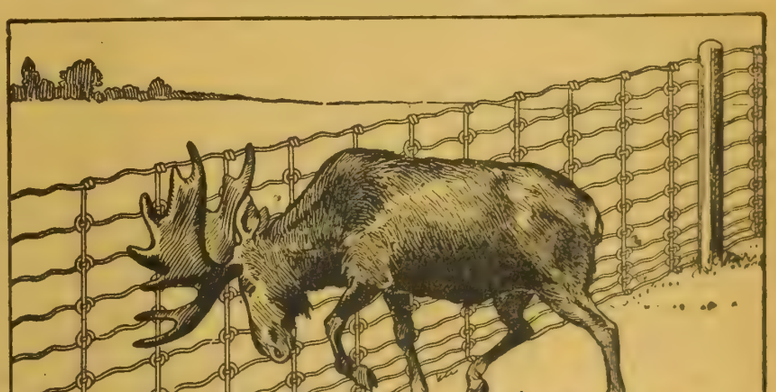


Our special factory for building farm engines has experts to work on each part of the "Monarch." It is built different from ordinary engines, with very big bearings (adjustable), over-size carbon-steel shaft, etc. Besides, it has equipment not found ordinarily—protected fuel tank and sight guage in base, governor, timer, primer, etc. It is the best engine made—Sizes: 1 1-2 to 35 h.p., for farms.

Ask for our "RED-CIRCLE" folder, and our easy buying terms and catalogue. A post card will do.

CANADIAN ENGINES LIMITED, DUNNVILLE, Ont.

Sole Selling Agents for Eastern Ontario, Quebec and Maritime Provinces, The Frost & Wood Co., Limited, Smith's Falls, Ont.



This Fence Has Vast Strength

For a fourth less than the price we pay, we could get hard-drawn steel wire. But that kind, though used in most other wire fence, hasn't the *life*, the springiness, the strength we insist on for Maritime Wire Fence.

* * * *

So we make this fence of extra-heavy hard drawn steel wire of nine-gauge. Constantly we test it for quality. And so we *know* this fence has *more* strength than it probably will ever need.

* * * *

Yet the price of Maritime Wire Fence is no higher than you must pay for ordinary fence. But the life of the Maritime Fence is far longer—and the fence surely reliable.

* * * *

On this extra-quality wire we put a smooth, even heavy coat of galvanizing. We put on more than enough—that's our way. You gain by the longer life of this better fence. And we lock laterals and upright wire rigidly, yet springily, with a cross-leverage lock that simply CANNOT let go under the hardest strain.

* * * *

You can bank on the strength of this fence Make the test for yourself and your neighbors. Then get the agency—it will pay you well. Address

NEW BRUNSWICK WIRE FENCE CO., Ltd., Moncton, N.B.

MARITIME WIRE FENCE

It Pays to Advertise in the Maritime Farmer.

THE HORSE.

Wart and Lump on Filly's Shoulder.

Would you kindly tell me the best way to remove and prevent small lumps, like pimples, on a filly? They are situated down along the shoulder just where the collar would rest—four in number. She had similar small lumps on her shoulder last summer, which became sore from the pressure of the collar, when for reasons not necessary to explain, I turned her out to grass, when after a while several more appeared, scattered about in the region of the humerus. On the approach of winter they went away, but are reappearing now in a different place. She was fed with good hay morning and night, just what she would clean up, in the stable last winter, with a run out to a bare pasture most part of each day but had no grain for the last twelve months, and very little previous. She has been at grass the last four weeks, and is improving in condition every day. It may be due to fulness of blood, as the dam had a scruff on the back of her neck from that cause every summer until she was about twelve years old, although working constantly on the farm. The filly is well bred, five years old, about 14 hands 3 in. high, and in good condition now. There is also what appears to be a wart on her neck, near the others, about the eize and shape of half a vetch seed.—F. W.

Answer: The small lumps like pimples are probably what is popularly known as surfeit, a condition not uncommon in the spring, and associated with changing of the coat or with indigestion. Fulness of blood is often only another name for stomach disturbance. Unless, in your case, friction from the harness causes soreness, the pimples or eruptions rarely occasion much inconvenience. Very often they remain only a few days, the cuticle peels off, and a small scaly spot is left. Sometimes, however, the eruption assumes a more virulent form, and it is desirable to give a dose of physic and a change of diet. The usual method of treatment is to give a few doses of alterative medicine. An example is 2 oz. each of sublimed sulphur, black antimony, nitrate of potash, and powered fenugreek. Mix, store in a covered tin, and give a tablespoon every night in damped food—crushed oats, bran and chaff. With reference to the wart, apparently it is of a shape and size that precludes the possibility of tying a ligature round it, and the most effctive treatment will be excision. With such a small excrescence and not in the way, we should be inclined to leave it until it grows larger, especially as it may disappear spontaneously.

Standard Bred Horse Association.

Members of the Canadian Standard Bred Horse Association decided at their annual meetingly recently to organize a national troting and pacing association similar to the American Trotting Association and the National Trotting Association to control racing in Canada. A committee consisting of Messrs. O. B. Shephard, and George Pepper, of Toronto, and James Cowan, of Cannington, was appointed to bring about the organization and incorporation of the Association. The decision is regarded by horsemen as one of the most important events that has happened for many years in the interest of the standard bred horse.

It is now the intention of the new association to become a money making concern. All money from racing, membership fees, etc., after paying the legitimate expenses of conducting the Association, are to be used to advance the interests of the standard bred horse in both breeding and racing. Another important matter was dealt with. The government is bouncing owners of the thoroughbred stallions, who, for nominal figure, place their horses at the disposal of farmers in certain districts, and the standard breed men, feel that the same might be done for them, claiming that there is no better cross for remounts, than the Thoroughbred, crossed with the Standard bred.

All the growth and thrift that can be encouraged and maintained during the first year of a colt's life insure a stronger and a better horse.

Lump on the Hock Joint.

A. C. F. I have a four-year-old horse with a hard lump on his hock joint. I do not know, for sure, if it is a spavin. Could you, in your paper, The Maritime Farmer, let me know of some remedy for it? He mired down in the mud and floundered around; next day it swelled up and I doctored with spavin cure and it got soft after two weeks' treatment, so I could press on it with my fingers, and it would take the shape of my fingers for a while; then it grew hard again. He does not limp and it does not seem to affect him at all.

Answer—If this animal is not lame there is no necessity of much treatment. It is likely that the enlargement can be reduced somewhat by blistering. Rub a cantharides blister in well at night and wash off in the morning, then keep greased so that the skin will not get too dry. While the blister is on the animal its head should be tied so that he cannot get his mouth to it.

Splints.

During the development of splint, when the exostosis is forming there is sometimes lameness of a severe character, caused by the painful stretching of the membrane covering the bone; but when the periosteum has accommodated itself to the presence of the enlargement, the lameness ceases, and, the inflammatory stage being past, it rarely recurs. There are, however, thousands of cases of splint to be met with in which the animal never shows sign of lameness for a single day.

Thus the treatment of splint depends entirely on circumstances—mainly on its stage of development and whether or not lameness is present. Age has a great influence, and if the horse is young, or the splint developed at pasture, or has been in existence for some time, there is rarely any lameness, and the question is one of letting it alone or trying to remove the eyesore or blemish. It is difficult to persuade the owner to let it alone, more particularly if he thinks some day of selling the animal, because, as he expresses it, he fears—and perhaps not without reason—that it will "go against him." The wisdom of interfering with a fully-formed splint when the irritation and inflammation attending its growth have passed away, and the horse is going sound again, or in those cases in which there has been no lameness during its formation, is

Horsemen Attention!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and pr eserve the life of your horses. heir use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pinkeye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Troubl, Fevers, Cuts, Sores and will remove bunches of all kinds.

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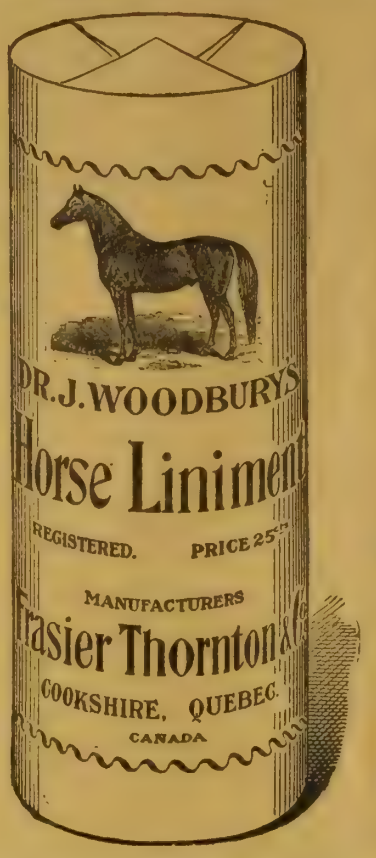
Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

For Sale all Dealers

Price 25 cents



Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

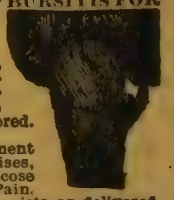
Demand

DR. J. Woodbury's Horse Liniment

AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

Don't Cut Out A SHOE BOIL, CAPPED HOCK or BURSITIS FOR ABSORBINE



will remove them and leave no blemishes. Cures any puff or swelling. **Does not blister or remove the hair.** Horse can be worked. $2.00 per bottle delivered. **Book 6 E free.**

ABSORBINE, JR., liniment for mankind. For Boils, Bruises, Old Sores, Swellings, Goitre, Varicose Veins, Varicosities. Allays Pain. Price $1 and $2 a bottle at druggists or delivered. Will tell more if you write. Manufactured only by **W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca**

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Fullline of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

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IS without real serious meaning to many thousand farmers because they think it is too hard work or it is not convenient to work a horse. So many farmers fail to understand what truly wonderful possibilities there are in modern hand tools

IRON AGE Wheel Hoes and Drills

(Now made in Canada)

do all of the sowing, hoeing, cultivating, weeding, furrowing, ridging, etc., in any garden with better results, far less work and some real pleasure for the operator. 38 or more combinations at $3.00 to $15.00. Ask your dealer about them and write us for new booklet. "Gardening with Modern Tools" also copy of our paper "Iron Age Farm and Garden News"—both are free.

The Bateman-Wilkinson Co., Limited
234 Symington Ave., Toronto, Ontario

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Fine leather tops, hardwood sole and heel, cosily lined with warm felt. All sizes for men and women, delivered, all charges paid, ONLY
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$60 Engine

Runs small machinery like pumping water, churns, small drag saw, ice cream freezers, or as good as any two men on the farm, drop a line for circulars and other sizes.

Guarantee Motor Co.,
70 Bay N, Hamilton, Ont.

very doubtful.

Leaving for the moment the case of the simple splint without lameness, let us suppose a case where the formation is recent and the lameness excessive. Young horses straight from grass, or brought from country work, and put to labor on hard or paved roads in towns, very often fall lame with splint, and the better their action the greater the liability and the more severe the lameness. The shock of concussion is greater. There is in this class of case the inflammatory stage to be treated, and here a grave mistake is often made in applying stimulants. Blisters, embrocations, liniments, of "oils" should never be applied until the inflammation has been abated, or has passed away as the result of time and rest. At this stage rest is imperative, not only because to use a lame horse is cruelty, and the owner risks a prosecution, but for the more speedy restoration to usefulness. Work during the stage of inflammation and lameness, or too soon after the lameness has disappeared, prolongs it or causes it to recur. We have known many cases where rest and cold water irrigation, followed by further rest at grass, has proved equal to the cure of splint lameness, without any other treatment. A dose of physic proportionate to the size of the animal is decidedly useful as a preliminary to treatment by rest and cooling lotions. Examples of refrigerating and sedative lotions are' (1) Hydrachlorate of ammonia, 2 drachms; acetic acid, 2 oz.; methylated spirit, 4 oz.; water 1 quart. (2) Acetate of lead, ½ oz.; acetic acid, 2 oz.; tincture of arnica, 4 oz.; rain or distilled water, 1 quart. Apply on linen bandages. When the inflammation has been reduced, as shown by there being less heat in the part and less pain on pressure or movement, is quite time enough to think about blistering, setoning, subcutaneous periostiotomy, or firing, and none of these are recommended unless the lameness persists, and permanent lameness from splint per se is rare. If a blister is thought desirable, the most useful form of vesicant for any bony enlargement is biniodide of mercury ointment of a strength of 1 to 7 of lard or lanoline. Where, as commonly happens, the owner is not content to "wait and see," but feels he must, as he expresses it, "do something at it," or try to "take off" the splint, the least hurtful, and likely to be the most successful, is the prolonged use of iodine. Where there is a splint from which the animal is not lame, and therefore being capable of being kept at work, the best way to use iodine is in the form of an ointment made by mixing together 1 drachm of resublimed iodine and 1 scruple of iodide of potassium with a few drops of spirit of wine and 7 drachms of benzoated lard. Shave the hair closely from over the enlargement, and—twice a week for the first week, and once a week subsequently—rub in a piece of the size of a small hazel nut. Immediate results, if any, must not be expected, and the application must be continued for some time. Iodine is, however, a capital absorbent, does not blister if judiciously used, and therefore does not interfere with the animal being worked.

Horses in Winter.

Professor J. H. Shepperd, of the North Dakota Agricultural College, answering a question recently about wintering horses on straw, says:

The North Dakota Station did a considerable amount of work in horse feeding a number of years ago and made extensive trails with oat straw, as compared with hay, for roughage. In the trial it was found that some horses did about as well on it as they did on hay. While others were very much harder to carry, chiefly because their appetites for roughage were too light to cause them to eat enough of it. Aside from those dainty animals there was little trouble in keeping them up on oat straw as roughage.

The oat straw used was that of a normal season, which was coarser and more woody than that which had been obtained this year. The trial consisted of a period of sixty days' feeding with oats as the grain ration against a similar period with oats and hay, and sixty days' feeding with a mixture of half and half bran and shorts by weight with hay compared with sixty days' feeding bran and shorts with oat straw.

During the first thirty days winter conditions were present and the horses were used only about enough for good exercise. During the second thirty days they were worked at harrowing, discing and seeding and had nearly all of that work the last half of the month. The horses receiving oats and hay as a ration required nine and one-third pounds of oats with hay to carry them, while those on oats and straw consumed eleven and one-half pounds of oats per day. During the thirty days that they had light work, the horses on hay gained 176 pounds and the three on straw 169 pounds. During the thirty days when they had heavy work one-half of the time, those on the hay lost 340 pounds and those on straw 345 pounds.

The similar lot of horses fed on bran and shorts, half and half by weight, gained during the winter conditions, 88 pounds when fed hay, and 83 pounds when fed strgw. When they were on the straw ration with heavy work for one-half of the month they lost 225 pounds, and on the hay ration 235 pounds.

These results indicate that horses can be carried almost as successfully on straw as roughage as they can on hay, provided enough additional grain is given them to supply them with sufficient nourishment. The additional grain required is about one-fifth. If the feeder has facilities for chaffing the straw and will moisten it and mix the grain fed with it during the season when the animals are required to do very little work, a smaller amount of grain will carry them.

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Maritime Poultry Supply Co., Moncton—Cock, 2nd; hen, 3rd.

Amos Doume, Centreville—Hen, 1st; cockerel 1st and 3rd; pullet, 1st, 2nd and 3rd.

BARRED ROCKS.

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Amos Dounie—Hen, 1st; cockerel, 1st and 3rd; pullet, 1st, 2nd and 3rd.

BUFF ROCKS.

Hartland Poultry Yards—Cock, 1st; hen, 1st.

WHITE WYANDOTTES.

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Maritime Poultry Supply Co.—Cock, 2nd; cockerel, 2nd; pullet, 2nd.

Frank A. Aiton, Hartland—Cock, 3rd; cockerel, 3rd.

J. W. Stickles, St. Marys—Hen, 2nd.

BUFF WYANDOTTES.

Hartland Poultry Yards—Cock, 1st; hen, 1st; pullet, 1st.

SILVER WYANDOTTES.

Hartland Poultry Yards—Cock, 1st; hen, 1st.

Geo. M. Pryor, Marysville—Hen, 2nd; cockerel, 1st.

ROSE COMB, R. I. REDS.

G. H. Seaman, Moncton—Cock, 1st; hen, 1st and 2nd; cockerel, 1st and 2nd; pullet, 1st and 2nd.

G. Tennant, Fredericton—Cock, 2nd; hen, 3rd.

L. C. Carten, Fredericton—Cockerel, 3rd.

Dr. Cox, Fredericton—Pullet, 3rd.

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N. J. Govang, Moncton—Cockerel, 2nd.

BUFF ORPINGTON.

Hartland Poultry Yards—Hen, 1st; cockerel, 1st; pullet, 1st.

BLACK ORPINGTON.

Hartland Poultry Yards—Cock, 1st hen, 2nd; pullet, 2nd.

W. P. Wilson, Marysville—Cock, 2nd; hen, 1st; cockerel, 1st; pullet, 1st.

WYANDOTTES (ANY OTHER VARIETY)

Hartland Poultry Yards—Cock, 1st and 2nd; hen, 2nd; cockerel, 3rd; pullet, 2nd.

A. E. Bell, Hoyt Station—Hen, 1st; cockerel, 2nd; pullet, 1st.

V. L. Matthews, St. Marys—Hen, 3rd; cockerel, 1st; pullet, 3rd.

SINGLE COMB R. I. REDS.

M. Merritt, Marysville—Cock, 1st; hen, 1st; pullet, 2nd.

A. D. Thomas, Fredericton—Hen 3rd; cockerel, 1st and 3rd; pullet, 3rd.

Louise C. Brown, St. John—Cockerel, 2nd; pullet, 1st.

GOLDEN WYANDOTTES.

Hartland Poultry Yards—Cock, 1st; hen, 1st; cockerel, 1st; pullet, 1st.

WHITE ORPINGTONS.

A. E. Bell, Hoyt Station—Cock, 1st; hen, 1st and 2nd; pullet, 1st.

W. Craig, Nashwaaksis—Cockerel, 1st; pullet, 2nd.

DORKINGS.

Hartland Poultry Yards—Cock, 1st; hen, 1st and 2nd; pullet, 1st.

N. J. Govang—Pullet, 2nd.

LIGHT BRAHMAS.

Hartland Poultry Yards—Cock, 1st; hen, 1st; pullet, 2nd.

F. M. Merritt, Marysville—Cock, 2nd; hen, 2nd; cockerel, 1st; pullet, 1st.

DARK BRAHMAS.

Hartland Poultry Yards—Cock, 1st; hen, 1st; cockerel, 2nd; pullet, 3rd.

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V. E. Walker, Fredericton—Cockerel, 1st.

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Hartland Poultry Yards—Hen, 1st; cockerel, 1st; pullet 1st.

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Hartland Poultry Yards—Cock, 1st; hen, 1st; cockerel, 1st; pullet, 1st.

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S. C. WHITE LEGHORNS.

F. M. Merritt, Marysville—Cock, 1st and 2nd; hen, 1st; cockerel, 1st and 2nd; pullet, 1st and 2nd.

Maritime Poultry Supply Co., Moncton—Cock, 2nd; hen, 2nd; cockerel, 3rd; pullet, 3rd.

A. E. Crowley, Fredericton—Hen, 3rd.

R. C. WHITE LEGHORNS.

N. J. Govang, Moncton—Cock, 1st; hen, 2nd and 3rd; cockerel, 1st; pullet, 2nd and 3rd.

Hartland Poultry Yards—Cock, 2nd; hen, 1st; cockerel, 2nd; pullet, 1st.

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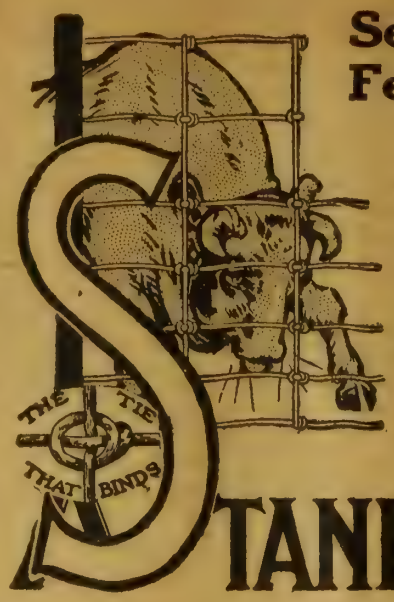

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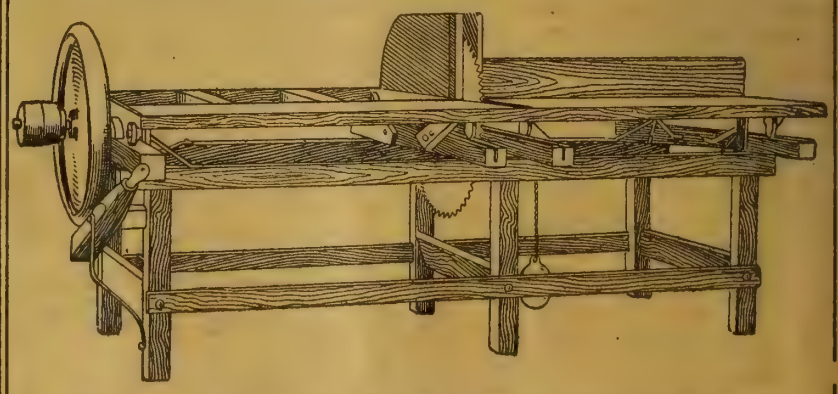

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(Continued on page 407)

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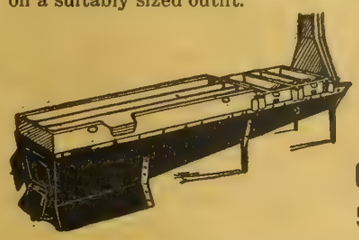

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THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue.)

Here everybody cried out, "Shame, J. Steesforth! Too bad!" It was Traddles whom Mr. Mell instantly discomfited by bidding him hold his tongue.

—"To insult one who is not fortunate in life, sir, and who never gave you the least offence, and the many reasons for not insulting whom you are old enough and wise enough to understand," said Mr. Mell, with his lip trembling more and more, "you commit a mean and base action. You can sit down or stand up as you please, sir. Copperfield go on."

"Young Copperfield," said Steerforth, coming forward up the room, "stop a bit. I tell you what, Mr. Mell, once for all. When you take the liberty of calling me mean or base, or anything of the sort, you are an impudent beggar. You are always a beggar you know; but when you do that, you are an impudent beggar."

I am not clear whether he was going to strike Mr. Mell, or Mr. Mell was going to strike him, or there was any such intention on either side. I saw a rigidity come upon the whole school, as if they had been turned into stone, and found Mr. Creakle in the midst of us, with Tungay at his side, and Mrs. and Miss Creakle looking in at the door as if they were frightened. Mr.Mell, with his elbows on his desk and his face in his hands, sat, for some moments, quite still.

"Mr. Mell," said Mr. Creakle, shaking him by the arm; and his whisper was so audible now, that Tungay felt it unnecessary to repeat his words; "you have not forgotten yourself, I hope?"

"No, sir, no," returned the master, showing his face, and shaking his head, and rubbing his hands in great agitation. "No, sir, no. I have remembered myself, I—no, Mr. Creakle, I have not forgotten myself, I—I have remembered myself, sir. I—I—could wish you had remembered me a little sooner, Mr. Creakle. It—it—would have been more kind, sir, more just, sir. It would have saved me something, sir."

Mr. Creakle, looking hard at Mr. Mell, put his hand on Tungay's shoulder, and got his feet upon the form close by, and sat upon the desk. After still looking hard at Mr. Mell from his throne, as he shook his head, and rubbed his hands, and remained in the same state of agitation, Mr. Creakle turned to Steerforth, and said:

"Now, sir, as he don't condescend to tell me, what is this?"

Steerforth evaded the question for a little while; looking in scorn and anger on his opponent, and remaining silent. I could not help thinking even in that interval, I remember, what a noble fellow he was in appearance, and how homely and plain Mr. Mell looked opposed to him.

"What did he mean by talking about favorites, then?" said Steerforth, at length.

"Favorites?" repeated Mr. Creakle, with the veins in his forehead swelling quickly. "Who talked about favorites?"

"He did," said Steerforth.

"And pray, what did you mean by that, sir?" demanded Mr. Creakle, turning angrily on his assistant.

"I mean, Mr. Creakle," he returned in a low voice, "as I said; that no pupil had a right to avail himself of his position of favoritism to degrade me."

"To degarde you?" said Mr. Creakle. "My stars! But give me leave to ask you, Mr. What's-your-name;" and here Mr. Crealke folded his arms, cane and all, upon his chest, and made such a knot of his brows that his little eyes were hardly visible below them; "whether, when you talked about favorites you showed proper respect to me? To me, sir," said Mr. Creakle, darting his head at him suddenly, and drawing it back again, "the principle of this establishment, and your employer."

"It was not judicious, sir, I am willing to admit," said Mr. Mell. "I should not have done so, if I had been cool."

Here Steerforth struck in.

"Then he said I was mean, and then he said I was base, and then I called him a beggar. If I had been cool, perhaps I shouldn't have called him a beggar. But Idid, and I am ready to take the consequences of it."

Without considering, perhaps, whether there were any consquences to be taken, I felt quite in a glow at this gallant speech. It made an impression on the boys, too, for there was a low stir among them, though no one spoke a word.

"I am surprised, Steerforth—although your candor does you honor," said Mr. Creakle, "does you honor certainly—I am surprised, Steerforth I must say, that you should attach such an epithet to any person employed and paid in Salem House, sir."

Steerforth gave a short laugh.

"That's not an answer, sir," said Mr. Creakle, "to my remark. I expect more than that from you, Steerforth."

If Mr. Mell looked homely, in my eyes, before the handsome boy, it would be quite impossible to say how homely Mr. Creakle looked.

"Let him deny it," said Steerforth.

Deny that he is a beggar, Steerforth?" cried Mr. Creakle. "Why, where does he go abegging?"

"If he is not a beggar himself, his near relation's one," said Steerforth. "Its all the same."

He glanced at me, and Mr. Mell's hand gently patted me upon the shoulder. I looked up with a flush upon my face, and remorse in my heart, but Mr. Mell's eyes were fixed on Steerforth. He continued to pat me kindly on the shoulder, but he looked at him.

"Since you expect me, Mr. Creakle, to justify myself," said Steerforth, "and to say what I mean—what I have to say is, that his mother lives on charity in an alms-house."

Mr. Mell still looked at him, and still patted me kindly on the shoulder and said to himself in a whisper, if I heard right: "Yes, I thought so."

Mr. Creakle turned to his assistant, with a severe frown and labored politeness:

"Now you hear what this gentleman says, Mr. Mell. Have the goodness, if you please, to set him right before the assembled school."

"He is right, sir, without correction," returned Mr. Mell, in the midst of a dead silence; "what he has said is true."

"Be so good as to declare publicly, will you," said Mr. Creakle, putting his head on one side, and rolling his eyes round the school, "whether it ever came to my knowledge until this moment?"

"I believe not directly," he returned.

"Why, you know not," said Mr. Creakle. "Don't you, man?"

"I apprehend you never supposed my worldly circumstances to be very good," replied the assistant. "You know what my position is and always has been here."

"I apprehend, if you come to that," said Mr. Creakle, with his veins swelling again bigger than ever, "that you've been in a wrong position altogether, and mistook this for a charity school. Mr. Mell, we'll part, if you please. The sooner the better."

"There is no time," answered Mr. Mell, rising, "like the present"

"Sir, to you!" said Mr. Creakle.

"I take my leave of you, Mr. Creakle, and all of you," said Mr. Mell, glancing round the rokm, and again patting me gently on the shoulder. "James Steerforth, the best wish I can leave you is that you may come to be ashamed of what you have done today. At present I would prefer to see you anything rather than a friend, to me, or to any one in whom I feel an interest."

Once more he laid his hand upon my shoulder; and then taking his flute and a few books from his desk, and leaving the key in it for his successor, he went out of the school, with his property under his arm. Mr. Mr. Creakle then made a speech, through Tungay, in which he thanked Steerforth for asserting (though perhaps too warmly) the independence and respectability of Salem House; and which he wound up by shaking hands with Steerforth, while we gave three cheers—I did not quite know what for, but I supposed for Steerforth, and so joined in then ardently though I felt miserable. Mr. Creakle then caned Tommy Traddles for being discovered in tears, instead of cheers, on account ol Mr. Mell's departure; and went back to his sofa, or his bed, or wherever he had come from.

We were left to ourselves now, and looked very blank, I recollect, on one another. For myself, I felt so much self-reproach and contrition for my part in what had happened, that nothing would have enabled me to keep back my tears but that the fear that Steerforth, who often looked at me, I saw, might think it unfriendly —or, I should rather say, considering our relative ages, and the feeling with which I regarded him, undutiful —if I showed the emotion which distressed me. He was very angry with tradd

Traddles, and said he was glad he had caught it.

Poor Traddles, who had passed the stage of lying with his head upon the desk, and was relieving himself as usual with a burst of skeletons, said he didn't care, Mr. Mell was ill-used.

"Who has ill-used him, you girl?" said Steerforth.

"Why, you have," returned Traddles.

"What have I done?" said Steerforth.

"What have you done?" retorted Traddles. "Hurt his feelings and lost him his situation."

"His feelings!" repeated Steerforth disdainfully. "His feelings will soon get the better of it, I'll be bound. "His feelings are not like yours, Miss Traddles. As to his situation—which was a precious one, wasn't it?—do you suppose I am not going to write home, and take care that he gets nsome money? Polly?"

We thought this intention very noble in Steerforth, whose mother was a widow, and rich, and would do almost anything, it was said, that he asked her. We were all extremely glad to see Traddles put down, and exalted Steerforth to the skies; especially when he told us, as he condescended to do, that what he had done had been done expressly for us, and for our cause, and that he had conferred a great boon upon us by unselfishly doing it.

But I must say that when I was going on with a story in the dark that night, Mr. Mell's old flute seemed more than once to sound mournfully in my ears; and that when at last Steerforth was tired, and I lay down in my bed, I fancied it playing so sorrowfully somewhere, that I was quite wretched.

I soon forgot him in the contemplation of Steerforth, who, in an easy amateur way, and without any book

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(he seemed to know everything by heart), took some of his classes until a new master was found. The new master came from a grammar-school, and before he entered on his duties, dined in the parlor one day, to be introduced to Steerforth. Steerforth approved of him highly, and told us he was a brick. Without exactly understanding what learned distinction was meant by this, I respected him greatly for it, and had no doubt whatever of his superior knowledge: though he never took the pains with me—not that I was anybody—that Mell had taken.

There was only one other event in this half-year, out of the daily school life, that made an impression on me that still survives. It survives for many reasons. One afternoon, when we were all harassed into a state of dire confusion, and Mr. Creakle was laying about him dreadfully, Tungay came in, and called out in his usual strong way' "Visitors for Copperfield!"

A lew words were exchanged between him and Mr. Creakle, as, who the visitors were, and what room they were to be shown into; and then I, who had, according to custom, stood up on the announcement being made, and felt quite faint with astonishment, was told to go by the back stairs and get a clean frill on, before I repaired to the dining-room. These orders I obeyed, in such a flutter and hurry of my young spirits as I had never known before; and when I got to the parlor door, and the thought came into my head that it might be my mother—I had only thought of Mr. or Miss Murdstone until then—I drew back my hand from the lock, and stopped to have a sob before I went in.

At first I saw nobody; but feeling a pressure against the door, I looked round it, and there, to my amazement, were Mr. Peggotty and Ham, ducking at me with their hats, and squeezing one another against the wall. I could not help laughing; but it was much more in the pleasure of seeing them, than at the appearance they made. We shook hands in a very cordial way; and I laughed and laughed; until I pulled out my pocket handkerchief and wiped my eyes.

Mr. Peggotty (who never shut his mouth once, I remember, during the visit) showed great concern when he saw me do this, and nudged Ham to say more things.

"Cheer up, Mas'r Davy boy!" said Ham, in his simpering way. "Why, how you have growed!"

"Am I grown?" I said, drying my eyes. I was not crying at anything particular, that I know of; but somehow it made me cry, to see old friends."

"Growed, Mas'r Davy Boy? Ain't he growed!" said Ham.

"Ain't he growed!" said Mr. Peggotty.

They made me laugh again by laughing at each other, and then we all three laughed until I was in danger of crying again.

"Do you know how mamma is, Mr. Peggotty?" I said. "And how my dear, dear, old Peggotty is?"

"Oncommon," said Mr. Peggotty.

"And little Emjly, and Mrs. Gummidge?"

"On—common," said Mr. Peggotty.

There was silence. Mr. Peggotty to relieve it, took two prodigious lobsters, and an enormous crab, and a large canvas bag of shrimps, out of his pockets, and piled them up in Ham's arms.

"You see," said Mr. Peggotty, knowing as you were partial to a little relish with your wittles when you was along with us, we took the liberty. The old mawther biled 'em, she did. Mrs. Gummidge biled 'em. Yes," said Mr. Peggotty, slowly, who I thought appeared to stick to the subject on account of having no other

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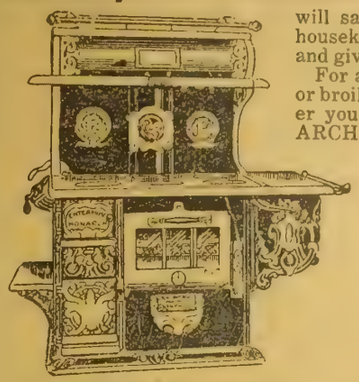

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Similar letters to the above are not infrequent, though, of course, such cases are not of long standing. Most women who have suffered for any length of time will require to use ORANGE LILY longer than the Trial Treatment in order to effect a complete cure, but in every case they will be perceptibly benefited. Further, the benefit will be permanent whether they continue to use ORANGE LILY or not. It is not taken internally, and does not contain any alcohol or other stimulant. It is an applied treatment, and acts directly on the suffering organs. In all cases of women's disorders, these organs are congested to a greater or less extent, and ORANGE LILY will relieve and remove this congestion just as positively and certainly as the action of ammonia or soap on soiled linen. It is a simple chemical problem, and the result is always the same, a step towards better health and complete cure.

In order that every suffering woman may prove its good qualities, I will send enough of ORANGE LILY for 10 day's treatment, absolutely free, to each lady who will send me her address. MRS. FRANCIS E. CURRAH, WINDSOR, ONT. 10

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subject ready, "Mrs. Gummidge, I do assure you, she biled 'em."

I expressed my thanks. Mr. Peggotty, after looking at Ham, who stood smiling sheepishly over the shell-fish, without making any attempt to help him, said'

"We come, you see, the wind and tide making in our favor, in one of our Yarmouth lugs to Gravesen'. My sister she wrote to me the name of this here place, and wrote to me as if ever I chanced to come to Gravesen', I was to come over and inquire for Mas'r Davy, and give her dooty, humbly wishing him well, and reporting of the family as they were oncommon toe-be-sure. Little Em'ly, you see, she'll write to my sister when I go back as I see you, and as you was similarly oncommon, and so we make it quite a merry-go-rounder."

I was obliged to consider a little before I understood whas Mr. Peggotty meant by this figure, expressive of a complete circle of intelligence. I then thanked him heartily; and said, with a consciousness of reddening, that I supposed that Em'ly was altered too, since we used to pick up shells and pebbles on the beach.

"She's gettiug to be a woman, that's what she's getting to be." said Mr. Peggotty. "Ask him."

He meant Ham, who beamed with delight and assent over the bag of shrimps.

"Her pretty face!" said Mr. Peggotty, with his own shining like a light.

"Her learning!" said Ham.

"Her writing!" said Mr. Peggotty. "Why it's as black as jet! And so large it is, you might see it anywhere."

It was perfectly delightful to behold with what enthusiasm Mr. Peggotty became inspired when he thought of his little favorite. He stands before me again, his bluff hairy face irradiating with a joyful love and pride for which I can find no description. His honest eyes fire up, and sparkle, as if their depths were stirred by something bright. His broad chest heaves with pleasure. His strong loose hands clench themselves in his earnestness; and he emphasises what he says with a right arm that shows, in my pigmy view, like a sledge hammer.

(Continued in next issue)

Teach Children Cleanliness.

Children should be taught neatness and cleanliness before they are old enough to be taught to read and spell The average mother will admit that her children seem to love dirt and abhor cleanliness. Children love to play in the dirt, at least most of them do. And not all kinds of so-called dirts are very dangerous. For example, a sandpile has a decided attraction for both girls and boys; and they can get pretty dirty in a sand pile. Then there is the mud pie industry at which little folks love to work; and tots will get disgracefully dirty, but no harm is done that soap and water will not speedily correct.

Just because the child gets dirty at its play is no reason that it should not be both permitted and encouraged to play at all of the healthful out-door pastimes. But children should be taught to be clean. They should be instructed early in the care of their mouths and teeth; to keep their hands and face clean; to bathe frequently and regularly as soon as they are old enough to perform those important offices for themselves; and by both training and custom the parents should inculcate this habit from infancy.

The idea in teaching children to be clean should be to dvelop in them hygienic habits. It is first necessary, of course, that the parents themselves should acquire the habit of

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Whooping cough generally begins as a common cold, accompanied with coughing and a slight discharge from the nose. It is, as a rule, more of a child's trouble but also affects adults.

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"Dr. Wood's" is put up in a yellow wrapper, three pine trees the trade mark; price 25 and 50 cents.

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Gentlemen,—My daughter, 13 years old, was thrown from a sleigh and injured her elbow so badly it remained stiff and very painful for three years. Four bottles of MINARD'S LINIMENT completely cured her and she has not been troubled for two years.

Yours truly,
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looking carefully after these things that have a direct bearing upon the health of their children. If this is done the children will soon form the habit of doing those things that make for bodily hygiene and for physical health and strength. This will mean that habits of eating, sleeping, excretion and bathing, the care of the teeth, mouth, eyes and those offices which, if carefully looked after and properly performed, tend to promote human health and efficiency, will be formed in early life and are not likely to be neglected in later years.—Chicago Department of Health

Soft Water for the Toilet.

If you would keep your skin and complexion in good condition, beware of washing in hard water. Endeavour to obtain filtered rain-water if possible. If this cannot be procured, the water must be softened by an artificial process. Here is a recipe for good water softener in the form of a powder:—Borax, in powder, half an ounce; white Castile soap, powdered, half an ounce; orris-root, two ounces; wheat flour, two ounces; almond meal, three ounces; oil of bitter almonds, five drops; oil of bergamot, one drachm. Mix throughly.

Add a tablespoonful of this to the water in which you intend washing the face, about two hours before using. A cheaper powder may be made by mixing together three ounces of fine ground oatmeal, three ounces of fine almond meal, and half an ounce of borax.

Good Receipes.

Drop Ginger Cookies—Two cupfuls of molasses, one cupful of butter, one cupful of sugar, four heaping tablespoonfuls of ginger, four heaping tablespoonfuls of soda, one cupful of boiling water, three eggs (beat well) and six cupfuls of flour. Dissolve the soda in the boiling water. Drop from teaspoon into a large bread-pan, leaving a good space between each one. This recipe will make eighty cookies.

Nut Cake—Three-fourths of a cupful of butter, one and one-half cupfuls of sugar, three eggs well beaten, one teaspoonful of soda in one and one-half tablespoonfuls of water, two cupfuls of flour sifited with salt, one tablespoonful of cinnamon, one cupful of nut-meats, one-half cupful of raisins, and one-half cupful of currants in one and one-fourth cupfuls of flour. Drop by tablespoonfuls one inch apart on buttered sheets. Bake in a moderate oven.

Home-Made Crackerjack—Take three pints of molasses and one cupful of white sugar and butter the size of an egg; boil as for taffffy. When done, add one teaspoonful of soda, and while foaming stir in eight or ten ears of nicely popped corn; pour out on a bread-board, and press into a square loaf, then roll out with a rolling pin until about an inch thick, and with a very sharp knife cut off in thin slices, and lay on a large platter to set. The cutting must be done while it is yet warm.

Eggless Cake—Crumb together one and one-half cupfuls of sugar, two and one-half cupfuls of flour, one teaspoonful. each, of nutmeg, cinnamon and alspice, one tablespoonful of lard, and, lastly, add one cupful of buttermilk and one teaspoonful of soda.

Banana Cake—One cupful of sugar, one and one-third cupfuls of butter, one-half cupful of sweet milk, three eggs, one teaspoonful of soda, two teaspoonfuls of cream of tartar, two cupfuls of flour, flavor to taste. Filling: mash two bananas to a cream, stir into boiled frosting, and put between layers. To be eaten the same day as made.

Spiced Beef-Tongue—Wash clean and

Eastlake Metallic Shingles

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25% CHEAPER TO LAY

"EASTLAKE" METALLIC SHINGLES are economical not only on account of their service and long life, but in many other ways.

"EASTLAKE" METALLIC SHINGLES can be laid twenty-five per cent. cheaper than any other shingles on the market.

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Due to the special construction of "EASTLAKE" METALLIC SHINGLES it is impossible for water, snow or sleet to back-wash or seep through. This prevents rotting of the timbers underneath, and contents of building are never spoiled.

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"EASTLAKE" METALLIC SHINGLES can be bent over the hip of the roof instead of having to be cut off and half the shingle wasted as with many others. This not only saves material, but saves a break in the roof, preventing a possible opening for leakage and damage.

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"EASTLAKE" METALLIC SHINGLE Roofs cost less than wooden shingle roofs equipped with lightning rods. With an "EASTLAKE" roof you do not need lightning rods, as they not only act as a lightning conductor, but are lightningproof and fireproof.

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Before roofing your buildings, investigate carefully all kinds of roofing, including "EASTLAKE." The more closely you investigate, the stronger you will be in favor of "EASTLAKE" METALLIC SHINGLES

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TO THE LIVE FARMER OUR PERFECT MAPLE EVAPORATORS AND A SUGAR BUSH CAN BE MADE TO PRODUCE A REVENUE WHEN IT IS MOST NEEDED.

With our Maple Evaporator, sap is easily and economically converted into the finest quality maple syrup.

The body of the perfect evaporator is made of heavy sheet steel thoroughly riveted and braced with steel angle and fitted with cast iron door and faame.

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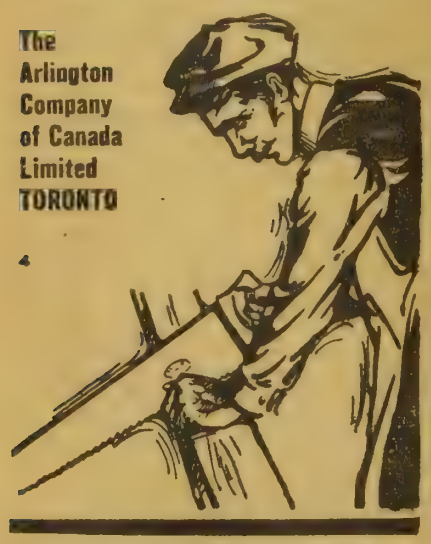
Hard work is no excuse for an untidy appearance. A Challenge Waterproof Collar with its dull linen-like finish will keep you neat and well-dressed. Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.



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For Frost Bites

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Gentlemen:--I had the misfortune to freeze my toe which caused me a great deal of suffering, and although I had it treated, yet without success till I used your Nerve Ointment, which has completely cured it, and I have no hesidency in recommending it to others as the best I ever used,

Yours sincereiy,
Matthew Wood,
Point Phillip, N. S.

HOW TO CONQUER RHEUMATISM AT YOUR OWN HOME

If you or any of your friends suffer from rheumatism, kidney disorders or excess of uric acid, causing lameness, backache, muscular pains; stiff, painful, swollen joints, pain in the limbs and feet; dimness of sight, itching skin or frequent neuralgic pains, I invite you to send for a generous Free Trial Treatment of my well-known, reliable Chronicure, with references and full particulars by mail. (This is no C. O. D. scheme.) No matter how many may have failed in your case, let me prove to you, free of cost, that rheumatism can be conquered. Chronicure succeeds where all else fails. Chronicure cleanses the blood and removes the cause. Also for a weakened, run-down condition of the system, you will find Chronicure a most satisfactory general tonic that makes you feel that life is worth living. Please tell your friends of this liberal offer, and send today for large free package, to MRS. M. SUMMERS, Box E. 309—Windsor, Ont.

Children are much more likely to contract the contagious diseases when they have colds. Whooping cough, diptheria, scarlet fever and consumption are diseases that are often contracted when the child has a cold. That is why all medical authorities say beware of colds. For the quick cure of colds you will find nothing better than Chamberlain's Remedy. It can always be depended upon and is pleasant and safe to take. For sale by all dealers.

neatly trim a large, fresh beef-tongue, and then drop into enough boiling water to cover it well. Add a half tablespoonful salt and a small pepper-pod. Cook slowly until the tongue can be pierced with a fork, adding boiling water from time to time, if needed. Take out, and peel off the skin. Put it again over the fire in a clean saucepan; add four tablespoonfuls of sugar, one tablespoonful, each of ground allspice and cloves, one cupful of water, one-half cupful of cider vinegar, and simmer until liquor has been evaporated. Turn on ice, cut into very thin slices, and garnish with sliced lemon and parsley.

Tomato Soup—Take two-thirds cupful of tomatoes (canned ones will do) a sprig of celery and one of parsley. Add one-half cupful of water, cook and strain. To this juice add pepper, salt and a teaspoonful of butter. return to fire, and after boiling begins add one-fourth teaspoonful of soda to prevent curdling of milk. Add one cupful of skim milk and and thicken with flour (one tablespoonful previously mixed with milk.) Just before serving add one-half cup ful of rich milk.

Fruit Pudding—One-half cupful of sugar, one tablespoonful of butter stirred into the sugar, one egg beaten into the two ingredients, one-half cupful of sweet milk, two cupfuls of flour, one teaspoonful of baking-powder, one pint of fruit of any kind. Steam one hour. Sauce to suit taste.

Filled Cookies—One cupful of chopped raisins, one-half cupful of sugar, one-half cupful of water and one tablespoonful of flour. Boil the mixture until thick, watch closely, as it burns easily. While the paste is cooking, make the cookie dough by using one cupful of sugar, one-half cupful of shortening, one egg, one-half cupful of milk, three and one-half cupfuls of flour, two teaspoonfuls of cream of tartar, one teaspoonful of soda and one of vanilla. Roll the dough thin, cut out, spread the top with the paste, put another cookie on top, and bake in a moderate oven.

Peach Dumplings—One pint of flour, two tablespoonfuls of butter, one-half teaspoonful of salt, one teaspoonful of salt, one teaspoonful of baking-powder and sweet milk to mix soft dough. Roll one-half inch thick. Take pieces of dough large enough to cover two halves of a peach, dot the tops with butter and brown sugar, place in a buttered pan, pour boiling water in the bottom of the pan, and bake in a hot oven three quarters of an hour.

Corn Cake—Take one cupful of cornmeal (bolted) and a cupful of flour. Mix together with two level teaspoonfuls of baking-powder. Beat one egg, and mix with one and one-half cupfuls of milk. Add one teaspoonful of salt and one tablespoonful of sugar. Beat all well together. Butter pan well and put on the stove, and heat hot. Put mixture into hot pan, and bake in quick oven from fifteen to twenty minutes.

For Baked Fowls—If one has small ones, the fowls are often burnt before done. This is the way I do with mine: If a small one, take a piece of old clean white cloth, fold five or six times, wring out of water, lay on top of the fowl and baste as often as necessary, not removing the cloth—the cloth keeps the steam in when fowl is tender. If not brown, remove the cloth and brown the fowl. It will be much sweeter and juicier in this way.

Chocolate Pie—One-fourth teacupful of chocolate, one teacupful of hot water, butter the size of an egg, one cupful of sugar, yolks of two eggs, two tablespoonfuls of corn-starch, dissolved. Mix well, cook, let cool, add one teaspoonful of vanilla, and pour in pie shell. Beat the whites of two eggs to a stiff froth, add two tablespoonfuls of sugar, spread on pie and brown in oven.

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Any Man May Easily Regain LOST VITALITY

Strong vigorous vitality, the crowning glory of mature, healthy manhood.

Do you know, reader, what this means to you?

If by these few simple inspired words (which every man may with profit read)

I should be the means of pointing out to you or other men the straight and sure, if narrow road to new manhood, new powers, new capacities for a better and more glorious physical and vital development, then in doing this I have rendered a great and lasting service to my fellow beings, and one which is infinite in its power for good

This self-same VITALITY, this builder of manhood and manly vigor, may easily be regained, and I will tell you how.

Have you ever stopped to consider that it is this VITAL FORCE which makes rugged men the real men that they are? It is this same MAN FORCE which is behind every great achievement in the world to-day, which gives the flower of our army and navy the courage to meet and face death unflinchingly, which gives the rough and rugged man of the plains that compelling power to rescue at all odds a loved one from some great peril, as our illustration here portrays, and it is this self-same, identical VITAL VIGOR which I must impart to you, reader, if you are not the man you should be.

Therefore, if I give you new vitality, I make you young again, and keep you feeling young the balance of your days. By increasing your vital supply, I soon have you answering "Simply feeling fine" to your friends' morning greetings, while they in their turn will secretly marvel at the wonderous change for the better which has come over you. A thoroughly vital, manly man is the greatest inspiration in the world; his power and fascination are felt by all women and all men alike who are near him. Nothing but death can conquer the giant of strength and manly vigor. On the other hand, how different with the half-man, the neurasthenic degenerate, who is burning up his vitality in dissipation and excesses! Is there any sight more pitiable, more repellent to one's sense of decency, then the weakling who deliberately kills his manhood and self-respect by acts of willful debauchery? Such a man has neither my sympathy nor can he profit by what of wisdom I can impart. But any man who is willing to make a fair, square fight for the return of his lost vitality and lost manhood, who will promise faithfully and honestly to discontinue any debasing practices or excesses he may be indulging, who will help me thus by helping himself to such, no matter how despondent he may be, no matter how weak and debilitated, no matter what years of folly have passed, to such a man I can offer all the encouragement in the world. Just lead a decent man's life, my friend, and then increase your VITALITY. All else will come.

I make and distribute a vitalizing appliance which I call a HEALTH BELT. I do not want you to get one of there HEALTH BELTS now nor to-morrow nor next week, for that matter, but first wish you to write for or call and get one of my little free books. I want you to thus have my whole story of this subject of VITALITY, so that you may judge for yourself. My HEALTH BELT, with suspensory attachment, is a complete treatment in itself; that is you place it comfortably around your waist nights when you go to bed and wear it at the time when you are asleep. The vitality which it produces and sends into your system hour after hour is felt as it flows in. There is no shock, but merely a pleasant, warm, soothing sensation which induces a sound, refreshing sleep. Weak back often disappears at once, and a better feeling is immediately experienced. Two or three months' wear is usually sufficient. The cost is nominal. With special attachments, my HEALTH BELT is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, etc.

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My book, as described above, will be sent in plain, sealed envelope to anyone who fills in the below coupon. It is fully illustrated with photo reproductions, printed on fine coated paper, and should be read by every man, young, middle aged or elderly, whether ailing or strong. Write or call to-day. Hours 9 to 6.

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Dear Sirs—Please forward me your Book, as advertised, free, sealed.

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An advertisement in the Maritime Farmer will sell your surplus stock---Try it!

Had a Weak Heart.

Doctored For Three Years Without Any Benefit.

Through one cause or another a large majority of people are troubled, more or less, with some form of heart trouble.

Little attention is paid to the slight weakness, but when it starts to beat irregularly, and every once in a while, pain seems to shoot through it, then it causes great anxiety and alarm.

Milburn's Heart and Nerve Pills will give prompt and permanent relief to all those suffering from any weakness of the heart or nerves.

Mrs. M. Shea, 193 Holland Ave., Ottawa, Ont., writes:—"I write you these lines to let you know that I have used Milburn's Heart and Nerve Pills. After doctoring for the last three years with all kinds of medicines and pills for weak heart, I heard of your Heart and Nerve Pills, so thinking I had never used anything that did me so much good, I kept on using them, and I had only used four boxes, when I was perfectly cured."

Price, 50 cents per box, 3 boxes for $1.25 at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address me personally;

E. N. MORRIS, Manager 1900 Washer Co'p'y.

357 Yonge Street, Toronto, Can.

Annual Report of the P. E. Island Dairymen.

The annual convention of the Prince Edward Island Dairymen's Association was held last week at Charlottetown.

The report of the Secretary shows that in the past year 25,201,885 lbs. of milk for cheese were supplied. Out of this 2,424,626 lbs. of cheese were manufactured—netting 2,930 farmers $258,495.17.

As to butter 12,200,944 lbs. of milk produced 527,494 lbs. of butter, netting 910 farmers the sum of $119,-023,39.

As compared with last year there was a falling off in the cheese manufactured amounting to about $2,000 and a gain in butter amounting to about $6,000.

Amongst interesting discussions Mr. William Cain of New Perth spoke on the care of machinery, Mr. Arthur Simpson on the advance of agriculture due to dairying, Messrs. A. A. Mc Neill of O'Leary, Adam Brown and Walter Simpson on milk testing.

Rev. Dr. Gauthier spoke on the education of the cheese maker.

Mr. Harvey Mitchell gave an address on dairying, which was followed by a discussion in which P. L. Gash, Emerald, and J. Noonan, Albany, took part.

The Secretary's report was followed by a discussion in which Mr. F. S. Cousins and Mr. Lauchlin Macdonald took part.

The question of taxing the factories was considered and it was decided that an amount not exceeding $650 be assessed.

At the evening session a resolution was past favoring a government short course in dairying.

After a general discussion on various subjects the following officers were elected:—President.—J. A. Dewar, M. P. P.; Vice-President—Arthur Simpson; Secretary Treasurer.—John Anderson; Directors:—Prince.—J. Noonan, Ernest Ellis; Queen's.—John Edmonds, D. Macdonald; King's—Lauchlin Macdonald; Auditor.—H. Jenkins. The following is Inspector Morrow's report:—

Mr. President and Gentlemen:—

It is satisfactory to be able to report to you as delegates, who represent the different Dairying Companies, that the factories, with about three exceptions were kept in a very satisfactory condition, as to clean lines. Some were not house-cleaned properly before starting, but were in good shape on my second visit.

A few require new floors, or the old ones properly repaired. Some of the cement floors have not been properly laid, and are badly broken which makes them anything but sanitary. This should be kept in mind by those who purpose putting in cement floors in the future.

Some of the old vats have been replaced by a proper steel vat which costs considerable more than a wooden one, but I consider them well worth the money.

A number of factories need whey tanks, and I would suggest to procure steel tanks, as they are both permanent and sanitary.

We still have some of those old rusty and broken milk cans to talk about. We will try and have to do away with them, and get new ones. When buying new you should take care to see that they are all well made, and all the seams properly floated with solder, as there are some very poor ones for sale; some of our tinsmiths have neglected to take the necessary precautions with regards to those two important points, viz., roughly made cans and poorly soldered.

With regard to the condition of the milk supply. We had such a cool sea-

(Continued on page 400)

MONEY IN POTATOES

$128.00 an acre Clear

Yes Sir! We can show you how to make it in potatoes, over and above the cost of seed, fertilizer, labor, marketing and your own time.

With the market price $1.00 a bag—and better, it's worth while going in strong for potatoes and getting every last bushel the ground will yield.

We can show you how to grow 240 bushels to the acre: how to get a double crop from the same outlay of labor and seed.

A lot of potato-growing experience is boiled down and plainly told in "Money in Potatoes." We have culled out the frills that a practical farmer has no time to read. The book is complete, but brief and to the point. See the list of subjects it covers. From this book you can see how other men have got the best results. You can grow and handle bumper crops of potatoes and take the long price.

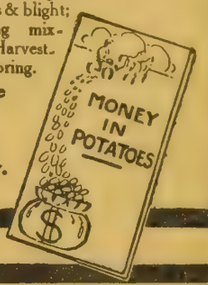
Clip the Big Crop Coupon to-day.

15

List of Subjects Covered by this Book.

Best Soil for Potatoes; Potatoes Help the Land; Preparing Soil; Fertilizing; Time to Plant; Selecting Seed, Cutting Seed; Depth to Plant; distance between hills; crop cultivation; Fighting bugs & blight; Spraying mixture; Harvesting; Storing.

Secure your free copy to-day.



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I am using the following machines for potato raising:

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The Canadian Potato Machinery Co., Limited
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As a Potato Grower I would like a free copy of your book, "Money in Potatoes."

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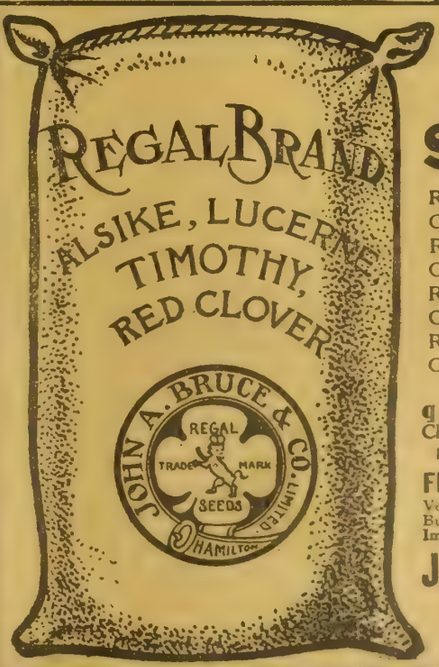

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Cotton Bags 25c. each.

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Someone Who Should be Remembered.

Somewhere today—in some city or town or out on some farm—a woman with a face you used to think the sweetest in all the world is waiting for something.

She is more than waiting—she is longing or maybe praying.

She goes on with her work, whatever it is, or her knitting or reading, but if you were where you could see, you'd notice she stops every little while to look toward the front gate or to find out who it was rang the doorbell!

When the postman or the rural delivery man comes, or when its time for the afternoon mail to be brought home from the post office, she is waiting to see what comes.

If there are any letters, she looks them over hurriedly and if ONE letter is not there, she lays them down and wonders a bit and then goes back to her work and her waiting.

Waiting for a letter from her boy or her girl!

Her boy or her girl who has gone away from home—and it's FAR away to her, no matter how few the miles!

She knows just how many days or weeks have passed since the last letter came.

She has read that letter over and over, and now that the waiting gets harder, she can't help thinking something may be wrong.

She has written four or five times since that letter came, so she just can not help worrying some. Of course, everything may be all right,—everything MUST be all right or surely she'd near—but if she had even a postal!

O "boy" or "girl" if you could be in her place for even a little while, you'd understand!

You'd understand so fully that no social or business engagement in all the calendar could keep you from writing at least a line or two to mother!

You will know some day, when your boy or girl has grown up and gone away from home, but likely it will be too late then to make any difference to your Mother.

Between now and the time you turn out the light tonight, write to her.

Between now and the time you turn out the light tonight, make the small effort—it doesn't take much to write a letter—that will cause the sun to rise in the old home tomorrow or the next day or the next.

Spend thirty or sixty minutes in loyalty to your first love. Make her heart happier than anything else could make it. Put a stop to all the wondering and the worrying and start a song that will carry across the miles and echo in your heart and make you happier, too.

Let the new-made "friends" wait, or pass them by altogether for one evening. Let some one else have the seat you would have filled in the country-bound trolley or the town-bound train. Telephone or send word to whoever may be expecting you that you're "glad you can't come." Tell why you're glad.

Then sit down and open your heart to her as you used to do when you came in from play or when she answered your call in the darkness.

As nearly as you can, write as you would talk, were she sitting close by.

Tell her of the burdens as well as the brightness, for there's nothing makes a mother so happy as to feel she can help her child over a rough place in the road.

Make her sure, SURE that your heart still keeps time with hers.

Then turn out the light and go to bed. You may not sleep, but you'll be happy.

"LION" BRAND OF RED CLOVER SEED

"ERMINE" BRAND OF TIMOTHY SEED

THESE TWO BRANDS LIKE THE PYRAMIDS HAVE STOOD THE TEST OF TIME AND HAVE PROVEN TO BE THE VERY BEST. YOU WILL MAKE NO MISTAKE IF YOU SOW THESE SEEDS FOR 1913

STEELE, BRIGGS SEED CO. LIMITED

HAMILTON TORONTO WINNIPEG

"CANADA'S GREATEST SEED HOUSE." SEND FOR OUR FREE ILLUSTRATED CATALOG

IT MADE A MAN OF ME

Read what Mr. James A. Boutillier, Aspotogan, Lunen. Co., N. S., says :

Dear Sir :—I hope you will pardon my delaying so long in thanking you for the benefits your valuable Belt has given to me. I can honestly say that it did me more good than all the other medicines put together. I had been troubled with Rheumatism off and on for four or five years, especially in my knee joints and shoulders, but the pain is all gone now, and I cannot recommend your Belt too highly. It is the best remedy in the world for Rheumatism and pain in the back. You ar welcome to use this testimonial, and if I can be of any service to you I will gladly render it. Any sufferer desiring to write to me may do so, and I will be pleased to answer.

Give me a man broken down from dissipation, hard work or worry from any cause which has sapped his vitality. Let him follow my advice for three months, and I will make him as vigorous in every respect as any man of his age.

Letters like that tell the story which means a good deal to a sufferer. They are a beacon light to the one who has become discouraged from useless doctoring. I get letters every day.

My Belt has a wonderful influence upon tired, weak nerves. It braces and invigorates them and stirs up a great force of energy in a man.

Are you weak or in pain? Are you nervous or sleepless? Have you **Varicocele, Rheumatism, Weak Back, Kidney Trouble, Weak Stomach, Indigestion or Constipation**? Are you lacking in vitality? I can give you the blessing of health and strength. I can fill your body with vigor and make you feel as you did in your youth. My Electric Belt is worn while you sleep. It gives a soothing, genial warmth into the body. This is life—vigor.

Tell me where you are and I'll give you the name of a man in your town that I've cured. I've got cures in every town. That's enough. You need the cure. I've got it. I'll give it to you or you need not pay a cent. Come and get it now. The pleasurable moments of this life are too few, so don't throw any away. While there's a chance to be husky and strong, to throw out your chest and look at yourself in the glass and say "I'm a man," do it, and don't waste time thinking about it.

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Appendicitis.

Probably the most talked of and the least understood of diseases is appendicitis. Many think the trouble is a new one that has been invented by surgeons as an excuse to cut you up and have the pleasure that it gives them to perform a fine operation, and, incidentally, get a big fee.

The fact is that appendicitis has been coexistent with civilization, and probably existed with the earliest men. It is an inflammation of the vermiform appendix, from which people have suffered and died for centuries under the name of inflammation of the bowels or some other.

The vermiform appendix is so called from the worm-like shape. The two words are from Latin roots, the first of which, vermi, is the worm, the same as that from which comes vermi-fuge—literally a remedy to drive away worm vermin, worm-like animal life; vermicide, an agent to kill worms, and so on. Appendix suggests its own meaning in the same way, being from the same Latin root as appendage—an offshoot, tail, affix, adjunct.

The vermiform appendix is situated at the right side of the appendix, about half way between the navel, and the groin, and is an apparnetly useless attachment at the end of the small intestines. Above the beginning of the large intestines is a pouch-like enlargement called the caecum. Of this the veriform appendix is the attachment mentioned. This has a small vacuum, and of course a mucous membrane lining. Under certain conditions, irritating substances are forced into this vacuum that set

up inflammation which, if not relieved, causes suppuration, perforation and gangrene, thus fecal matter or pus—or both—will pass into the abdominal cavity, setting up further inflammations that may or may not become dangerous to life, according to the treatment that the trouble receives.

The entire trouble is usually caused by constipation. Without going into the technical details of how it is brought about, the mere and continuous over-crowding of the lower, small intestines and accessory functions sets up inflammation that extends to the appendix, which relaxes, and fecal matter is crowded into it, which is resented by the interior of the appendix, with the result related above.

When you have acquired appendicitis, you will know it, and immediate treatment is necessary, which does not mean the knife of the surgeon. Immediate relief of the impacted colon, and over-charged caecum is necessary. Large injections of warm water or infusions of spearmint—three or four quarts of each enema—should be given, and repeated if necessary until free evacuations are produced.

When the appendix is inflamed, a large and hot poultice of mullien leaf, containing some lobelia herb, and sprinkled lightly with ginger, should be applied to the abdomen directly over the appendix. Give internally, every half-hour, of an infusion of Lady Slippers, and one-half teaspoonful of lobelia to a cupful of boiling hot water. Sustain the patient's strength by giving either broth, malted milk or other liquid foods and require perfect quiet in bed. Keep the bowels active by injections, never using cathartics.

After convalescence, eat sparingly of easily digested foods, avoid constipation, and that will end appendicitis.

Honesty.

Speaking of honesty, a storekeeper looking after a young girl who had just walked out of the door, said to a customer: "Children do not seem always to understand that they have no right to help themselves to tiny bits of candy or other trifles that happen to be on the counter. The girl who has just left never comes into this shop without a little petty pilfering. She takes a peppermint drop or a chocolate, and has not an idea that she is doing anything wrong. Older people do the same thing and a merchant has no way by which he can protect himself unless he can keep his goods all the time under lock and key." Not one of us would like to be labeled in the mind of another as a thief. We can avoid this slur by being honest all through, as honest about little things as large things.—The Comrade.

Tea Leaves for Carpet Sweeping.

This used to be a common device for keeping down the dust in sweeping a carpet. I wonder if many people resort to it now? An easier holding of dust is a sprinkling of dry salt. Put it in a canister with a perforated lid, such as those in which certain cleansing powders are sold. Keeo it in a very dry place, for the salt must not be in the least degree damp. A chemist was showing me the other day a tin of some substance for preventing the rising of carpet dust, but one does not wish to spend more money than necessary on household helps of this kind.

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Style 70

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MARK you, we do not urge you to buy a Sherlock-Manning Piano--we simply ask you to compare the Sherlock-Manning with the world's best.
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and we believe that your judgment or the judgment of any unbiased master musician, will confirm our opinion. But, before you decide, find out the essentials of a perfect piano—the features that make for lasting tonal beauty.
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There are other essential features, but ask to be shown these—the most essential. You will find that only high-grade first quality instruments possess these. Now Sherlock-Manning 20th Century piano is the embodiement of quality. It possesses every feature that makes for piano excellence and the lasting life of the instrument. Yet—you can save money, a considerable amount of money, if you buy a Sherlock-Manning Piano. Ask us to show you where and how the saving comes in. Write for inside information anyhow.

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Tough soil won't stick the "Bissell." It stays right down to its work and pulverizes the ground thoroughly.

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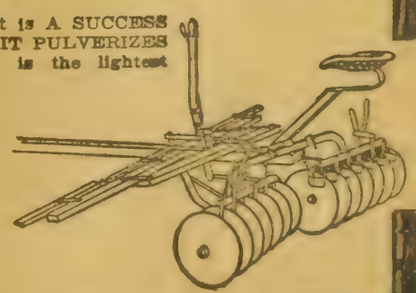
Post yourself fully on Harrows before buying. We put our name on every Harrow so that you will know it is genuine. Ask your local dealer, or write to Dept M for free catalogue.

60



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The Agricultural Colleges demonstrate this every day.

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If you suffer from rheumatism let me send you a package of my remedy absolutely free. Don't send any money. I want to give it to you. I want you to see for yourself what it will do. The picture shows how I suffered. Maybe you are suffering the same way. Don't. You don't need to. I've got the remedy that will cure you and it's yours for the asking. Write me to-day. S. T. Delano, 531 a Delano Bldg., Syracuse, New York, and I'll send you a free package the very day I get your letter.

Farmer Ads. will Bring Results.

Annual Report of the P. E. Island Dairymen.

(Continued from page 397)

son, with the exception of a few days in July that we had very little difficulty in making up almost all the milk that was offered. We had less sour milk than I have seen for a whole season in my experience. The average lbs. of milk per pound of cheese was lower this year than we have ever had before.

I consider that our dairymen should pay attention to cooling the milk and cream, and by all means keep it well covered in order to have a fine quality of cheese and butter.

I consider we have held our reputation in our export cheese and butter. The quality was more uniform this year than ever before.

Some markets still continue to make cheese that are not uniform in size. The chief objection is having them too high for the boxes. We must insist on having all cheese weighed to press, and not have them so large in the Fall as in Summer as they do not settle down on the shelves so much in cool weather.

I try to be present when convenient to look after the shipment of cheese, when they are delivered at the wharf in Charlottetown, and find that some lots are not weighed as carefully as they should be. I consider each company should have a proper scale for cheese and butter, which if carefully used would insure greater satisfaction to all parties concerned.

I have given the matter of sampling and testing milk as much attention as I could. I find in some factories too many days' milk not sampled. The sample jars should be tightly corked instead of present fasteners in use, as they cause too much evaporation. All bottles should be the same size.

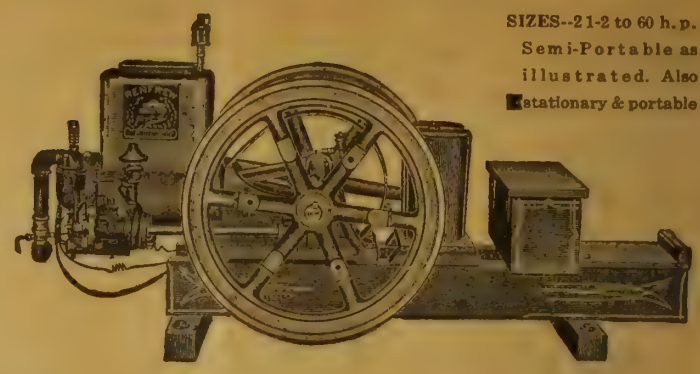
Another matter I would like to speak about is the care of the machinery. Some of our managers should take some instructions on general care of factory machinery. We would be likely to have our boilers tested and fittings kept tight and prevent loss of steam, waste of fuel, etc., which occurs in too many factories.

I would suggest that if our short course could cover the daily class another season, that they have instructions given on the care of machinery, by the best practical men available. Our managers are held responsible for a good deal, and with a few exceptions, are all good men. I consider they need further information on some subjects yet the same as other professional men.

The matter of milk production has been brought before you from time to time, and I will leave that to those who are better able to discuss such matters. It has been demonstrated by some of our best dairymen that it is certainly profitable, when conducted on business principles. We still have a large field to work in, and it is certain we must follow those who are leading in milk production the same as in other callings. In order to improve our condition we must pay more attention to the dairy cow. I also find that the largest milk producers usu[illegible]e the best milk and cream, and are always anxious to know if any further improvement is necessary in caring for their milk and cream.

A portion of the Eastern end of the Island has not had as favorable seasons for grass as some other sections and have not patronized cheese factories on account of the shortage in milk supply. Perhaps creamery work would help the live stock branch more than anything they could take up.

I would like to see them continue



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engine is also tested for balance. It must be so perfectly balanced that it will run with clock-like precision and smoothness. It must start easily without cranking. In short, the engine must be absolutely right in every particular before our inspectors affix their O. K's. If you were at the factory, you might think we were over-particular. But just think what our painstaking and care means to the purchaser of a Renfrew-Standard engine. It assures him getting an engine whose reliability has been proven under test—one that will give him great satisfaction.

Write for our engine catalog. It describes the Renfrew-Standard in detail, and contains information about gasoline engines that every progressive farmer would like to know.

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A WARNING

TO CANADIAN FARMERS

Do not starve your crops! Wherever there is a lack of Plant food in the soil, plants cannot attain normal development; in other words, they starve! It is therefore necessary to provide the plants with the nourishment required, by judicious fertilizing. But in fertilizing be sure to use sufficient POTASH since of all Plant food substances, POTASH is most heavily drawn on from the soil. POTASH improves the quality, promotes the maturity and increases the yield of all crops.

This is a Recognised Fact
in both Science and Practice.

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dairying, as the cheese and butter business has done more for them than they can hope even to get from selling the raw material.

In conclusion I would say that if there are any matters that I have overlooked they might come up in the general discussion.

Thanking you all for the assistance given me in the past, I remain.

Yours Truly,

F. T. Morrow.

Mr. Morrow reports most of the factories doing good work, a considerable improvement being reported in the general quality and finish of the cheese.

How to Disinfect a Dairy Stable.

The following enquiry has come from a reader, and it is of such importance that we shall give it more than the usual attention in a condensed reply: "I wish to disinfect thoroughly some old barns I have recently bought, rendering them safe for my cattle. Will you advise me what to do and how to do it?"

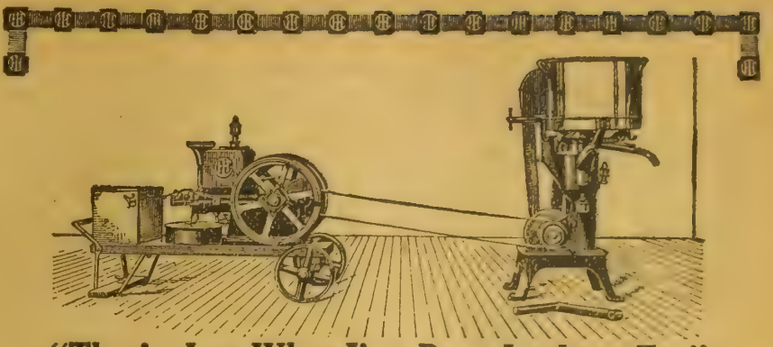
In disinfecting a stable there are some fundamental principles to be borne in mind; but unfortunately they are often left out of the procedure. It should be remembered, for instance that disease is due to infection by germs; that the germs are minute and may remain effective for extended period in stables that are dark, dirty and badly ventilated, and that any method of disinfection that does not also do away with these insanitary conditions and keep them permanently away, must fail of success. Germs thrive, grow and live in the dirt of dark, damp places. So do the insect and vegetable parasites which prey on farm animals. Sanitation, suggested by the need of sunlight, ventilation and cleanliness, therefore has the twofold effect of lessening the chances of infectious disease and keeping animals free from parasite forces. Take tuberculosis for example. The disease is due, as all our readers are aware, to the specific bacillus of the disease. No case of tuberculosis can start without its seed—the bacillus. The dark, damp, hot, badly ventilated stable cannot produce the disease any more than one can grow a crop of corn or potatoes without planting seed corn or tubers. This is true of all other germ diseases. The start of all disease is always the presence of the specific germ. It must next be remembered, however, that an animal living in a stable of the insanitary sort will be an unhealthy beast, with impure blood, sluggish circulation, and over-worked, impaired excretory organs. Disease once started runs the most rapid and fatal course in the unhealthy occupants of the stable.

The direct rays of the sun will quickly kill the germs that cause tuberculosis. The bacillus of tetanus cannot cause lockjaw in the presence of fresh air (oxygen). The germs which cause glanders, pneumonia, blood poisoning, pus formation and pus absorption (pyaemia) naval infection, strangles (colt distemper), influenza, shipping or stock yard fever of horses, purpura haemorrhagica, haemorrhagica septicaemia, anthrax, blackleg and some other diseases, including John's disease, contagious abortion and infectious vaginitis, all most surely affect animals and lurk and linger longest in the stables that are not rendered hygenic by lighting, frequent cleansing and adequate ventilation.

With a full appreciation of these essentials, then disinfection of a stable entails the putting in of sufficient amount of window glass to allow free entrance of God's good sunshine, which kills germs and is otherwise absolutely necessary for health. Each adult animal in a stable should have at least four square feet of window glass for this purpose. Fresh air is as essential, and so the stable will have to be perfectly ventilated. The King system now predominates in popularity, because it gives entrance to fresh air at the level of the ceiling forces the warm air down upon the cattle and through the medium of many air shafts in the walls and connecting with high chimneys in the roof, sucks out the vitiated air from the ground surface. True disinfection renders the provision of some such system of ventilation imperative in every stable.

See to these things first; then remove from the stable everything that possibly can harbor germs. Tear out and burn all saturated, porous, ancient timber of mangers, feed boxes and hay racks, walls, floors, partitions, and other parts of the internal fittings of the stable. And to the cremating fire add all old bedding, soiled feed and trash. Dig out four inches of dirt floor and put in new, clean earth, or a clay and cinder compost mixture wetted and tramped down; or, far better than either, put in concrete floors. Scrub and scrap the remaining woodwork or stonework. Get the dirt out of every nook, crevice, crack, crany and corner. Get rid of those festoons and cobwebs. They are filthy germ laden yet often left by the superficial cleaner of the stable.

(Continued on page 404)



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WHILE we were getting the opinion of farmers on our new cream separator power outfits, one of them said: "I have been looking for such a combination as this for a long time. I need an engine with that kind of a gear on it to slow down the speed. There are half a dozen small machines on my farm for that engine to run. I want that outfit." You, too, will want it when you see it. The outfit consists of an

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Dairymaid or Bluebell

and a one-horsepower back-geared I H C engine. The engine is mounted on a portable truck, and can be used for any farm work to which power can be applied. The back gear adjustment runs at the proper speed to operate any hand turned machine.

The working parts on I H C cream separators are accurately made and all bearings are well lubricated. The shafts and spindle are the strongest used in any separator. The gears are easily accessible for cleaning. Both separators have the famous I H C dirt-arrester chamber.

See the I H C local agent and ask him to explain carefully all of the good points of these outfits. You can get catalogues and full information from him, or, write the nearest branch house.

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At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton

Raising Poultry for Profit--How to Begin.

(Continued from page 379)

This ration may be continued until full grown, though whole wheat, oats, corn, may be fed once a day for a change. Use hoppers and feed everything dry and you will have little trouble with sick hens. When the chickens are, say two months old, the roosters should be removed to a pen by themselves, as they are greedy creatures, and not very altruistic at any time. When the pullets are four or five months old they should be removed to the winter laying, or if they are to remain in the same house in which they have been reared it should now be fitted up with dry feed boxes and nests so that the young pullets may get down to business as soon as possible, for remember "it is the hen that lays that is the hen that pays."

WINTER LAYING HOUSES FOR HENS.

The size of the house will depend upon the number of hens you wish to keep in it, but no one house should contain more than fifty hens. Hens do not lay nearly so well when crowded, or when more than forty-five ot fifty are confined on one pen. There are a great variety of hen houses used by the different experimental stations and some of them are unnecessarily expensive. The supposed great cost of housing hens has done more to keep people from raising chickens than anything else that I know; and much that is written in poultry books and journals is the veriest nonsense, as anyone can easily prove for himself. When the beginner is instructed to put in concrete walls a foot below the ground and a foot above the solid concrete floors, you will know that the instruction is not for you. That is the plan followed by many clever persons who raise chickens by the tens of thousands on paper, or in their minds, but who never actually raised one hundred and made them pay their keep. All over the country you will find where industries of that kind have been started, and where the man or oftener the company, went bankrupt inside of two years. It only takes a few experiences of that kind to leave the impression in peoples minds that there is no money in hens. But you will please observe that the fault was not with the hens

Again, it is believed by many that the houses ought to be made as warm as possible, hence, we often see hen houses with inside ceiling all round the walls and three or four inches of saw dust between this and the outer wall: the doors and windows made as tight as possible and no ventilation of any kind allowed. This is a house you are better without. It is expensive, unsanitary and unprofitable. A dry cold house is the best and such a house can be built very cheap. My hens are all housed at less than $25.00 per hundred hens, and I never saw hens that had a better appetite, or that seemed to enjoy their work more than mine. At present I have three hen houses and a rooster house. Each of the hen houses contains forty-five hens.

House No. 1 is 8x16 with a shed roof. It is ceiled all round inside and well lined. It has a window 5x1 facing south, which is seldom or never in, and has an inside shutter of wood which is let down at night. There is a window and a door in the west end. The roosters are all on the nnrth side where the hen house joins the barn. The door is hooked open two and a half inches every night for ventilation. If the doors and windows in this house were kept closed this would be a very warm house.

House No. 2 is also 8x16 but with the roof pitched to the square. This house I built to suit myself, and was intended to be something of an experiment. I had gradually developed the idea that warm hen houses were not good and that better results might be obtained in a colder house. So this house was built of planed hemlock boards with the planed side inside. It is single boarded and wholly without shingles, clapboards or tar or other kind of paper. The cracks are simply battened over with two and a half inch wide battens on both sides and roof. It has two windows in the south side, one a fixture, and the other removable. Both windows are of ten-cent cotton oiled with paint oil which makes them wind and air tight. They give almost as much light as glass. At any rate they give plenty light. The window which is a fixture is two feet long and fifteen inches wide and is placed just in front of the roosts, or about five feet from east end. The other is in a frame about two feet square, and is removed every morning cold or hot, and, indeed, oftener than not it is never put in from one day to another. Only when the wind blows hard or when a storm is threatening is it put in at nights and never for frosts alone. It has been out in ten to fifteen degrees below zero, night and day, and even in that temperature last winter my hens struck "high day" more than once. The door of this house is in the west end and in the afternoons on bright days I put the window in to kill the draught and then open wide the door. It is something altogether remarkable how much frost a hen will stand if the sun is shining upon her. This house has a floor reaching back from the door to within one foot of the roosts. This floor is absolutely tight. At the end next the roosts it has a wide board standing on edge so that the chaff on the feeding floor cannot be scratched under the roosts, nor the droppings from under the roost scratched out over the feeding floor. There is no dropping board. The space under the roosts is dug down a foot and then well banked round so as to be wind proof. The floor is swept up once every two weeks and the litter changed, but mind every thing is frozen hard as bullets and as dry as nuts. The nests are on the walls and underneath them are the dry feed hoppers which are never empty. The gable over the roosts is filled with straw and there is a ventilator over the door. The feed boxes are supplied with about equal proportions of cornmeal, bran, middlings with a few handfuls of beef scrap. Grit, oyster shells, charcoal and water are before them all the time. Sometimes the hens prefer snow to water, and often it is supplied along with the water. They will often leave the new, clean water and eat the cleaner snow. You know a hen is peculiar, and few of us know as much about some things as she does. In the morning about eight o'clock they are fed with the whole oats on the floor. At noon, green food, such as turnips and potatoes are fed whole. They might better be ground, but I have no grinder, so I let them help me in that respect and save money at the same time. Remember I am keeping poultry for profit, but the profit is intended to be for myself and not for the man in the city who deals in furniture for hen houses. I believe that a dollar saved is better than a dollar earned in the hen business, for you save the time it takes to earn that dollar, and time has now come to be money in this country. At 4.30 p. m. in winter they are fed whole wheat, oats cracked, or whole corn in the litter to warm them up before going to roost for the night.

"I Doubled My Crop"

This is the story that can be told by hundreds of happy farmers in Canada who have used a 10% Potash Fertilizer. One farmer in Nova Scotia who ordinarily raised a crop of 120 bushels of potatoes with no fertilizer managed to raise 302 bushels with a low-grade fertilizer but with a 10% Potash Fertilizer he raised 442 bushels per acre of his land. We can tell you of many other cases just like this. If you want to do the same on your farm, you must learn quickly that

"Potash Pays"

Every crop you raise takes from your land just so much Nitrogen, Phosphoric Acid and POTASH. This is the food the plants eat. You must help Nature put back this plant food into your soil if you wish to raise good crops each year. You probably understand this, and it is likely you use some sort of fertilizer, but ***if you are not using a 10% POTASH fertilizer you are not getting the best crops from your land.*** This is because every plant eats three times as much POTASH as it does Phosphoric Acid. Ordinary low grade fertilizers contain from 6 to 8% Phosphoric Acid and but 2% POTASH. Certainly this is not three times as much POTASH. Therefore, you want to raise this percentage to 10% of POTASH.

If YOU want to raise a bumper crop this year, do this: Insist that your dealer provide you with a 10% POTASH fertilizer. If he cannot do this, and you have to buy a low-grade fertilizer, add enough POTASH to it to raise it to 10% POTASH. We will tell you exactly how to do this, free. You can mix your own fertilizer at home if you want to and our experts will tell you how to do this too, without charge.

Get in touch with your fertilizer dealer NOW, so that he will be sure to have POTASH on hand for you when you need it. Send us your dealer's name and we will send you a free booklet telling how to properly raise the kind of crops you deal in. It is written by some of the very best Agricultural Experts in the world and will surely be of great interest to you. Simply write us stating your dealer's name and telling us the kind of crops you raise.

If you want your POTASH now and your dealer has not got it, we will sell it to you direct. Simply let us know your requirements. The main thing to do is to ACT NOW. Write us today.

German Kali Works, Inc.,

Temple Bldg., TORONTO, Ont.

We have Muriate and Sulphate of POTASH stored ready for immediate shipment at St. John, N. B., Montreal and Toronto.

...House No. 3 is 8x15 and same style as house No. 2 except that the middle window, 20x20 in. on the south side is of glass, and above it is a shutter 24x6 in. which is left open all day and fine nights. This house was built in November, 1912, from boards that were out in the wet and were frozen over when I was building the house. I could not get battens for the cracks so I covered the whole house with single-ply tar paper. The door in the west end has been open every day this winter and the birds are kept in by a screen door made of laths. This is my pullet house and I was honestly afraid that they would perish on me when I found the winter was on and that lumber never got a chance to dry out, but will you believe it the pullets in that house are as dapper as can be and are laying the best of any. I am delighted with them and they always seem glad to see me, especially if I happen to have a bucket in my hand. Oh, yes, a hen is a wonderfully knowing bird, and she knows good wheat from bad as well as a government grain tester. I acknowledge that my hens are just a little crowded this winter, but it is not the result of ignorance but simply because I had not the heart to kill those lovely pullets last fall. I said I will let them take their chance this winter, and try and have better accommodation for next winter. There are some pullets in the other two houses, but now, I cannot tell tother from which.

Now Mr. Editor, this is the simple story of a man who has made money out of hens, and if any one who reads says: Oh, anybody can make money out of a few hens if he gives all his time to them, you may reply for me to the effect that I give very little time to them other than to instruct my boys what to do, how and what to feed, etc., and that I personally have not seen them fed ten times in the morning in ten years, and that in all those years I have not spent as much time working with them each day as it would take me to smoke three cigars, or at least, as long as it takes most people to do it. I never tried one myself. And besides, being a very busy man every day I am often away from home a week, a month, two months at a time but still the hens keep up the tune, and my wife says she can make them lay as many eggs as I. Well, we'll not argue that point just now.

Now, just a word in conclusion. I am often asked by my friends and neighbors "What is the secret about making money with hens?" Well so far as my experience goes, there is only one way to make money with hens, and that is by the process of keeping the hens at it, all at it, always at it, laying eggs.

I have had as many as 400 hens and chickens running in one field and never lost one through sickness. I never was guilty of making less than one dollar a head on hens.

Edwin Smith.

The Manse, Chipman, N. B., Feb. 13, 1913.

Oliver Plows Have Stood the Test of Time

FIFTY-SEVEN years ago, when James Oliver made his first plow, he made up his mind to make as good a plow as he could make, and to make a plow a little better than anybody else was making. Through all the years that Oliver plows have been built, through times of prosperity and adversity, these two ideas of James Oliver's have guided the whole organization in the building of Oliver plows. To show how thoroughly the plow situation is studied by these efficient manufacturers, and to convince you that plows made by them will do your work, it is only necessary to point out the well-known rule of the Oliver Plow Works: "Make and sell only those plows which you know from experience will do good work when they are sold."

Oliver Plows for Eastern Canada

consist of a group made specially for this country. It includes walking plows, three-wheel sulkies, walking gangs, high and low lift gangs, hillside plows, and riding cultivators. Perhaps the most popular plows in this line are the Oliver 1-C sulky and 1-C gang. They are so built that the two furrow wheels which carry most of the weight of the plow are traveling on a smooth surface at all times. This, in connection with a spring on the land wheel, and the two bails, insures the evenest possible depth of plowing. These two plows can be used in almost every part of Eastern Canada.

The shape and construction of the share and the kind of material to be used; the construction of the frog; the amount of beam landing; the strength and design of the frame; these are but a few of the points which are brought out by thorough experimenting before an Oliver plow is sold.

You can see any plow in the Oliver line at the place of business of the I H C local agent. See him for catalogues and full information, or, write the nearest branch house.

International Harvester Company of Canada, Ltd.

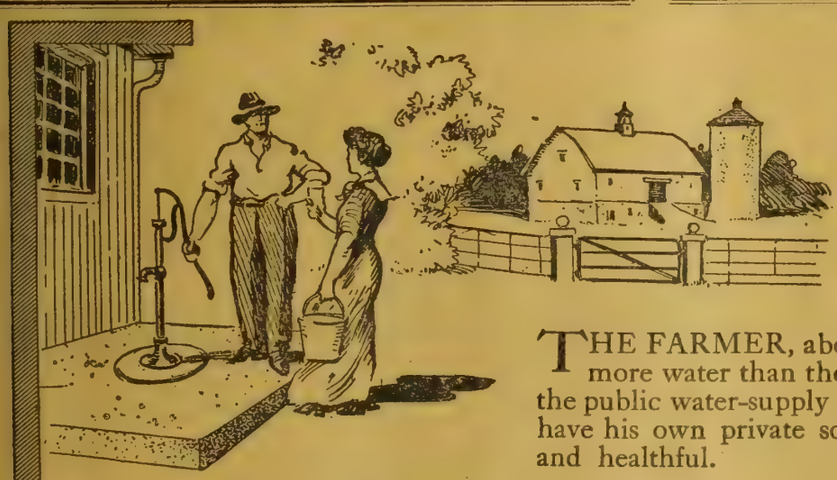
EASTERN BRANCH HOUSES

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

These plows are built at Hamilton, Ont.

Care of Horses Feet.

One of the things to observe in caring for the horses is to see that everevery evening after a day's work in the field their feet are cared for, freed from all dirt and washed and rubbed dry. Horses will improve under this kind of treatment. A very large portion of horse ailments come through a proper lack of the care of the feet. Horses that are artificially shod or driven on artificial roads, standing on artificial floors, all of which are injurious to the feet, call for extra care on the part of the owner or driver. If the horse's feet are neglected, the hoofs are likely to become hard and cracked or else get soft and smell offensive and cause such diseases as thrush and canker, and other foot troubles are likely to develop. Never allow the shoes to stay on until they are worn out or drop off of their own accord. Look aftet the horse's feet.



SPARKLING WATER, cool and sweet, refreshes the farmer who builds a

Concrete Well or Tank

THE FARMER, above all others, appreciates good water. He drinks more water than the city man. The city-dweller is dependent upon the public water-supply for the purity of his water, while the farmer can have his own private source of water, and thus be sure that it is pure and healthful.

MAN hasn't found a better drink than cool water, properly collected and stored. But in order to keep water fresh and pure, a tank or well casing that will keep out every possible impurity must be used.

CONCRETE IS THE IDEAL MATERIAL FOR TANKS AND WELL-CASINGS.

IT is absolutely water-tight, protecting your water from seepage of all kinds. It cannot rot or crumble. It is easily cleaned inside. Time and water, instead of causing it to decay, actually make it stronger.

THERE are scores of other uses for concrete on your farm—on every farm. If you would like to know of them, write for our book, "What the Farmer Can Do With Concrete." The book is absolutely free.

OUR Farmers' Information Department will help you to decide how to build anything, from a porch-step to a silo. The service is free—you don't even have to promise to build. When in doubt ask the Information Department.

Address Publicity Manager

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Limited

506-561 HERALD BLDG., MONTREAL

WHEN you go to buy cement be sure that this label is on every bag and barrel. Then you know you are getting the cement that the farmers of Canada have found to be the best.

CANADA CEMENT COMPANY LIMITED PORTLAND CANADA CEMENT MONTREAL

How to Disenfect a Dairy Stable.

(Continued from page 401)

Now saturate everything above, below and on every side, with a strong effective, disinfecting solution. That means a solution that will actually kill each germ it touches; not merely stun it, make it weak, wobbly or sick at the stomach. Such a disinfectant may not have a bad smell. Some of the poorest disinfectants smell the worst. Use a solution of six ounces of formaldehyde to the gallon of water; or a 1-50 mixture of commercial coal tar disinfectant; or compound solution of cresol; or two or three ounces of liquid carbolic acid (95 per cent. pure) to a gallon of water. Put the liquid on with a spray pump which forces it into every place possibly occupied by germs and follow it with a thorough spraying with fresh-made lime wash containing a pound of chloride of lime to each three gallons.

The following formula for lime wash with an added disinfectant, is also recommended by the Bureau of Animal Husbandry. To prepare five gallons: Slake 7½ pounds of lime, using hot water, if necessary to start action. Mix to a creamy consistency with water. Stir in 15 fluid ounces of 95 per cent. pure liquid carbolic acid and make up five gallons. Stir thoroughly and strain through a wire sieve, if it is to be applied by means of a spray nozzle. Where disease has been known to exist we do not only disinfect the entire stable according to above plan, but also flood the floors with the lime and disinfectant wash combination.—A. S. Alexander.

The Summerside Seed Fair.

The Seed Fair held in Summerside, P. E. I., on the 4th, 5th and 6th, of this month, came off very successfully, being blessed with the best of weather and attendance. The oats and barley were not as good color as they were last year, but the wheat was better than ever, there was 52 samples of Banner Oats. The potato exhibit was better than ever, there being about 200 half-bushels samples.

The whole exhibit showed that the Department of Agriculture was doing excellent work in P. E. Island and all the exhibitors were experts.

Lectures were delivered by J. A. Telfer, W. Cameron, F. A. Benson, Prof. Ross, Father Gauthier and others.

JUDGES.

Potatoes—R. Robertson.

Oats and Timothy—S. Moore and Prof. Clark.

Barley, Wheat and Buckwheat—Richard Creed, Albion, and John Andrews.

White Fife Wheat, 2 bus.—1, M. McArthur, Kensington; 2, Fred Bulman, Rustico; 3, John A. Plaisteed, Arlington, Lot 14.

White Chaff Wheat—1, Horace Wright, Bedeque; 2, B. McFarlane, Fernwood; 3, Wood & Son, Hazelbrook.

White Russian Wheat—1, Horace Wright; 2, L. G. Hayter, Murray River.

Any Other Variety Wheat—1, Frank Bullman, Rustico; 2, Frank Glyden, Kensington; 3, D. McLeod, Mt. Royal.

White Banner Oats—1, Geo. McFarlane, Fern Road; 2, M. D. McLeod, Mt. Royal 3, Jas. B. Millman Long River.

White Ligowo Oats—1, A. E. McLean, South River; 2, Horace Wright, L. Bedeque; 3, M. D. McLeod, Mt. Royal.

Any Other Variety Oats—1, Wood & Son, Hazelbrook; 2, M. McLeod, Mt. Royal; 3, Benj. Mallet, Little York.

Black Oats—1, Peter Brodie, Little York; 2, A. J. McDonald, Souris West; 3, Jas. McDonald, Little York.

Barley, 2 rowed—1, E. J. Vesey, Little York; 2, Wood & Son, Hazelbrook; 3, Peter Brodie.

Barley, 6 rowed—1, B. J. Mallet; 2, Jas. A. McKinnon, Rollo Bay; 3, A. E. McLean.

Silver Hull Buckwheat—1, Alex. Henderson, Bedeque; 2, Benj. Mallet; 3, Cephas Mallet, Union.

Vetches—1, H. Arsneault; 2, Louis Perry, Wellington; 3, Philip Goudet.

Timothy Seed—1, Benj Mallet; 2, Wm. McKay.

Common Red Clover—1, Robert Howard.

Alsike Clover—1, Geo. Wedlock, Mt. Royal.

Potatoes, McIntyre—1, Archie Vessey, Little York; 2, Peter Brodie; 3, B. Mallet.

Potatoes, Long White—1, E. J. Vessey; 2, F. Montgomery, Traveller's Rest; 3, W. Scott, Summerside.

Potatoes, Dakota Red.—1, Peter Brodie; 2, Benj. Mallet; 3, Fulton Simpson, Belmont.

Potatoes, Rose Type—1, Benj. Mallet; 2, E. J. Vessey.

Potatoes, Green Mountain—1, Reg. Compton, St. Elnor; 5, Benj. Mallet; 3, E. J. Vessey.

Potatoes, white, round—1st, E. J. Vessey; 2nd, Peter Brodie; 3rd, A. McFarlane, Fernwood.

Mangel Seed—1, John M. Peacock, Lower Bedeque; 2, Geo. Jeffry, Linkletter.

Turnip Seed—1, A. D. Murray, Linkletter; 2, Horace Wright, Lower Bedeque.

Flax Seed—1, Judson Simpson, Lot 14; 2, Fred Enman, Rose Hill.

Donated by Steam Navigation Co., Charlottetown, for the largest and most creditable exhibition in wheat, Banner oats, Barley and Buckwheat—1, $5.00 won by H. Wright; 2, $3.00 won by Benj. Mallet; 3, $2.00 won by A. E. McLean.

SPECIALS

Silver cup donated by Hon. John Richards, for best 2 bus. oats and best 2 bus. barley, cup to be won three times, not necessarily consecutively. Won 1912 by Horace Wright, North Bedeque, 1913 by Horace Wright.

Silver cup donated by F. R. Heartz, Charlottetown, for best 2 bus. sample grain from fields competing in standing grain competition of 1911, cup to be won three times. Won in 1912 by Fred Bullman, Rusticoville, 1913 by Horace Wright.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

Why Red Rose is a "Distinctive" Tea

Because it is largely composed of the fine teas of Northern India, which are generous in strength and richness. These, blended with the flavory teas of Ceylon, produce the qualities for which Red Rose is famed.

N.B.—Coffee users will find Red Rose Coffee as generously good as Red Rose Tea.

372

The Results At The Kerwood Cheese Factory

EVERY week or so we receive letters from creameries and cheese and butter factories, reporting tests made with the Standard cream separator. For example, the Kerwood Cheese and Butter Factory reports as follows on tests made Oct. 29, 1912:

Test No.	Per cent. of Butter Fat in Cream	In Skim Milk
1	38	.02
2	43.5	.02
3	45	.03

In each of the above tests the mjlk was fed to the machine at the rate of 684 lbs. per hour (machine listed at 600 lbs.) and the bowl was flushed, and when taken apart was free from cream and in good condition. The milk skimmed was not new milk but had been kept over some of it two days old. You will note by the above figures that the milk was fed to the machine nearly 100 lbs. per hour faster than its rated capacity and that the cream skimmed contained a high per cent. of butter fat, so that I consider the work done in this test exceptionally good.

(Signed) W. WADDELL

Proprietor, Kerwood Cheese and Butter Factory.

The above test again emphasizes the superiority of the Standard in close skimming. Even old milk, fast-skimming and heavy rich cream did not prevent the Standard from skimming closer than other separators do under most favorable conditions. *Figure it out.* It will pay you to discard your old machine and get a *"Standard"* and do it now. There is no other that can give you equal results and it's results that count. Send for descriptive catalog.

The Renfrew Machinery Company, Limited

Head Office and Works, RENFREW, ONT.

Agencies Everywhere in Canada

Send for This Book To-day

The most thorough and up-to-date text book ever published for poultry keepers. It puts poultry raising and keeping on a scientific basis. This book is

SYSTEM IN POULTRY PRACT CE

written by Jas. Shackleton. By mailing $1.00 to-day for this great book, you will also receive the Canadian Poultry Review free for one year. But you must act now. Book contains 30 chapters. Here are some: Chap. 1—Feeding of Chicks. Chap. 3—Rearing of Breeders. Chap. 4—Main Cause of Mortality in Chicks. Chap. 6—Factors of Prolificacy. Chap. 8—Crops in Poultry Yards, illustrated. Chap. 9—Best Breeds of Fowls. Chap. 11—Differences in Eggs. Chap. 12—Pekin Ducks, illustrated. Chap. 15—Main Cause of Degeneracy. Chap. 16—Causes and Prevention of Diseases. Chap. 17—Factors of Fertility. Chap. 18—New Blood and Grading Up; etc.

THE CANADIAN POULTRY REVIEW,

184 Adelaide Street, TORONTO.

Herewith find $1:00 for **System in Poultry Practice** and one full year's subscription Canadian Poultry Review.

AME .....

ADDRESS .....

Silver cup donated by Geo. Grady, Summerside, for McIntyre's and other early and other later variety of potatoes, to be won twice. Won in 1912 by B. A. Mallet, York, in 1913 by B. Mallet.

Silver cup donated by Hon. Chas. Dalton, for the largest and most creditable number of exhibits in the seed division. Won in 1912 by B. A. Mallet, 1913 by B. A. Mallet.

$5.00 in gold donated by Carter & Co., Charlottetown, for best sample 2 bus. wheat, from fields in the standing competition of 1912 won by H. Wright and Fred Bullman.

FLORICULTURE.

Lottie, of Moncton, writes:—Will you please tell me how to plant the seed or pit of the common date and how long it takes to grow a palm from them? Can the palms such as are commonly seen in houses be grown from seed, and where can they be obtained? I have a Calla Lily that grows well and throws up buds, which turn brown before they develop. One bud, however, is green as a leaf with just a narrow fringe of white around the top. What is the cause of this, and the remedy?

Plant the date pit in light soil in a small pot, keep moist and in a light window. The first season there will be only one grass-like leaf from this seed but the next season, the character leaves will form. About three years should give you a plant eighteen inches high, and a foot across. It is a very hardy plant and will stand lots of neglect after it is once established and, unlike most palms, will take some sunshine. This seed is from the date we eat. The common palms, such as the Rentias, Arecas, Latanias are grown from seed but it would be rather difficult to do so in the house as they require a forcing heat under the soil that would be hard to arrange. The seed can be obtained from the large seed houses in Toronto. The Calla Lily is apparently suffering from lack of nourishment. Apply freely liquid cow manure twice a week while in bud and you will probably see an improvement.

John, St. John, writes:—I have two Japanese Fern balls that were given me last season. One came out a mass of leaves, the other seems to be dead at the bottom while the top looks nicely. Would it do to cut off the bottom? How often should they be watered?

By all means cut off the dead portion, you can thus place the growing part in a fern pan and they make a pretty centrepiece for the dining room table when treated thus. Water every two days if in any sunlight if in perfect shade they would not require it so frequently.

Repot Palms, Rubber Plant and all Ferns that are much root bound now but never repot such plants unless they are thoroughly root bound. Use one size larger pot only, firming the soil in with a thin stick and watering thoroughly. Use good, light fibrous loam.

The new sword fern, the Pearsoni, is a beauty. It is just as much prettier than the Boston fern as that variety was ahead of the old upright growing fern and it is just as easy to grow. The Whelmani is one of the next lovely ferns, the thick foliage making such a show when quite small and it is so tough and hardy.

The Pandamus Vertchii is a beautiful ornamental plant for the parlor and quite a change from palms. It is easily grown, making it a very desirable plant for the drawing room.

The Norfolk Pine or Amacaria is also a splendid decorative plant and should be much used. They used to be quite expensive but in the last few years they have been quite a fad for parlor plants, and such quantities have been produced that they can be bought as reasonably as a Rubber Plant. They require the same treatment as a palm and do not want much, if any, sunlight. They are tough and not injured by handling as are the Rubber plants. Their deep, glossy, green foliage gives a handsome effect in a light apartment.

If early Pansies are wanted, especially if one has a hot bed, the seed should be sown now in a small box in light soil. We find an excellent method to sow all fine seed is to fill a box about three inches deep, full of fine soil, press it down firmly with a small piece of board and water thoroughly then sow the seed broadcast and as evenly as possible with a fine sieve. Sift sand evenly over the surface entirely covering the soil. Press this down firmly also with the piece of board and water thoroughly. Cover from sunlight and keep moist. If seeds are course and you find that the watering disturbs the sand and seeds you will have to put in a deeper layer of sand. This you can only learn by experience.

Finish This Story

A WORKMAN in an I H C wagon factory was explaining the various stages of wagon construction to an interested visitor. He picked up two pieces of long leaf yellow pine, which to all appearances were sawed from the same board, and asked the visitor to notice the difference in the weight of the two pieces. The lighter piece, he explained, was kiln-dried. The heavier piece was air-dried and more thoroughly seasoned. It had retained the resinous sap which adds strength and toughness, while in the kiln-dried piece of lumber this sap had been drawn out by the too rapid application of heat.

Every Stick of Lumber Used in IHC Wagons is Carefully Selected, Air-Dried Stock

Here was something to think about. The visitor asked for a test as to the relative strength of the two pieces of wood. The air-dried piece held up under nearly double the weight under which the kiln-dried piece of lumber broke. The workman explained how the comparative life of air-dried and kiln-dried lumber has about as great a difference.

To the eye there was no difference between these two pieces of lumber, but when put to the test there was a vast difference. So it is throughout the construction of I H C wagons—**Petrolia,** and **Chatham.** They are built for real strength, light draft, and satisfactory service.

After seeing the care used in the construction of every part of an I H C wagon, the visitor asked: "Why don't you let people know of the great care used in selecting material and in constructing I H C wagons?"

This is what we have been trying to do, but we cannot tell it all in one short advertisement. I H C local agents handle the wagons best suited to your work. See them for literature and full information, or write the nearest branch house.

International Harvester Company of Canada, Ltd
EASTERN BRANCH HOUSES

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa; Ont.; St. John, N. B.; Quebec, P. Q.
Built at Chatham and Petrolia, Ont.

MAXWELL'S

HIGH SPEED CHAMPION

Easiest running and most satisfactory washing machine made in Canada. Can be worked with side crank as well as top lever. Red Cypress Tub and the whole top opens up. Wash day is the easiest day of the week when you wash with the Maxwell "High Speed" Champion.

JEWEL FOOD CUTTER

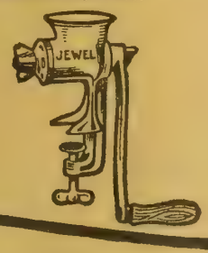
is just what you need for your kitchen. So much easier, quicker and more convenient than cutting up meat, etc., with a knife.

"Jewel" is superior in every way to imported food choppers, and being made in Canada, costs less.

FAVORITE CHURN

makes the most delicious butter you ever tasted. It's real "quality" butter—that is a pleasure to eat.

Both hand and foot levers and roller bearings, enable a child to churn with the "Favourite". All sizes from ½ to 30 gallons



Write us for Catalogues, if your dealer does not handle these household necessities.

DAVID MAXWELL & SONS
ST. MARYS, Ont.

129

AYRSHIRE BULLS FOR SALE

I am offering a two-year-old bull for sale. He is out of the famous cow White Heather of St. Annes. I have also two other choice bulls that are fit for service. Correspondence solicited.

J. FRANK ROACH, - - Sussex, N. B.

Custom Hatching and Day Old Chicks

We can supply Day Old Chicks from our Standard Utility Bred B. P. Rocks and White Leghorn Pens at rate of 20c apiece for April and 15c apiece for May delivery. Prices for Hatching Eggs supplied by customers is $3.50 per 100 eggs in lots of 75 or over.

With our modern Hatching Machinery, including new 3000 egg Candee Sectional Incubator, and long experience in the business we feel we can give satisfaction. Some 250 and 360 egg Model & Prairie State Incubator for sale.

Kinnear Poultry Company, Ltd., Sussex, N. B.

Use and Abuse of the Country Roads

Every man who travels the public highway has it in his power to do either of two things:

First—He may use the road in such a manner as to add to its life and usefulness, thereby increasing the value of the investment; or,

Second—He may misuse or abuse the road to such an extent that its life will be materially shortened, premature repairs made necessary and its value as an investment decreased.

In considering these points bear in mind that the traveler or property owner is the investor; it is his own money that he saves or wastes.

If we discuss the second proposition, the first has been answered. We will seen then how our roads are abused and misused.

First, in the case of all roads, we misuse them when we

Use narrow-tired wagons.

Drive in one track, following the ruts.

Ride or drive, or drive stock up or down the side of road embankments.

Obstruct the side ditches by throw-into them brush, old fence posts, field stones, etc.

Ride or drive, or drive stock across wooden and steel bridges faster than a walk.

Obstruct the road by permitting fences to remain on the right-of-way.

Second, in the case of earth roads, in addition to the foregoing, we misuse them when we

Attempt heavy hauling immediately after a soaking rain.

"Skid" logs in the roadway or side ditches.

Furthermore, we may abuse our road—and so our road funds—by

Moving a mass of earth to the center of the roadway and leaving it there loose and unpacked.

Making excavations in the fall.

Leaving a windrow of loose earth in the roadway after dragging.

Throwing rock into mud holes.

Failure to keep the weeds cut and ditches and drians open.

Failure to report damaged or dangerous condition of a bridge, culvert or road.

No doubt there are others, but this list will do for the present. You will see that the road user is able to injure his road by acts of commission and of omission. You may say that your supervisor is supposed to attend to the cleaning of ditches, proper grading of the road, etc. But does he do it? If not, and you know of it, you should stir up such a fuss that the man would do his duty or resign. If you do not do this, then you are abusing the road.

Probably the most pronounced of the above items is the use of narrow-tired wagons. It ought to be prohibited by law, and in some places I believe it is. These narrow tires work exceptional damage to earth roads. Go matter what care you give the roads as to construction and maintenance, the tires cut through to the bottom, especially after a rain. The same condition of the soil that will pack and improve under a four-inch tire will cut into ribbons under a narrow one. It's just the very simple proposition of distributing the load over a greater area.

Everyone knows how easy it is to drive in the rut; the horses just naturally follow the beaten paths of those before them, and it would require undue exertion to turn them out. But you may say that if you do turn out of one rut, you will make a new one. Then you are misusing the road by hauling too great a load for the condition of the earth. Contrary as it may be to practice, there is a time when the earth road should be used and when it should be let alone. No doubt you have observed that before.

I knew of a community where the timber industry thrived. Many men made a business of working in the woods; others did so at odd times. But invariably when it rained and they could not work in the fields oe elsewhere, these noble taxpayers would hook up to a load of logs and start to town to the mill. I have seen damage to the extent of at least $100 done by two teams in one day. Is that fair to the road and to the other men who helped pay for it? I know of one teamster who put six mules to a load of logs and literally ruined a newly-built dump immediately after the first rain, that should have packed it; and nothing was ever done about it. although if that man had gone to the treasurer's office and stolen $10 he'd have been jailed for it.

Riding and driving down the side of an embankment is in the same class. The first time may not hurt the road, but soon a path is formed; then water begins to cut and pretty soon an expenditure of good money is required to "fix" it. Throwing brush and other refuse in the side ditches, obstructing the road or ditches with fences, etc., is ordinarily contrary to statute. The trouble is that we dislike to "raise a row" and prosecute the offender. Would you be such a "good fellow" if this man stole ten bushels of potatoes from you? The principle is exactly the same.

When you trot your team across a bridge you risk your life, which is probably more important to you than risking the bridge. The vibration thus caused strains the bridge much more than the load itself. I saw a picture of a steel bridge that went down under a milk wagon. No doubt the bridge was too light in the first place, but the vibration of the fast-moving wagon probably caused its failure.

Unquestionably, earthwork should be done in the spring and summer. Even though the material is rolled and apparently solid, it requires the travel and the wetting of occasional rains before it is ready to go through the winter. Moving loose earth to the roadway and leaving it in that condition not only obstructs travel, but it wastes money. After dragging a road, and when the material has been brought to the centre of the roadway, the drag should be hitched square across the road and the material spread in a thin layer over the surface. A man expert in the use of a drag will not take all the earth to the centre and have to spread it again. He will leave it where he wants it at one operation.

It costs money to throw rocks into mud holes, and the disappointing feature about it is that it never helps the mud holes. Such places have an unbelieveable capacity for swallowing stone. Follow the method previously suggested, or some other that will drain the road and remove the cause of the mudhole.

It is certainly some man's duty to inspect bridges and culverts, but it is every man's duty to report any damaged or dangerous condition that he may happen to observe. There is more reason for doing so than for reporting a fire you may discover in your neighbor's buildings.

Weeds left to grow in the road not only obstruct the drainage and injure the roadway but they breed disease, are often the cause of poor health and, therefore, doctors' bills. There's something about every item and feature of this road problem that hits a man's pocket book.—John N. Eddy, in Twentieth Century Farmer.

You judge a man not by what he promises to do, but by what he has done. That is the only true test. Chamberlain's Cough Remedy judged by this standard has no superior. People everywhere speak of it in the highest terms of praise. For sale by all dealers.

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Press Notice.

As a means of furthering the policy of developing the poultry interests of the Dominion in which the Live Stock Branch of the Department of Agriculture is actively engaged, the Live Stock Commissioner is anxious to secure the name and address of each breeder of poultry in Canada who is systematically endeavoring to improve the quality of his stock, particularly from the standpoint of increased meat and egg production.

The information is desired in order that the Live Stock Branch may be brought more closely in touch with progressive poultrymen throughout the Dominion and with those whose names might be eligible for inclusion in a Dominion Poultry Directory.

As a means of securing this information, in part at least, all those who are interested are requested to write the Live Stock Commissioner, Ottawa, in

(a) The breed, variety and strain or family of poultry they are breeding.

(b) The extent to which selection for increased egg and meat production is being practised.

(c) A brief but specific statement of what has been accomplished.

(d) Whether or not they are actively engaged in trap-nesting at the present time. If not, what means are being used to select the most desirable individuals for the breeding pens.

Letters giving the above information should be addressed to the Live Stock Commissioner, Ottawa. Such communications do not require postage.

The York and Sunbury Poultry and Pet Stock Awards.

(Continued from page 390)

BLACK COCHIN BANTAMS.

Maritime Poultry Supply Co.—Cock, 1st; hen, 2nd; cockerel, 3rd.

E. M. Pringle, Stanley—Cock, 2nd; hen, 1st; cockerel, 2nd; pullet 1st and 3rd.

F. M. Merritt, Marysville—Cockerel, 1st; pullet, 2nd.

BUFF COCHIN BANTAMS.

G. H. Seaman, Moncton—Cock, 1st; hen, 1st.

F. M. Merritt, Marysville—Cockerel, 1st; pullet, 2nd.

Maritime Poultry Supply Co.—Cockerel, 2nd; pullet, 1st.

WHITE COCHIN BANTAMS.

F. M. Merritt, Marysville—Cock, 1st; hen, 1st; cockerel, 2nd.

Maritime Poultry Supply Co.—Cockerel, 1st; pullet, 1st.

R. I. WHITE COCHIN BANTAMS.

Maritime Poultry Supply Co.—Cock, 1st; hen, 7st and 2nd; pullet, 1st and 2nd.

R. I. BLACK COCHIN BANTAMS.

F. M. Merritt, Marysville—Cock, 1st; pullet, 2nd.

Maritime Poultry Supply Co.—Cock, 2nd; pullet, 1st.

GOLDEN SEABRIGHT BANTAMS.

F. M. Merritt, Marysville—Cock, 1st; hen, 1st; cockerel, 1st.

SILVER SEABRIGHT BANTAMS.

F. M. Merritt, Marysville—Cock, 1st; hen, 1st.

BLACK, RED BANTAMS.

F. M. Merritt, Marysville—Cock, 1st; hen, 1st and 2nd; cockerel, 1st; pullet, 1st and 2nd. 6

BROWN RED BANTAMS.

V. E. Walker, Fredericton—Cock, 1st; hen, 1st; cockerel, 1st; pullet, 1st.

JAPANESE A. O. V. BANTAMS.

F. M. Merritt, Marysville—Cockerel, 1st; pullet, 1st.

BRONZE TURKEYS (OVER ONE YEAR).

Hartland Poultry Yards—Cock, 1st.

Brookland Poultry and Fruit Farm, Ltd., Lower St. Marys—Cock, 2nd.

WHITE HOLLAND (OVER ONE YEAR).

Hartland Poultry Yards—Male, 1st; hen, 1st.

BLACK HOLLAND (OVER ONE YEAR).

Hartland Poultry Yards—Cock, 1st.

WHITE HOLLAND TURKEY (HATCHED 1912).

Hartland Poultry Yards—Cock, 1st.

AFRICAN GEESE.

Hartland Pou,try Yards—Male, 1st; female, 1st.

WILD GEESE.

Hartland Poultry Yards—Male, 1st; female, 1st.

CAYUGA DUCKS.

Hartland Poultry Yards—Male 1st; female 1st.

ROWEN DUCKS.

Hartland Poultry Yards—Male, 1st; female, 1st.

WILD DUCKS.

Hartland Poultry Yards—Male, 1st; female, 1st.

ROWEN (HATCHED 1912).

Hartland Poultry Yards—Male, 1st; female, 1st.

AYLESBURY (HATCHED 1912).

Hartland Poultry Yards—Male, 1st; female, 1st.

COMMON (HATCHED 1912).

Hartland Poultry Yards—Male, 1st;

WILD (HATCHED 1912).

Hartland Poultry Yards—Male, 1st.

Best 1 doz. brown eggs, Dr. Cox, Fredericton, 1st; A. E. Crowley, Fred ericton, 2nd; F. M. Merritt, Marysville, 3rd.

Best 1 doz. white eggs, Dr. Cox, Fredericton, 1st; E. M. Pringle, Stanley, 2nd; A. A. Balmore, Fredericton, 3rd.

Best 6 doz. brown and white eggs, Dr. Cox, Fredericton, 1st.

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27 Notre Dame St. West, Montreal.

Rotation on Yarmouth County Farm.

(Continued fram page 378)

When the mowings fail to cut from 1½ to 2 tons of hay per acre, we turn them over in the fall letting them lay until spring. As soon as the ground is in condition to work, we go at it with the disc and properly disc it. Then we sow from 2 to 2½ bushels clean oats to the acre and after they are sown they are harrowed in. I prefer a light drag-harrow as it smoothes the surface better than the disc. We harrow it a couple of times each way then put on the roller and we have a fine, smooth field. After the oats are harvested we plow as soon as convenient and let it lay until the following spring, when we give it from 7 to 8 tons lobster shells to the acre and thoroughly disc and plow lightly. After giving it a light harrowing or two we leave it alone until ready to sow the turnip seed, when we take the hiller and ridge up about 28 or 30 inches apart. We have a light one-horse roller that will cover two rows. After going over the rows with the roller then comes the seeder, sowing two rows at a time, both drilling and covering. After that they are cultivated once a week and thinned when about 2½ or 3 inches high. We keep them cultivated until they commence to meet across the rows then we leave them until time to harvest. The next year we grow potatoes. The following year we set our strawberry plants and care for them. The next two years we harvest the berries after which we plow them under and seed to wheat grass and clover. Our land yields us a good crop of fine hay for four, five and sometimes six years without any other fertilizer when we repeat the operation.

A Farmer.

Yarmouth County, N. S.

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Remember the agent or dealer wants you to purchase from him a fence on which he can make a commission, and makes claims of quality in an attempt to account for the tremendous difference between his price and ours. Fifty thousand Ontario farmers purchased over seven hundred car loads of ROYAL FENCE during 1912, and every one of them stand ready to tell you that it is the most perfectly woven fence they ever used. The following is our guarantee,—

IF YOU FIND FOR ANY REASON THAT THE FENCE RECEIVED OF US IS NOT OF THE BEST HARD, STEEL, WIRE, THE BEST GALVANIZING, THE MOST PERFECTLY WOVEN FENCE YOU EVER PURCHASED AT ANY PRICE, YOU ARE AT LIBERTY TO RETURN IT TO US. WE WILL PAY FREIGHT BOTH WAYS AND REFUND EVERY CENT OF YOUR MONEY.

WE SET THE PRICE. OTHERS DEVOTE THEIR ENERGY TO TRY TO MEET OUR PRICES.	PRICE Car load or less in Old Ontario	PRICE Car load or less in New Ont Que. and Mar Pro	PRICE less Car load in Man and Western Prov's	PRICE Full Car Load in Man and Western Prov's
4-34-0 HORSE AND CATTLE FENCE Has 4 line wires 34 in. high 9 stays to the rod all No. 9. Hard Steel wire spacing 11, 11, 12 Weight per rod 5½ lbs Price per rod freight prepaid.....	17c	19c	22c	19c
5-40-0 HORSE AND CATTLE FENCE Has 5 line wires 40 in. high 9 stays to the rod all No. 9. Hard Steel wire, spacing 10, 10, 10, 10, Weight per rod 6½ lbs. Price per rod freight prepaid	19c	21c	26c	21c
6-40-0 HORSE AND CATTLE FENCE Has 6 line wires 40 in. high 9 stays to the rod, all No. 9. Hard Steel wire, spacing 7, 7, 8, 9, 9, weight per rod 7½ lbs. Price per rod freight prepaid	21c	23c	30c	25c
7-40-0 HORSE, CATTLE AND SHEEP FENCE, Has 7 line wires 40 in. high 9 stays to the rod, all No. 9. Hard Steel wire, spacing 5, 6, 6, 7, 7½ 8½. Weight per rod 8½ lbs. Price per rod freight prepaid..	23c	25c	34c	28c
7-48-0 HORSE AND CATTLE FENCE Has 7 line wires 48 in. high, 9 stays to the rod, all No. 9. Hard Steel wire, spacing 5, 6, 7, 9, 10, 11, Weight per rod 9 lbs. Price per rod freight prepaid.	24c	26c	36c	29c
8-34 SHEEP AND HOG FENCE, Has 8 line wires 34 in. high 12 stays to the rod all No. 9. Hard Steel wire, spacing 3, 3¼, 3½ 4¾ 5½ 6, 8, Weight per rod 10 lbs. Price per rod freight prepaid.....	27c	29c	40c	32c
8-40 GENERAL STOCK FENCE, Has 8 line wires 40 in. high 12 stays to the rod all No. 9. Hard Steel wire, spacing 3, 4, 5, 6, 7, 7, 8, Weight per rod 10½ lbs. Price per rod freight prepaid	28c	30c	44c	36c
8-48 GENERAL STOCK FENCE, Has 8 line wires 48 in. high 12 stays to the rod, all No. 9. Hard Steel wire, spacing 4, 5, 6, 7, 8, 7, 9, Weight per rod 11 lbs. Price per rod freight prepaid	29c	31c	46c	37c
9-48-0 GENERAL STOCK FENCE Has 9 line wire 48 in. high 9 stays to the rod, all No. 9. Hard Steel wire, spacing 3, 4, 5, 5, 6, 8, 8, 9. Weight per rod 11 lbs. Price per rod freight prepaid.....	29c	31c	46c	37c

CASH WITH THE ORDER SAVES EXPENSE AND YOU GET THE BENEFIT OF THE SAVING IN THE PRICE.	PRICE Car load or less in Old Ontario	PRICE Car load or less in New Ont Que. and Marl Pro	PRICE less Car load in Man and Western Prov's	PRICE Full Car Load in Man and Western Prov's
9-48-OS HORSE AND CATTLE FENCE Has 9 line wires, 48 in. high 9 stays to the rod all No. 9. Hard Steel wire spacing 6, 6, 6, 6, 6, 6, 6, 6, Weight per rod 11 lbs. Price per rod freight prepaid.....	29c	31c	46c	37c
9-48 GENERAL STOCK FENCE Has 9 line wires 48 in. high 12 stays to the rod, all No 9. Hard Steel wire spacing 3, 4, 5, 5, 6, 8, 8, 9, Weight per rod 12 lbs. Price per rod freight prepaid....	31c	33c	50c	41c
10-50 HORSE, CATTLE SHEEP AND HOG FENCE, Has 10 line wires 50 in. high 12 stays to the rod all No. 9. Hard Steel wire spacing 3, 3¼ 3½ 4¾, 5½ 6, 8, 8, 8, Weight per rod 13¼ lbs per rod freight prepaid.....	33c	35c	54c	45c
11-54 HORSE, CATTLE SHEEP AND HOG FENCE, Has 11 line wires 54 in. high 12 stays to the rod all No. 9 Hard Steel wire, spacing 3, 3¼ 3½ 4¾, 5½ 6, 6, 6, 8, 8. Weight per rod 14½ lbs Price per rod freight prepaid....	37c	39c	60c	50c
7-26 HOG FENCE, Has 7 line wires 26 in. high 20 stays to the rod top and bottom No. 9. Filling No. 12. Hard Steel wire spacing 3, 3¼, 3½ 4¾ 5½ 6. Weight per rod 6 lbs price per rod freight paid..	18c	20c	25c	20c
15-50-P STOCK AND POULTRY FENCE Has 15 line wires 50 in. high 24 stays to the rod top and bottom. No. 9. Filling 12 Hard steel wire spacing 1⅞ 1⅞, 1⅞ 1⅞, 2, 2, 2½ 3, 4, 5, 5, 6, 6, 7. Weight 12 lbs. Price per rod freight paid	37c	39c	54c	45c
FARM GATE 12x48 Freight paid.....	$4.00	$4.25	$5.25	$4.50
FARM GATE, 13x48, freight prepaid...	$4.25	$4.50	$5.50	$4.70
FARM GATE 14x48 Freight paid.....	$4.50	$4.75	$5.75	$5.00
FARM GATE 16x48 Freight paid.....	$5.00	$5.25	$6.25	$5.50
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BRACE WIRE No. 9. Soft per coil 25 lbs freight paid.....	75c	80c	$1.10	90c
BARBED WIRE GALVANIZED, Two point per spool of 80 rods freight paid..	$2.25	$2.50	$3.40	$2.80
STRETCHER, All iron top and bottom draw very heavy tested chain, extra single wire stretcher and splicer, the best stretcher made at any price freight paid..	$7.50	$8.00	$9.00	$8.25

The first row of prices include freight prepaid by us to any railroad station south of North Bay in Old Ontario. The second row of prices include freight prepaid by us to any railroad station in New Ontario, Quebec & Maritime provinces. The third row of prices include freight prepaid by us to any railroad station in Manitoba, Saskatchewan, Alberta & British Columbia in shipments of 200 lbs, or over. The fourth row of prices include freight prepaid by us to any railroad station in Man. Sask. Alta & BC in full car loads of not less than 24,000 lbs (except B.C. which requires 30,000 lbs, to the car) Carloads may be made from any one style of fence or assorted fence, gates and barb wire. The weights of each article are given above so you can readily determine how much to order to fill the car. Remember ALL WIRE USED IN THE WEST MUST COME FROM THE EAST, our policy will save you money **Remit cash with your order** by bank draft, post office or express order to

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FOR SALE.—One pure bred Aberdeen Angus bull, 18 months old.—L. M. ANDERSON, Sackville, N. B.

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FOR SALE.—One Standard bred stallion, three years old, weight 1000 lbs. Broken to drive and to sire, attractive to look at and speedy with good disposition.—E. R. STRANG, Port Clyde, Shel. Co., N. S.

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We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

Price if taken before April 1st, $40.00

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

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Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd. A few bull calves and yearling heifers for sale.

FRED S. BLACK, Amherst, N. S.

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Maritime Dept. Birks Bldg. Montreal

FOR SALE

Blue Bell View Farm offers for sale; one pure bred Holstein bull, 12 months old, also some nice S. C. Rhode Island Red Cockerels from good laying strain.

Price of bull $80; Cockerels $1.50 each f. o. b.

WALTER PAYNE, Lake Edward, N. B.

Lawndale Stock Farm

We offer at present a few young heifers and bulls, as well as three cows, all bred in the purple.

Information cheerfully supplied to enquirers, Address,

I. M. LOVITT, M. D., P. O. Box 352, Yarmouth, N. S.

FOR SALE

Jersey Bull, two years old, dam, Figgis 35th of Hood Farm; sire, Bonnies' Foxy. Bonnies' Foxy is from the noted Hood Farm Bonnie, winner of more sweepstakes prizes than any Jersey cow in the Maritime Province, and was sired by the famous bull, Lachasse Foxy, (Imp.)

Apply to

Robt. Robinson, Box 232
Meadow View Farm, Sussex, N. B.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.B.

IT will soon be time to set the hens. Try a setting of my turkeys (absolutely free from disease) $3.00 for eleven. Have booked a good many orders would like to add your name.

Sicillian Buttercups, from one of the world's best strains $3.00 a dozen, Indian Runner ducks, $2.00 for 13; splendid Single Comb Rhode Island Reds $2.00 for 15.

"How to Raise Turkeys" 25c. a copy.

SARAH E. MOSES SMITH,
Woodwards Cove, New Brunswick.

WHITE ORPINGTONS — Cook-Philo strain. Day old chicks, $4.00 for 12. Hatching eggs, $2.00 for 15. A few fine cockerels and pullets at $3.50 each.—C. W. GILLIATT, Masonic Home, Windsor, N. S.

NORTHERN GROWN TREES

Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery—no agents. Send list of your wants for prices, etc.

E. L COLPITTS
Petitcodiac, New Brunswick

Maple Green Farm

Holstein Cattle and Shropshire Sheep

To make room we offer for quick sale at greatly reduced prices two extra choice Bull calves 4 mos. old. Both out of dairy test winners and sired by "Maple Grove Mercena Mercedes" who's dam gave in the R. O. P. 12064 lbs. milk and 567 lbs. butter as a 2 yr. old.

Also 8 registered Shropshire Ewes. All supposed to be with lamb to Imp ram and 2 ram lambs, first cheque for $75 takes the "lot of sheep."

R. L. HICKS, Dalhousie Jct., N.B.

HOMESTEAD FARM

Holstein–Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

LOGAN BROS.
R. R. I.
Amherst, N. S.

Long distance 'Phone

FOR SALE

Pure Bred Registered Guernseys

1 cow dropped Sept. 30th, 1908 due to freshen in May.
1 heifer dropped Feb. 1st, 1911, bred to freshen in October.

Both the above have both American and Canadian registry papers.

1 heifer dropped Aug. 12, 1911, Canadian registry.
1 bull dropped Aug. 19, 1911, Canadian registry.

All the above good stock bred by a popular Maritime Province breeder—PRICES RIGHT.

W. E. READ & SON, Bear River. N. S.

FOR SALE

Imported Clydesdale Colt "Spicy Robin" rising three year old, Sire Radium by Hiawatha. For further particulars apply to

J. MEIKLEJOHN,
Cossar Farm, L. Gagetown, N.B.

Cattle and Sheep Labels

Size	Price doz.	Fifty tags
Cattle.....	75c	$2.00
Light cattle...	60c	1.50
Sheep or Hog.	40c	1.00

No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample mailed free

F. G. JAMES, Bowmanville, Ont.

Rhode Island Reds
Barred Plymouth Rocks
White Wyandottes
SilverLaced Wyandottes

Mating List Free

GEO. H. SEAMAN, Moncton, N. B.

Farmer Ads Are Business Getters

FOR SALE!

A few choice White Leghorn Cockerels from prize stock. Eggs for hatching all breeds. Send for catalogue.

Maritime Poultry Supply Co.
MONCTON, N. B.

FOR SALE

The pure bred Clydesdale Stallion Flash Favourite, imp. (12147) sired by Royal Favourite, dam by Flashwood. Imported and owned by the Nova Scotia government for four years at Truro, N. S. Flash Favourite has proved a sure foal getter and a sire of colts noted for their quality and size. Price reasonable.

ALFRED HAMILTON,
River John, N. S.

1870 1912

Mumford Bros.

PRODUCE COMMISSION MERCHANTS

141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

For Sale

Pure bred Clydesdale Stallion, Marquis of Meadowlands, (No. 10749); dam, Imp. by Sir Hugo; sire, Kings College Imp. Foaled June, 1909.

Marquis is a fine upstanding horse with best of underpining and plenty of style throughout.

Full particulars apply to

Morris Scovil
Gagetown, N. B.

Successful Lessons in Poultry Raising

Twenty complete Lessons. The successful Poultry Book a simple and comprehensive treatise in the care and culture of domestic fowls. This book is sent free on request.

OCTAVIEN ROLAND
Sole Agent for the Des Mones Incubator, P. O. Box 2363, Montreal, P. Q.

"HILLSIDE STOCK FARM"

We have for sale at right prices four Ayrshire bulls from twelve to fifteen mos. old. They are sired by the champion bull of 1911; a son of the renowned Scotch champion "Spicy Sam."

Prescott Blanchard, Truro, N. S.

Sea View Stock Farm

offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

Sgd. J. D. IRVING,
Buctouche, N. B.

HEREFORD STOCK FARM

Let us know how much money you want to invest in Hereford bulls, heifers, or cows with calf by her side or bred to "Prime Lad".

Buff Orpingtons and White Wyandottes, good laying and Utility strains, eggs $1.50 per 13.

R. R. BLACK, Amherst, N. S.

Free to Stock and Poultry Raisers

We will send absolutely free, for the asking, postpaid, one of our large sixty-four page books, with insert, on the common diseases of stock and poultry. Tells how to feed all kinds of heavy and light horses, colts and mares, milch cows, calves and fattening steers; also, how to keep and feed poultry so that they will lay as well in winter as summer. No farmer should be without it.

NOW is the time to use Royal Purple Stock Specific. At a cost of only two-thirds of a cent per day per animal, it will increase it 25 per cent. in value. It permanently cured Bots, Colic, Worms, Skin Diseases and Debility. Restores run-down animals to plumpness and vigor. It will increase the milk yield three to five pounds per cow per day and make the milk richer.

Royal Purple is not a stock food. There is no filler used in its manufacture, and we import from Europe all the seeds, herbs, barks, etc., and grind them on our own premises. Therefore, we can guarantee it to you as being absolutely pure. We do not use cheap filler to make up a large package. We give you the best condition powder ever put on the market in a concentrated form.

A tablespoon levelled off, once a day, is sufficient for a full-grown animal. It prvents disease, keeps your animals in perfect health, and is absolutely harmless. It makes six-weeks-old calves as large as ordinary calves at ten weeks. You can develop six pigs ready for market in just one month's less time than you can possibly do without it, at a cost of only $1.50, saving you a month's work and food.

A 50c. package will last a horse 70 days. A $1.50 pail or air-tight tin, containing four times as much as a 50c. package, will last an animal 280 days.

If you have never used it, try it on the poorest animal you have on your place, and watch results. If it does not produce better results than anything you have ever used, or give you satisfaction, we will refund your money.

Toledo, Ont., July 1, 1910.
W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—I have used a part of a package of your "Royal Purple Stock Specific." I fed it to one cow according to directions. She gained six pounds of milk while using part of a package. The rest of my herd reduced in milk while this one gained. I consider it has no equal.

T. G. BELLAMY.

Bondhead, Ont., Aug. 31, 1912.
The W. A. Jenkins Mfg. Co., London, Ont.

Gentlemen,—After experimenting with a great many stock foods, I was about convinced that there was very little virtue in any of it, but your dealer insisted on me trying Royal Purple Stock Specific, saying it was different from all others. I have since used a great lot of it, as I keep from ten to twenty horses and about the same of cattle. This Specific, in my opinion, is certainly in a class by itself as a conditioner, and is the best I have ever used.

GEORGE MAPES.

Clear Creek, Ont., Sept. 19, 1912.
W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Your "Royal Purple" Stock Specific is the best stock conditioner I have ever had in my stables, and am never without it. I had a brood sow that had milk fever very bad. Your "Royal Purple" saved her life. Put her on her feet in three days. I had three calves last spring that got scouring very badly. Could not get it stopped until I used "Royal Purple." It did the work O.K.

Yours truly, H. B. MOULTON.

Saskatoon, Sask., Sept. 20th.
The W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—Some months ago we bought some of your Royal Purple Stock Specific from Mr. Vogan here. We have been using it ever since, and we find it the best conditioner for driving horses we have ever tried.

H. F. McCALLUM, "The Palace Livery."

Scott, Sask., May 22nd, 1911.
The W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Do you want a man to represent your Royal Purple goods in this district. I am from Ontario, and have fed your Stock Specific—got it from Mr. J. Corbett, of Brownsville. My cows, while using it, made the largest average, and tested five points over average at C.M.P. at Brownsville. I know your goods are the highest class Stock Specific on the market, and take great pleasure in representing you in this district

NORMAN G. CHARLTON.

Royal Purple Poultry Specific

will make your hens lay in winter, as well as summer, and yet a 50c. package will last 25 hens 70 days, or a $1.50 pail or air-tight tin, containing four times as much as a 50c. package, will last 280 days. It prevents poultry from losing flesh at moulting time, cures and prevents all the ordinary diseases, makes their plumage bright, and keeps them in prime condition.

Port Colborne, May 11.
W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—This is to certify that I have used one $1.50 tin of your "Royal Purple" Poultry Specific, and there is nothing that can equal it. I wanted yours again and your agent did not have any, so he gave me another brand, and I can assure you it was not worth carrying home, for my hens layed better without it. I have been from 12 to 15 dozen eggs short every week since I have not used your "Royal Purple."

CHARLES RICHARDSON.

Royal Purple

STOCK AND POULTRY SPECIFICS

A second from Mr. Richardson as follows :—

Port Colbborne, Ont., Aug. 24, 1910.
W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—Please find enclosed express order for $3.00, for which please send me two tins of your "Royal Purple" Poultry Specific.

C. RICHARDSON.

A third letter from Mr. Richardson as follows :—

Port Colborne, Ont., Aug. 29, 1910.
W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—I received two tins of "Royal Purple" Poultry Specific all O.K. I have tried all kinds of specific to make my hens lay, and I find that you are the only ones that manufacture the genuine article. All the rest, I think, is a waste of time and money to bother with. As an egg-producer, I cannot praise your Poultry Specific high enough, for I would not be without it if I had to pay double the money.

C. RICHARDSON.

Sherbrooke, Que., Aug. 1, 1910.
W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—I have used your Specific for one year, and have given it to my birds with good results. See my winnings at the different fairs, which will tell the tale.

MISS GEORGINA CAMIRAUD.

Royal Purple Cough Specific

During the last four years there has been an epidemic cough going through every stable in Canada, which has been a great source of annoyance to horsemen. Our Royal Purple Cough Cure will absolutely cure this cough in four days, will break up and cure distemper in ten days. Absolutely guaranteed. 50c. per tin; by mail, 55c.

Royal Purple Gall Cure

will cure all sorts of open sores on man or beast. Will absolutely dry up and cure scratches in a very few days.

Mr. Sam Owen, coachman for the Hon. Adam Beck, says: "By following directions, I find your Royal Purple Gall Cure will cure scratches and make the scabs peel off perfectly dry in about four or five days." Price, 25c.; by mail, 30c.

Royal Purple Sweat Liniment

will reduce lameness in a very short time. Mr. John M. Daly, coalman in London, says: "We have nine horses constantly teaming coal, and have all kinds of trouble with them being lame at times. I have used your Sweat Liniment for a year back, and have never known it to fail to cure sprained tendons, etc." Price, 50c., 8-ounce bottles; by mail, 60c.

Royal Purple Lice Killer

This is entirely different from any lice killer on the market. In order for you to understand the process of manufacture of this lice killer, you will have to send for one of our booklets, as we give you a full history of it there. It will entirely exterminate lice on fowls or animals with not more than one or two applications. It smothers them. Price 25c.; by mail, 30c.

Royal Purple Disinfectant (Sheep Dip)

In this line we give you the largest value for the money of any disinfectant on the market. A tin containing 1 3-8 qts. Imperial measure will cost you only 50c. Also put up in 25c. tins.

Royal Purple Roup Cure

Mr. Dulmage, the great breeder, of White Rocks, tells us that he has never used a Roup Cure that will give relief so quickly to hens suffering from Roup or kindred diseases. Our book tells you all about it. 25c. per tin; 30c. by mail.

Royal Purple Worm Powders

For animals. 25c. per tin; by mail, 30c.

In using our Stock Specific, we guarantee you better results by using the ordinary food grown on your farm, such as good hay, oats and bran, and so forth, than you can possibly obtain by using any of the many patent foods on the market. In these the percentage of nutrition is usually very small for the amount of money paid for the same. You know exactly what hay, oats, bran, chop or any farm products cost you, and ROYAL PURPLE makes animals digest these foods properly.

What we wish to impress on your mind is that we manufacture nothing but pure, unadulterated goods. Our booklet gives over 300 recommendations for our different lines from people all over Canada. While we give you above the names of a few who have used it, our best recommendation is for you to ask any person who has ever used any line we manufacture. 26

These goods may be obtained from, Halifax Seed Co., Halifax; Amherst Trading Co., Amherst; A. Horne & Co., Charlottetown; Maynes & Riley, St. John.

W. A. JENKINS MANFG. CO., London, Ont.

AN ASSORTED ORDER AMOUNTING TO $5.00 WE WILL PREPAY.

Weed, Breed and Feed.

Weed, breed and feed are the main points used at dairy institute meeting. Weigh the milk of each cow every milking. The most of the farmers will tell you that they do not have the time to bother with weighing. They are losing more time milking and feeding some of their poor cows that are not paying for their keep. The past season I have been milking a couple of two-year-old heifers. One of them gave 4500 pounds of milk—not a large production by any means—but the other produced only 1900 pounds. Did it pay me to spend the time weighing? Anyone who weighs the milk will get good pay for his time.

In the breeding work buy a good pure bred bull, not a pure bred scrub, and raise the calves from the best cows. The average dairyman will say that it costs too much money to buy a registered sire. It does not take a great deal of capital and quite often you can sell the bull to some of your neighbors for as much or more than he cost. You have the use of him for his keep and the interest on the investment. But if you have only a few cows and cannot afford a good sire and you have a near neighbor who has one that you can use, take your best cows there and don't be afraid to pay him $2.00 or more per cow. It will be one of the best investments you ever made. You cannot feed a sire for $20 or $25 per year.

I know of a case where a cow that was considered rather a poor producer was bred to a registered sire and when the calf became a three-year-old she gave over 8000 pounds of milk in a season. Her bull calves sired by a registered bull all sold for $5.00 a piece as soon as dropped and her heifer calves cannot be bought. If any one of the readers of this comment should become the owner of a good pure bred bull, don't make the mistake and turn him out where he can run at large and serve all the cows in the neighborhood free of charge and be everybody's bull. People are liable to consider him a very common individual. Such was the case with the first registered bull I owned. Since then I have always had the bull in a place where he could not get away and when I wanted to use him he was at home.

Don't be afraid that when you feed good cows you will not get the money back that you paid for the feed, for a cow to be a good producer must be kept in good physical condition just as well as must a horse that does a good season's work. The same rule can also be used in having a cow in good condition before she freshens as in having horses in good condition before commencing work in the spring. Most feeders recommend feeding one pound of feed to three or four pounds of milk produced, but in the latter end of the milking period, and if your cows are a little thin, it pays to feed a little heavier so as to have your cows in good, fair flesh when they go dry. Then when they freshen you will be surprised to see how much better they will milk than when they are dried off skin-poor and kept in that condition until freshening. The average farmer will say this kind of dairying costs too much, but he is mistaken. Weeding, breeding and feeding pay.—C. J. Devlin, in Hoard's Dairyman.

There are too few good colts raised on the farms. This should not be. Don't leave this important industry to the horse breeders alone.

This is an age of hustle. The team of 3,500 or 4,000 pound weight can haul as much in one trip as the small team can in two or more. One man can drive a big team more cheaply than two men can drive two small teams in teaming. This is the secret of the demand for big horses in the cities.

REEDERS' DIRECTORY

ur charge for inserting names in this Direc- y is $1.00 per year for each line under each ding. Money must be paid strictly in ad- ce. Names taken out promptly when time is Stamps taken.

Guernsey Cattle.

A. Smith, Woodward Cove, Grand Manan, B.
n N. Chute, Berwick, N. S.
ward W. Corning, Cheggogin, Yarmouth Co., N. S.
Frank Roach, Sussex, N. B.

Holstein Cattle.

W. C. Nase, Nerepis, N. B.
W. C. Nase, Nerepis Station, Kings Co., N. B.
. R. Taylor, Upper Dorchester, N. B.
n B. Barton, Welsford, N. B.

Ayrshire Cattle.

A. Archibald, Truro, N. S.
n H. Hughes, Petitcodiac, N. B.
e S. H. White Co. Ltd., Forest Glen, N. B.
. W. Owens, 4026 Dorchester St., Montreal.
Frank Roach, Sussex.
d. S. Black, Amherst, N. S.

Shorthorn Cattle.

A. Archibald, Truro, N. S.
ac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

d S. Black, Amherst, N. S.

Yorkshires.

wart Bros., Alliston, P. E. I.
. Callbeck & Sons, Box 386, Summerside, P.E.I.
d A. Wetmore, Bloomfield Station, N. B.
. W. Owens, 4026 Dorchester St., Montreal.
S. H. White Co. Ltd., Forest Glen, N. B.
A. McBeath, Marshfield, P. E. I.
. Messenger, Bridgetown, N. S.
. A. Churchill, Lakeside. Yarmouth Co., N.B
iney J. Goodliffe, Sussex, N. B.

Chester Whites.

H. Moore, Scotch Lake N.B.
ward W. Corning, Coeggogin, Yarmouth Co. N. S.

Shropshires

A. Archibald, Truro, N. S.

POULTRY.

eeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single omb Brown Leghorns, Walter McMonagle & on. Sussex, N. B.

pringbrook Ayrshires !

hampions in the show ring dairy tests, and ners of the Gold Watch over all dairy eds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

red for Eggs and Meat

Bellevue Strain of White and Colum- n Wyandottes, S. C. White Leghorns, d Light Brahmas. Stock for sale. er 30 years in business.

MICHAEL K. BOYER,
x 27 Hammonton, Atlantic County, New Jersey

e Duplicate All Infertile Eggs

White and Columbiam Wyandottes, Single Comb ite Leghorns, and Light Brahmas. We use p nests. In business over 30 years. Brahma s, $3 for 15; $5.00 for 30. The other varieties or 15, $5 for 50, $10 for 100. Address,

MICHAEL K. BOYER, Box 27,
Hammonton, New Jersey.

CORNING TURNIP SEED

FOR SALE

About 1000 lbs. of the famous Gr. Top "Corning" Turnip Seed, crop 1912, grown rom selected roots. Price 50c., postpaid 55c.

. P. GOUDEY, Yarmouth, N. S.

Barred Plymouth Rocks

Again we maintained our prominence as breeders of B. P. Rocks at Maritime Fair by winning Silver Cup for the best display of this variety. In heavy competition won 1st and 6th on hens; 1st, 5th and 6th on pullets; 2nd, 5th and 6th on cockerels; 1st and 2nd Mating pens (pullet); 1st breeding pen, and special for best female. High class stock for sale.

CRAIG BROS., Amherst, N. S.

Rose Bank Farm Jerseys & Yorkshires

FOR SALE

One Jersey bull two years old by Pogis 40th of Hood Farm and bull calves by Foxhall's St. John O'Dreamwold, also pigs one to six months old, both sexes.

Josselyn & Young, St. John, N.B.

Columbian Wyandottes

Winners at Amherst

See Maritime Farmer Xmas issue. Prize winners for sale. Also a few Rhode Island Reds (both combs). New "Peerless" Incubator cheap.

Orchard Hill Farm, Brown's Flats, N.B.

LAWNDALE STOCK FARM

We have a special lot of 3 young bulls for sale at a bargain—Two roans dropped December 1911. One, all red, dropped February 1912. Splendidly bred and excellent specimens. Also other pure bred Shorthorns.

Write for particulars.

J. M. LOVITT, M. D., Proprietor,
P. O. Box 353 Yarmouth, N. S.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

C. C. H. EATON,
Canard, N. S.

ELMWOOD STOCK FARM.

Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

FOR SALE

Ten cocks and cockerels, 20 pullets and yearling hens in the following varieties: Rose and Single Comb R. I. Reds, Buff Orpingtons and S. C. Brown Leghorns. Write for prices.

W. H. HENRY,
Shubenacadie, N. S.

Pure Bred Ayrshire Bull Calf

Dropped Jan. 12th, 1913. Bred from a daughter of Barcheskie Kings Own. Come and see him and his dam. Stables near the station.

ALLANDALE FARM, - Hampton, N. B.

FOR SALE

We have a number of choice cockerels and pullets of Barred Plymouth Rock. White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Apply to

Walter McMonagle & Sons, Sussex Corner, N. B.

Cobequid Farm Holsteins

We offer for sale 9 bulls from 2 months to 18 months old. The dams of these bulls averaged 12,358 lbs. milk in one year. including 3 two yrs old and 2 three yrs old. Do you know where you can beat this average in the Maritime Provinces? There is need for a thousand bulls such as these. For particulars and prices address

SAMUEL DICKIE, Central Onslow, Col. Co., N. S.

DROP A CARD

KINGSDALE MATING LIST
Our mating list is now ready for 1913.

KINGSDALE POULTRY SUPPLY CATALOG
Fully illustrated 60 pages all up to date.

EVERYTHING FOR THE POULTRY KEEPER

KINGSDALE POULTRY & SUPPLY CO., SUSSEX, NEW BRUNSWICK

FOR SALE--Pure Bred Shropshires

20 to 30 Shropshires.
6 Cheviots.
5 Leinsters.
A few Southdowns, Oxfords and Lincolns.

These sheep are from one to two years old, extra choice, being picked from noted flocks by Mr. R. H. Harding of Mapleview farm, Thorndale, Ont. Write or wire,

F. DeL. CLEMENTS, 9 & 11 Rodney St., St. John, N.B.

RIVERSIDE HOLSTEINS

We have now for sale two exceptionally good high grade young cows, one 5 years old, is a show cow and 50 lb. producer, due to calve January 20th sired by Sir Rooker Posch Artis, Sire of 1911 Champion at Amherst and 1912 1st money Holstein cow, also several others forward in calf.

LEA & CLARK, VICTORIA, P. E. I.

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

SUNNY SIDE STOCK FARM

Ayrshire herd founded 1889 now headed by "Greenslack Great Fortune" (Imported) A number of 1911 and 1912 bull calves for sale, females any age.

In Chester White Swine I am booking orders for young pigs.

J. F. ROACH, 'Phone 111 SUSSEX, N. B.

BRAMPTON JERSEYS !

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

BELLEVIEW STOCK FARM

Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

C. A. ARCHIBALD, - Truro, N. S.

BROOKLAND'S POULTRY & FRUIT FARMS

LIMITED

SPECIALISTS IN WHITE WYANDOTTES & BARRED ROCKS

WE have some of the finest stock in the Maritime Provinces. All our birds reared on free range, thus ensuring size, health, and vigor, so essential for heavy egg producers.

If you want winter layers try the *BROOKLANDS STRAIN* you will not be disappointed.

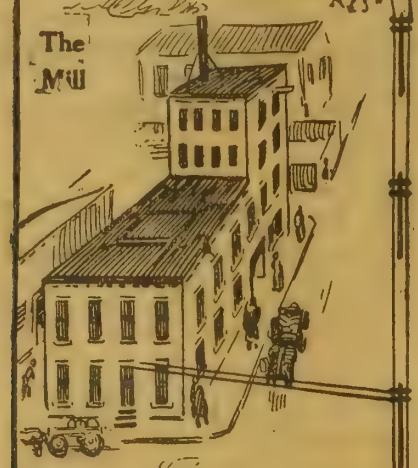
STOCK, EGGS AND DAY OLD CHICKS

We have installed an 1800 egg capacity Incubator to especially cater for the day old chick trade.

Custom hatching a specialty. Correspondence solicited.

LEONARD C. BOX, Managing Director Barker's Point near Fredericton, New Brunswick.

The Mill



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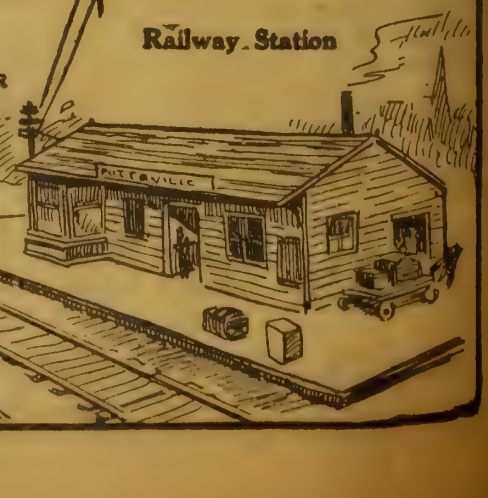

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Vol. 18. SUSSEX, N. B., MARCH 25, 1913 No. 12

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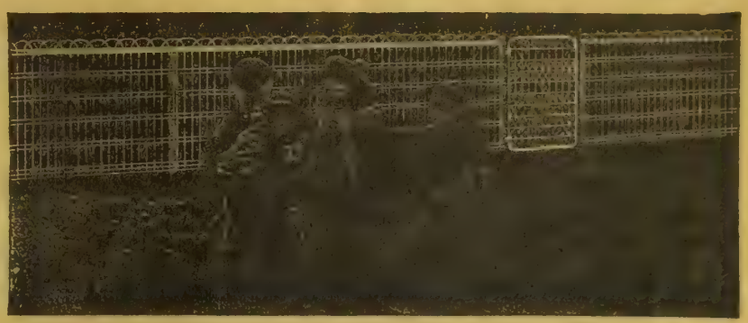

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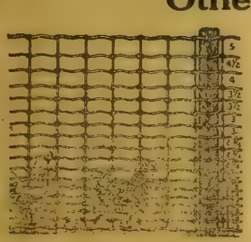

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Fine, *granular*, very dry.

Nothing remains in the sifter—FIVE ROSES is *free*, heavy.

And your bread is more *porous*, more yielding, more appetizing.

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Because the particles are finer, *easier* to get at by the stomach juices.

Use this very fine flour—*superfine*.

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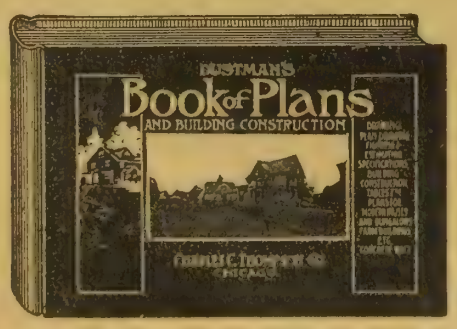

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Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

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Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

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The Maritime Farmer

SUSSEX, N. B.

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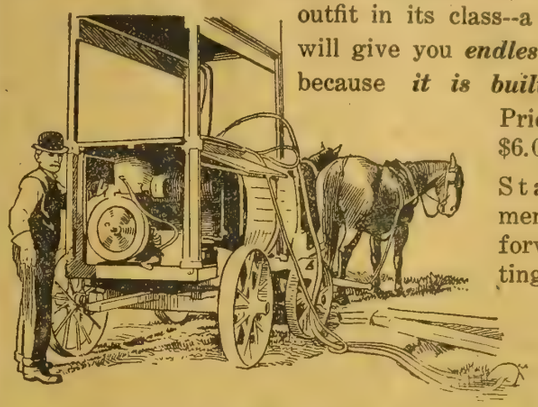

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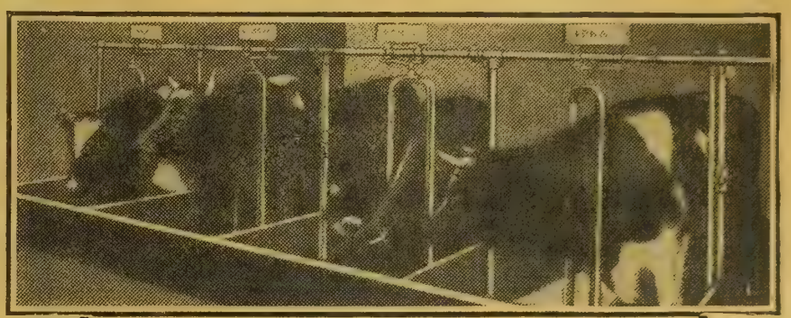

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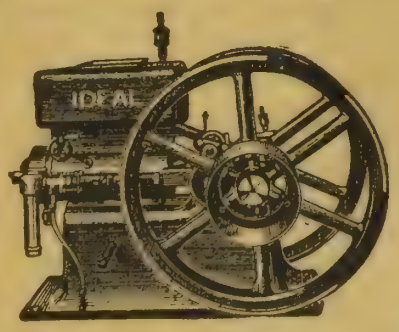

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Volume 18. SUSSEX, NEW BRUNSWICK, MARCH 25, 1913. Number 12.

Women's Institutes of New Brunswick

Daisy E. Harrison, Gondola Pt., N. B., Acting Supervisor

DURING the summer of 1911 the Women's Institute Work was first introduced into New Brunswick and 16 organizations formed. In the Fall of 1912 the work was again taken up, those institutes visited and fourteen new branches organized with the promise of many more. Up to now we have twenty-five branches representing nine of the fifteen counties of our province with a total paid membership of 561.

The work has made rapid advancement since its introduction here and the women have shown their appreciation and ability to enter into such work. Trained lecturers have been sent out by the Department each year to familiarize the women with the work and organize where desired. Lectures on Home Nursing and Hygiene and demonstrations in cookery with short talks on food values and food combinations were given at each meeting.

The aim and object of the organization is for the betterment of the home and the motto adopted is: "For Home and Country." Those things which touch upon the daily life of the homemaker are taken up in the Institute and women unite to study those subjects and undertake work which goes towards the improvement of the home and the community.

Several of the Institutes have co-operated with the Agricultural Societies. The Welsford Branch at Ford's Mills is raising funds for the building of an agricultural hall, while other branches are assisting them in revising their prize lists. An interest in the general welfare of the locality is felt and the institute in several instances has been able to bring about many improvements. In Central Napan the members took up the matter of the building of a public hall with the result that the Institute was given the privilege of choosing the site and the hall was built and formally opened last November. This same Institute besides raising $180.00 towards the hall, presented the school with a flag and pole and gave three prizes for general proficiency. Nearly every branch has interested themselves in some special line of work—the need of which has been felt in their particular locality.

If space would permit I could make special mention of the work of the greater number of the Institutes in this direction. The prevention of the sale of cigarettes and tobacco to minors was accomplished by the Hillsboro Branch and a Law and Order League formed which has done much for the town. Hoyt Institute is making provision for the fixing of a very dangerous piece of road in their vicinity, while the Havelock Branch is arranging for a reading room for the boys of the place.

The following program is an example of the general work of the Institutes:

Jan.—"How to entertain small companies," Discussion—Can a woman be too economical? R. C. earliest remembrance. Demonstration—Carrot Pudding.—B. May Harron.

Feb.—Should a wife understand her husband's business?—Mrs. G. Neale. How would you spend a spare day?—All. R. C. clipping of prose or poetry. Demonstration—Economy Cake—Mrs. Neale.

Mar.—How can we teach our children economy?—Mrs. R. Fleming. Discussion—Heating and ventilation of a house. R. C. Don'ts. Demonstration—Spice Cake.—Mrs. Geo. Laverty. Canned Peaches—B. May Harron.

Apr.—What to prepare for dinner when meat is scarce?—Inez Green. What to plant in a small vegetable garden. Discussion—How to do spring cleaning in the easiest and best way. R. C. Quo. on Spring. Demonstration—Marble Cake.—Mrs. J. Y. Fleming.

May.—Abour Day. Election of Officers. Apron Parade. Bring pattern. Should the country woman dress more up-to-date?—Mrs. J. R. Kirkpatrick. Discussion—Paper Bag Cooking. Demonstration—All bring sandwiches. Date Cookies.—Mrs. Geo. Sanderson.

June.—Food value of strawberries and canning.—B. M. Harron. Systematic Housework.—Mrs. W. J. Craig. How to prepare simple meals in berry time.—All. How to can vegetables.—All. R. C. Patriotic Quo. Demonstration—Frut Salad.—Mrs. P. Tobin and others.

July.—Girls' Meeting. N. B. Early History. Literary men and statesmen. Paper—Table setting and serving.—Miss Turner. Samples of needlework.—Girls. Discussion—How girls can help their mothers. Demonstration—Ice Cream.—Mrs. I. Carson, Mrs. I. Carson, Mrs. J. Grant and others. Cake.—Girls.

Aug.—Picnic.

Sept.—Prophecy what the homes will be like when every woman attends the Institute.—Mrs. G. W. Flemming. Each a Suggestion—How to make an Institute Meeting instructive and entertaining. Discussion—Does the housewife work harder than the professional woman?. Vocal Solo.—Mrs. Carpenter. Jelly Making, Pickling, Preserving—All bring samples. Demonstration—Doughnuts—Mrs. G. M. Green.

Oct.—How to keep young.—Mrs. J. Y. Flemming. Simple meals, well cooked, nicely served.—Mrs. G. Sanderson. Discussion—Christmas presents. How to grow bulbs. Exhibition of needlework.—All. Demonstration—Angel Cake.—Miss L. Crabbe. Choice Cherry Wine.—Mrs. A. Henderson.

Nov.—Each member bring a man and a lunch. Discussion—Do farmers' wives work harder than their husbands?—Mrs. A. Henderson. Will better education tend to turn the boys and girls from the farm?—Mrs. S. Billings.

Dec.—Shall the wife have an allowance?—Mrs. Faucett. Discussion—The capricious appetite. Shall it be catered to? Soap. Laundry and toilet. Demonstration—Fruit Cake and Raspberry Wine.—Mrs. Blair and Miss Meagher.

The excellent results attending the Women's Inssitute work in every locality where an organization exists and the interest and earnestness which is taken in the work is sufficient justification for its continuance. Anything to be successful must be continuous and it is to be hoped that the Women's Institute work will receive the financial support and trained supervision which is necessary for its successful continuance.

It has been a great pleasure for me to have had part in the arranging of the First Annual Convention of the New Brunswick Institutes. The success of the Convention and the Institute work throughout the province is largely due to the members of the various branches.

We were fortunate in having Miss M. V. Powell, of Ont., present, an experienced and enthusiatic worker in the Ontario Institutes.

The five sessions of the Convention were well attended—members of Parliament, visitors in the city and a number of men were present at the different sessions.

FIRST ANNUAL CONVENTION OF THE NEW BRUNSWICK WOMEN'S INSTITUTES.

The first Annual Convention of the Women's Institutes of New Brunswick was held in the Y. M. C. A. building, Fredericton, on February 18 and 19. The Convention was a great success and marked the formal inauguration of the work in the province.

The first of the five sessions opened with 49 delegates present from nearly every country in the province. Twenty-three of these were Government delegates, others were sent by the Institutes while many took advantage of the excursion rates and came at their own expense for the sake of attending the Convention.

Mr. J. B. Daggett, Secretary for Agriculture, presided at the opening session. The Convention was opened by the singing of "O Canada" after which the Rev. Mr. Wilson led in prayer.

The Chairman: The Women's Institutes fill a social need in this province, particularly in the rural communities and I am pleased to see such a large and representative gathering present at the first Women's Institute Convention held in the province. Since taking up my duties as Secretary for Agriculture, I have been given an almost free hand by my chief, Hon. Dr. Landry in the handling of this part of the work.

This Convention has been called for the purpose of seeing just what strength and possibilities there were for the women's Institute work in this province and the future of the movement depended very largely upon the success of the Convention. Fundamentally he was not favorable to organizations which split up the women in one organization and the men in another. The fault lay with the men, who wanted to get together where they could smoke and often where they could discuss things which they would not like to talk over before their wives and daughters. The social movement in this province had made it necessary for the women to organize themselves. He would like to have the Government understand that the Department of Agriculture was heartily in sympathy with the work and would give consideration to any legitimate demand that was made.

ADDRESS OF WELCOME.

Mayor Hooper: In my year of office I have welcomed between ten and fifteen conventions, but this is the first gathering of women I have welcomed and this welcome which I give on behalf of the citizens is a hearty one.

I notice your program is a very interesting one and I believe when completed the Convention will be productive of much good.

I should like to see the ladies of the Women's Institutes confer with the management of the Fredericton Exhibition in making up the prize list for the September Exhibition for Domestic Science.

REPLY TO ADDRESS OF WELCOME.

Mrs. Medley Siddall, Pres. Port Elgin Institute:
Mr. Chairman:—

On behalf of the delegates of the Women's Institutes of New Brunswick I desire to thank Mayor Hooper for the very kind and cordial welcome extended to us.

This day is an unique one in the history of our province, in that it marks the time of an event of lasting importance, and from which should spread far-reaching results—the meeting of the representatives of an organized body of women who have at heart the betterment of home conditions, whose club motto is: "For Home and Country." Surely no Convention could have a more ennobling, more soul-satisfying purpose, or more practical common sense subjects for discussion than those that appertain to a higher standard of community life. Nor in any gathering of women could there be a closer unity existing, than exists in the assembly that meets for the discussion of subjects dealing with the home. For the home is more closely knitted to woman's heart than any institution, religious or secular, and there can be no division of feeling in matters that relate to the welfare of the home.

It is a fact, and if I were a woman suffragist I would consider it an argument in my favor, that women are only interested in moral questions, questions relating to the home and its occupants, questions bearing directly or indirectly on the home, or considered in relationship to the home.

In these stirring times we women have a greater independence of spirit than the women of a few years back. We cannot cling to the conditions of the past as did our mothers, and our unrest is not a manifestation of instability and idleness, but an eager striving for better methods of fulfilling our destiny of accomplishing our life's work. This delegation of women desirous perhaps of determining the best way to make a loaf of bread or bind up a bruised finger is but a manifestation of the desire for better citizenship, and we are beginning to learn too, that to wash a tumbler well is of greater service to society than writing a great treatise.

Our Women's Institute is but in its infancy. Our ideals are high, and our endeavors weak and seemingly ineffectual but we see "As in a glass darkly" the goal, efficient womanhood.

Mr. Chairman: I have much pleasure in moving a vote of thanks to Mayor Hooper for the cordial welcoming of these delegates of the Women's Institutes of New Brunswick.

ADDRESS.

Miss M. V. Powell, Whitby, Ont.: I wish to congratulate the Institutes on the admirable manner in which the work is being carried on. At this rate it will soon catch up to Ontario. I bring you greetings from 21,000 of the most intellectual women in Ontario, comprising the Women's Institutes of that province. Fifteen years ago the society was formed with only fifteen members, but since its inception the membership has steadily increased and to-day there are 21,000 united with one common object.

For many years in Ontario the Department of Agriculture has assisted the farmers to a very great extent and it is deplorable that not until fifteen years ago was the fact recognized that the women, too, needed help for the advancement of the interest of the home. The women stand equal with the men in their work.

This country needs education which stands for highest needs in the world, and the women stand for education. The Institute asks that the women be educated not away from their homes but in their homes and along lines that stand for the betterment of their homes. There is no greater national question than the home and it is necessary today that we fully understand the principles of life. Our motto and the motto of your organization as well is, "For Home and Country." Home is properly recognized as the first place. We, in our homes, are building there the future of our nation. Should they not have every training possible, every care and every thought? Should we not have the highest standards and how are we to have those ideals if the women have not the education and the development? Today there are so many demands upon a woman's time. Our Ontario organizations have provided for the women in the best possible way. The work grows because of the need as no other organization has done. Ontario has the largest women's organization on the continent. They all meet an one common ground, no sex, no creed. They meet in one common cause, which is the uplifting of our homes. Surely the object is a high one? To build up characters for the future citizens, it demands the thought of every intellectual man and woman. Only recently has it been conceded that women have ability to think. Women should keep in touch with all public questions in order that they might be able to provide for the young ones in the home. Women must take an intellectual interest in all public affairs. It will bind together much more closely the family ties because the women in the home understand his work and the care and difficulties which he has to meet in every day life. The Institutes of Ontario have met the need in regard to social life. We come in touch with other women of the community because of the Women's Institutes. It has not the narrowing effect of religious circles. In the Institute work we find theme for work which can touch the home. Nothing is too small or too great for us to undertake. Education forms a very great part of our work. The women are anxious to carry on the lines of work which are suggested to them through our Institute. They are receiving the support of every intelligent man in the community and all intelligent men aid these organizations. We accomplish our work by the co-operation of the men. The women needed the help of the stronger sex just as they needed the refinement and cultivation of the of the women. The whole national life is influenced by our women. The institute helps her to take a different view of her work. She is in touch with not only her own home but every other home.

We take up in the Institute the vital things of life. We are learning there that common runs of household, even the common talks and the ordinary tasks of the home take upon themselves a different aspect. Nothing is too small to do in the very best possible way that it can be done. Today it is necessary for the homemaker to know the science of her work. If a woman cannot learn self-control she cannot carry on the work of the home. We learn all these things in the Women's Institutes. It is particularly beneficial to those in rural districts. We do not claim for the organization publicity or drawing public attention, but our aim and object is to bring into the lonely, isolated life more brightness, more of the joy of living. Everything and anything in the home which tends to elevation, cultivation will tend to developing the home. The successful man requires a business training and how much more so is that training necessary for the woman in the home. It is the duty of the mother to train the boys and girls who would be the future men and women of this country and the influence that goes from the home is the influence that would control a nation. Should the women of Canada then not have the highest standard, the highest ideals of life? How can the women attain the highest standards if they do not have proper facilities.

There are 740 branches in Ontario and last year $7000.00 had been granted for Women's Institute work and the women, by their own efforts, had raised $30,000.00, making the total amount available the sum of $37,000. The surplus for 1912 amounted to over $14,000. The 740 branches in Ontario are visited by official delegates every summer and winter.

I understand that the Department of Agriculture of New Brunswick expended about $60,000 in agriculture, while only $1,500 was appropriated for women's work. Surely this is generosity on the part of the Government? It seems to me that when the great amount of work of the Women's Institute can accomplish, is recognized, that no doubt substantial means would be provided for the carrying on of the movement.

Among other matters which the Women's Institutes of Ontario have considered is the school question. We have done a great deal towards the solution of the school question. We are undertaking all through our province medical inspection through our schools. The schools need more than they are getting. We want to get down and do things, not talk about them. We want things which they will use in everyday life. In some schools they have what is called, "Mother Classes." They are taught how to care for the little ones. With us, we are endeavoring to have every Institute visit the school in the district once a month. They see that the conditions of the schools are beneficial to the pupils.

The standard of the home is the standard of the community. We are endeavoring to uplift not only the home but also the school. It rests very largely with us as to the standards of the community. In Ontario we are giving them the advantage of scientific training. The best homemakers are the ones who take up this work. For fifteen weeks one lesson a week is given for $1.00 in cooking, sewing and home nursing. Graduates are employed for this work. Three thousand dollars is used for the education of our homemaker. We hope that next year it will be ten thousand dollars to put the work in touch with a greater number of Institutes and to give it development

The whole matter of today depends upon the soundness of the boy today. We want to broaden out. Only by education can we make the proper advance. Through the Ontario Institutes halls have been built, circulating libraries introduced and almost everything has been done in regard to civic work. Many branches have undertaken the work of public parks and play-grounds for children. Ontario has taken up child welfare in almost every phase of its work. The Institute is undoubtedly recognized as a powerful factor in the development of the province.

New Brunswick affords a vast field for activity along women's line, and I trust that the next few years will be characterized by increased efforts towards the uplifting of the conditions of the home.

ADDRESS: PREMIER FLEMMING.

I have listened with a great deal of pleasure to the interesting, comprehensive and instructive address just given by Miss Powell.

I am here to express on my own behalf and on behalf of the Government the interest which we feel in the work of the Women's Institute. I believe that in a few days a bill is to be introduced in the Legislature providing for votes for women, so I desire to stand well with the women, particularly as they soon will be an added portion to the electorate of New Brunswick.

Great importance is attached to the co-operation of an organization such as the Women's Institute for the advancement of the province. I am satisfied that great good will result to the province through the work of the Women's Institutes. If the Institute carries on in any reasonable way its aims and objects, much good is bound to result. The motto of the Institute "For Home and Country" was an admirable one, and that itself enlisted the sympathy of every right minded citizen of the province. I have no sympathy with the man who is not true to his country, loyal to the church to which he belongs and there should be equal loyality to the home. What is a man worth who does not have the strongest feeling of devotion to his home, and where this organization is working for home and country, the work must appeal to every man and woman.

The work of the Women's Institutes must of necessity result in making the homes more attractive and more particularly the rural homes of the province. My sympathy is entirely with the man and woman in the rural community, in meeting the difficulties and in helping to solve the problems. I am interested in the condition of the rural home because I realize that the success of the city homes depends on the rural districts. The addition to the rural population would solve the question of prosperity, advancement and success of the cities, town and villages.

What the province needs is the need of more people to see the beauty of staying near to nature, of staying on the land and populating the rural districts. Surely the work of the Women's Institutes to make the work attractive, was one of the most potent influences to bring about this result.

The Government would co-operate in the work by endeavoring to give better highways, better educational facilities and more rural telephones. The isolation of the farm had caused a drift of many to the towns and cities and the principle of rural telephones was disturbing the monotony of farm life. I should like to see the telephone extended to every rural community in the Province. I am willing to help in every way possible to have our people see the advantage of staying on the land. The old saying that man made the city and God made the country is as true as it is old; a good deal that man had made had turned out to be counterfeit. Surely it is true that the earth is full of the goodness of God. I wish that my voice was strong enough to reach out to every citizen of New Brunswick and to impress them with the desirability of staying on the land and nearer to Nature's heart, rather than the passion and fashion of the city. The Institute could accomplish a great amount of good in showing our people that the farm was the best place to live, thrive and die.

I am interested in agricultural education, also in household or domestic science, and the Government proposes to bring the agricultural education nearer to the boys and girls of the Province. At the Agricultural Schools to be established at Sussex and Woodstock there would be well equipped departments in Household Science.

I am glad of the opportunity of attending the First Annual Convention of the Women's Institutes and I trust that the future will see an increased interest in this important work, so that when the next convention is held

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Soil Characteristics.

The unit in the soil survey is the soil type, and each type possesses more or less definite characteristics. The line of separation between adjoining types is usually distinct, but sometimes one type grades into another so gradually that it is very difficult to draw the line between them. In such exceptional cases, some slight variation in the location of soil-type boundaries is unavoidable.

Several factors must be taken into account in establishing soil types. These are (1) the geological origin of the soil, whether residual, glacial, loessial, alluvial, colluvial, or cumulose; (2) the topography, or lay of the land; (3) native vegetation, as forest or prairie grasses; (4) the structure, or the depth and character of the surface, subsurface and subsoil; (5) the physical or mechanical composition of the different strata composing the soil, as the percentages of gravel, sand, silt, clay and organic matter which they contain; (6) the texture, or porosity, granulation, friability, plasticity, etc.; (7), the color of the strata; (8) the natural drainage; (9) agricultural value based upon its natural productiveness; (10) the ultimate chemical composition and reaction.

The common soil constituents are indicated in the following outline:

CONSTITUENTS OF SOILS

- Soil Constituents
  - Organic Matter — Comprising undecomposed and partially decayed vegetable material
  - Inorganic Matter
    - Clay .....001 mm.* and less
    - Silt.....001 mm. to .03 mm.
    - Sand ..... 03 mm. to 1. mm.
    - Gravel ..... 1. mm. to 32 mm
    - Stones ..... 32. mm. and over

*25 millimeters equal 1 inch.

GROUPS OF SOIL TYPES.

The following gives the different general groups of soils:

!Peats—Consisting of 35 percent or more of organic matter, sometimes mixed with more or less sand or silt.

Peaty loams—15 to 35 percent of organic matter mixed with much sand and silt and a little clay.

Mucks—15 to 35 percent of partly decomposed organic matter mixed with much clay and some silt.

Clays—Soils with from more than 25 per cent of clay, usually mixed with much silt and some sand.

Silt loams—Soils with more than 50 percent of silt and less than 15 percent of clay, mixed with some sand.

Loams—Soils with from 30 to 50 percent of sand mixed with much silt and a little clay.

Sandy loams—Soils with from 50 to 75 percent of sand.

Fine Sandy loams—Soils with from 50 to 75 percent of fine sand mixed with much silt and little clay.

Sands—Soils with more than 75 per cent of sand.

Gravelly loams—Soils with 15 to 50 percent of gravel with much sand and some silt.

Gravels—Soils with more than 50 percent of gravel.

Stony loams—Soils containing a considerable number of stones over one inch in diameter.

Rock outcrop—Usually ledges of rock having no agricultural value.

More or less organic matter is found in nearly all the above classes.

SUPPLY AND LIBERATION OF PLANT FOOD.

The productive capacity of land in humid sections depends almost wholly upon the power of the soil to feed the crop; and this, in turn, depends both upon the stock of plant food contained in the soil and upon the rate at which this is liberated, or rendered soluble and available for us in plant growth. Protection from weeds, insects and fungous diseases, though exceedingly important, is not a positive but a negative factor in crop production.

The chemical analysis of the soil gives the invoice of fertility actually present in the soil strata sampled and analyzed, but the rate of liberation is governed by many factors, some of which may be controlled by the farmer, while others are largely beyond his control. Chief among the important controllable factors which influence the liberation of plant food are limestone and decaying organic matter, which may be added to the soil by direct application of ground limestone and farm manure. Organic matter may be supplied also by green manure crops and crop residues, such as clover, cow-peas, straw and cornstalks. The rate of decay of organic matter depends largely upon its age and origin, and it may be hastened by tillage. The chemical analysis shows correctly the total organic carbon, which represent as a rule, but little more than half the organic matter; so that 20,000 pounds of organic carbon in the plow-soil of an acre correspond to nearly 20 tons of organic matter. But this organic matter consists largely of the old organic residues that have accumulated during the past centuries because they were resistant to decay, and 2 tons of clover or cowpeas plowed under may have greater power to liberate plant food than the 20 tons of old, inactive organic matter. The recent history of the individual farm or field must be depended upon for information concerning recent additions of active organic matter, whether in application of farm manure, in legume crops, or in grass-root sods of old pastures.

Probably no agricultural fact is more generally known by farmers and landowners than that soils differ in productive power. Even though plowed alike and at the same time, prepared the same way, planted the same day with the same kind of seed, and cultivated alike, watered by the same rains and warmed by the same sun, nevertheless the best acre may produce twice as large a crop as the poorest acre on the same farm, if not, indeed, in the same field; and the fact should be repeated and emphasized that with the normal rainfall of Illinois the productive power of the land depends primarily upon the stock of plant food contained in the soil and upon the rate at which it is liberated, just as the success of the merchant depends primarily upon his stock of goods and the rapidity of sales. In both cases the stock of any commodity must be increased or renewed whenever the supply of such commodity becomes so depleted as to limit the success of the business, whether on the farm or in the store.

As the organic matter decays, certain decomposition products are formed, including much carbonic acid, some nitric acid, and various organic acids, and these have power to act upon the soil and dissolve the essential mineral plant foods, thus furnishing soluble phosphates, nitrates, and other salts of potassium, magnesium, calcium, etc., for the use of the growing crop.

As already explained, fresh organic matter decomposes much more rapidly than the old humus, which represents the organic residues most resistant to decay and which consequently has accumulated in the soil during the past centuries. The decay of this old humus can be hastened both by tillage, which maintains a porous condition and thus permits the oxygen of the air to enter the soil more freely and to effect the more rapid oxidation of the organic matter, and also by incorporating with the old resistant residues some fresh organic matter, such as farm manure, clover roots, etc., which decay rapidly and thus furnish or liberate organic matter and inorganic food for bacteria, the bacteria, under such favorable conditions, appearing to have power to attack and decompose the old humus. It is probably for this reason that peat, a very inactive and inefficient fertilizer when used by itself, becomes much more effective when incorporated with fresh farm manure; so that, when used together two tons of the mixture may be worth as much as two tons of manure, but if applied separately, the peat has little value. Bacterial action is also promoted by the presence of limestone.

The condition of the organic matter of the soil is indicated more or less definitely by the ratio of carbon to nitrogen. As an average, the fresh organic matter incorporated with soils contains about twenty times as much carbon as nitrogen, but the carbohydrates ferment and decompose much more rapidly than the nitrogenous matter; and the old resistant organic residues, such as are found in normal subsoils, commonly contain only five or six times as much carbon as nitrogen. Soils of normal physical composition, such as loam, clay loam, silt loam, and fine sandy loam, when in good productive condition, contain about twelve to fourteen times as much carbon as nitrogen in the surface soil; while in old, worn soils that are greatly in need of fresh, active, organic manures, the ratio is narrower, sometimes falling below ten of carbon to one of nitrogen. (Except in newly made alluvial soils, the ratio is usually narrower in the subsurface and subsoil than in the surface stratum.)

It should be kept in mind that crops are not made out of nothing. They are composed of ten different elements of plant food, every one of which is absolutely essential for the growth and formation of every agricultural plant. Of these ten elements of plant food, only two (carbon and oxygen) are secured from the air by all agricultural plants, only one (hydrogen), from water, and seven from the soil. Nitrogen, one of these seven elements secured from the soil by all plants, may also be secured from the air by one class of plants (legumes), in case the amount liberated from the soil is insufficient but even these plants (which include only the clovers, peas, beans, and vetches, among our common agricultural plants), secure from the soil alone six elements (phosphorus, potassium, magnesium, calcium, iron and sulphur), and also utilize the soil nitrogen so far as it becomes soluble and available during their period of growth.

Plants are made of plant-food elements in just the same sense that a building is made of wood and iron, brick, stone and mortar. Without materials, nothing material can be made. The normal temperature, sunshine, rainfall, and length of season in Central Illinois are sufficient to produce 50 bushels of wheat per acre, 100 bushels of corn, 100 bushels of oats, and 4 tons of clover hay; and, where the land is properly drained and properly tilled, such crops would frequently be secured if the plant foods were present in sufficient amounts and liberated at a sufficiently rapid rate to meet the absolute needs of the crops.

CROP REQUIREMENTS.

The accompanying table shows the requirements of such crops for the five most important plant-food elements which the soil must furnish. (Iron and sulphur are supplied normally in sufficient abundance compared with the amounts needed by the plants, so that they are not known ever to limit the yield of general farm crops grown under normal conditions.)

TABLE A.—PLANT FOOD IN WHEAT, CORN, OATS AND CLOVER

Produce		Nitrogen	Phosphorus	Potasium	Magnesium	Calcium
Kind	Amount	pounds	pounds	pounds	pounds	pounds
Wheat, grain	50 bu.	71	12	13	4	1
Wheat, straw	2½ tons	25	4	45	4	10
Corn, grain	100 bu.	100	17	19	7	1
Corn stover	3 tons	48	6	52	10	21
Corn cobs	½ ton	2		2		
Oats, grain	100 bu.	66	11	16	4	2
Oat straw	2½ tons	31	5	52	7	15
Clover seed	4 bu.	7	2	3	1	1
Clover hay	4 tons	160	20	120	31	117
Total in grain and seed		244*	42	51	16	4
Total in four crops		510*	77	322	68	168

*These amounts include the nitrogen contained in the clover seed or hay, which, however, may be secured from the air.

To be sure, these are large yields, but shall we try to make possible the production of yields only half or a quarter as large as these, or shall we set as our ideal this higher mark, and then approach it as nearly as possible with profit? Among the four crops, corn is the largest, with a total yield of more than six tons per acre; and yet the 100-bushel crop of corn is often produced on rich pieces of land in good seasons. In very practical and profitable systems of farming, the Illinois Experiment Station has produced, as an average of the six years, 1905 to 1910, a yield of 87 bushels of corn per acre in grain farming (with limestone and phosphorus applied, and with crop residues and legume crops turned under), and 90 bushels per acre in live-stock farming (with limestone, phosphorus and manure.)

The importance of maintaining a rich surface soil cannot be too strongly emphasized. It is well illustrated by data from the Rothamsted Experiment Station, the oldest in the world. Thus on Broadbalk field, where wheat has been grown since

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THE MARITIME FARMER.

And Co-operative Dairyman

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MARCH 25, 1913.

DATES OF ISSUE.

April 15-29
May 13-27

THE TEST OF EDUCATION.

The employer, whatever his line of work, asks the applicant for a job; "What can you do?" he doesn't ask "Where did you go to school? Did you graduate? Can you translate Caesar's wars, work problems in trigonometery, or describe the difference between the government of ancient Rome and that of Persia?" The one question is, "What can you do?"

If the applicant can show that he can pull off his coat and go to work at the job assigned, or at some useful job the employer may have, there is a chance for the applicant to earn his bread and butter. Otherwise he must tramp along in quest of a place where the inefficient, the unskilled, the impractical may find an opening.

The test of education is fitness for work. The better the education the better the job.

Do your children get fitted for life work in the country schools, or in the town schools for that matter? Can the eighth grader or those who finish country school go out into the world and earn a living by means of the knowledge and skill he may have acquired in school? Can he, after he has been through high school? If so, blessed be that family within range of such a school!

The school statistics show a very decided tendency in American homes to educate the children outside the public school walls. Why? Because nearly everybody is well aware that after the child has learned to read and write and figure a little he can get more practical schooling on the farm or on the streets than in the school room. It has been discovered that the schools do not fit the pupils for real life—do not give the training that enables them to go out and earn a living.

Would the boy become a clerical man in town—he must go to a private business college. Would the girl become a stenographer—she must go to the private school to learn. Would the boy become a carpenter, an artisan in any line—he must go to the technical school or apprentice himself to that line of work and work out his own salvation. Would the farm boy know the principles of agriculture—he must dig them out by the slow and uncertain process of mixing home study with field practice. Would the farm girl get the fundamentals of domestic science—she must go to a school where such things are taught.

The test of education is fitness for service. That fitness should come by aid of the public schools below eighth grade and largely finished off in the high school.

PROFIT IN KINDNESS.

Too few breeders and dairy farmers give the needed recognition to the basis on which the dairy industry is founded—the motherhood of the animal furnishing the milk. One of the most successful of the early Wisconsin dairymen had for his motto, "Speak to a cow as you would to a lady;" and then he was asked if he removed his hat when entering the stable in the morning, he replied that he certainly would do so if he thought he could get more milk thereby.

What owner, especially in testing, has not noticed that some one of his milkers was able to get more milk from the cows than were the other milkers? It is the personal equation, the regard the cow has for her attendant, that gives hand milking an advantage over the machine; and the more nearly the cow has adopted her milker in the place of her calf, the greater will be his success as a milker. There is usually a vast difference in results between the milker who gets a cow into position by pushing the leg of the stool into her flank and then kicks her on the shin to make her step back, and the one who gains the same end with patience and gentleness. Who can blame the cow for wanting to kick the first man?

Aside from the knowledge of how to feed in general and the study of the special wants of the individual cows, to attain the greatest success a man must win the affection of the cows. Some will say that this cannot be done. But if the calf and growing yearling is treated gently and kindly, and then is stabled and handled before freshening like a cow, there will be no such thing as breaking the heifer to milk; she will take it as the regular thing.

If a person desires to install a music box in the stable, it may be that it will work all right; but the less of singing, whistling and loud talking there is, the better it will be. Indeed, talking of all kinds except the low spoken, soothing words of the milker to the cow should be prohibited. When you see a cow that is fastened loosely enough at the neck reach around and affectionately lick her milker as she would her calf, you may know that that man will get all the milk anyone can get.

Motherhood and milk production go together. Treat the cow like a mother. Be kind; be gentle; it will pay and pay big.

ASK THE CROPS.

Way up in the mountains of Pennsylvania, at State College, fertilizer experiments have been carried on since 1882 the longest period recorded in the United States, although Ohio is a very close second. In every case the humus content was kept up by the turning under of hay or clover, as of course roots and stubble were carefully conserved to keep up this most important item of soil fertility. Many curious variations in results obtained with mineral fertilizers or chemical compounds were found. Difficult to explain, although our farm and experience demonstrates conclusively that the let-up in crop increase is most frequently caused by the acidity resulting from the continued use of chemicals without any attempt to counteract this with the use of sweeteners like lime. This was likewise demonstrated in Pennsylvania by the fact that the very valuable plant clover, was replaced by the very unwelcome plant sorrel. The increase in crops grown by varying treatments of soil were as follows:

The use of but six tons of manure (produced on the farm as it should be), applied at the cost of $1.00 per ton, amounting to $16.92, over the yield of land which received nothing. Where phosphoric acid was applied increase was $5.32 above the cost; where potash, $11.38, and where both phosphoric acid and potash with nitrate of soda were used, the increase was $10.93. Anyone blessed with just everyday average powers of thought and observation will at once recognize the fact that man has not yet solved the wonderful and perplexing problem of the one best method of keeping up soil fertility and securing the greatest returns for the least expenditure. All practical workers in the crop raising field, whether they are fortunate possessors of high-class agricultural education or merely possessors of an education secured by continuous reading and contact with others successfully pursuing the same profession, found long ago, that there was one absolute necessity. Upon this, among men who really know, there never has been one bit of argument. The one item is that in any rotation, whether its duration be three or more years, there must be at least the plowing under of heavy sod, if no other means are used to keep up the vegetable matter or humus in the soil

Regarding the proper amount of chemical fertilizers to be used and the proportion in which they are to be mixed, the government and the states are so wide apart that they astound and frequently seriously perplex and upset those following the great out-door profession as a producer of animal income. So to those who live in the Maritime Provinces we again say that all the world, scientists and successful laymen are unanimous in agreeing that the use of manure, the turning under of green crops or heavy sod, is an absolute necessity for upholding the soil to its maximum capability of crop production and that there is but one way for each soil tiller to find whether or no chemical fertilizers are necessary, what quantity should be used and what particular form of phosphoric acid, potash or nitrogen yielding salt will enable him to secure an increase in crops sufficient to pay for the purchase and application of any chemical or mineral matter. That different men, with different methods will obtain different results is a foregone conclusion and as this will continue until the end of time, as it has continued from the beginning thereof, only side by side plots or acres handled by the same men using different fertilizing materials will ever prove whether barnyard manure, cover crops or heavy sod are the best basis for his particular individuality and conditions, and whether or not the purchase and application of minerals or chemicals of any description will prove a money maker, a money loser or an even split. As Prof. Stewart puts it. "Ask the crops."

SMALL LINES OF GUMPTION.

Keep well to your own natural gait; don't worry anything about keeping up with, or a little ahead of, your neighbors and you are sure to hold out in the race a good deal better.

If you have quit paying attention to the chirp of the sparrows and are no longer charmed with the glories of the summer sunset, it is probable that you are working too hard, or that your mind is burdened with a greater load of selfish ambition than it ought to bear.

The men who think that they are slaves to their work are in a very poor way to become master of it.

Some fools try all the advice they receive, and others try none of it.

When one meets a farmer who runs down everyone's methods but his own, run away just as quick as courtesy will permit.

Some men are so hard set in their ideas that they have to be revolutionized every time they take a step in advance.

Some men always talk about the weather, no matter what it may be, in exactly the voice of the rain crow.

There is something in ears; a cornfield with big ones is always generous.

Aviation continues to be a dangerous occupation; it isn't even safe to take a flier on the market.

Grabbing the steering wheel when another is driving the car is an act of the same fool who grabs the lines when another is driving the team.

A joy ride for the farmer is on the spring seat of the wagon carrying to market a load of hogs when the price is at the top notch.

A young fellow can't discover the way to improve upon his old father's methods by gazing through the bottom of a bottle.—M. G. Rambo.

BUSINESS MANAGEMENT.

One farmer will fail to get ahead and the neighbor next to him will succeed. The land is the same, the climate identical, the opportunities equal. But one loses time and money because of bad management of fields and buildings and by a lack of system in his farming. He keeps cows that do not pay; has more horses than he needs; grows the wrong kind of crops.

The neighbor makes every lick count and insists that all stock shall more than pay their way. Instead of a lot of idle geldings he has sufficient brood mares that give him a paying by-product. He has pulled up the fences and re-arranged the fields so he has the least amount of travel to and from, the least waste space, and has moved his buildings so they are convenient.

In other words, one man is a business farmer and the other is not. One has studied his farm and his farming with a view to get the most net profit from it.

Are you rushed from sun up to dark, from early spring to late fall so that you never have time for recreation and pleasure? Maybe it is not so much the lack of help as the lack of system.

Women's Institute of New Brunswick.

(Continued from page 418)

here there will be a larger attendance of delegates who had the vision of the possibilities of the Women's Institutes and the desire to carry out the work as it had been outlined.

ADDRESS: MR. H. W. WOODS, M. L. A.

I wish to congratulate the members of the Women's Institutes on the success that has characterized the opening of the First Annual Provincial Convention.

I have been very much interested in the remarks of Miss Powell, who has certainly taken a different stand from many of the other speakers who have come to this Province from Ontario. It was an old standing joke that Ontario speakers usually think of nothing but Ontario, but Miss Powell has words of appreciation of the energy displayed in the condition of the work in New Brunswick and made valuable suggestions for the advancement of this important department.

Like the Premier, I am familiar with the advantages of Household Science and I am able to appreciate the practical results of having the knowledge of how to prepare a good steak.

While Miss Powell has outlined a large and extensive program for women's work, the Institute must not expect to accomplish everything at once, but by carrying out a few important measures each year the desired results would soon be achieved. I am in hearty accord with the work of the Institute and will give any assistance I possibly can towards its advancement.

I am sure that the Premier, like myself, was impressed with the business-like methods that prevailed, and I am confident that Hon. Mr. Flemming will see his way clear to increase the grant for this important work.

ADDRESS: HON. DR. LANDRY, MINISTER OF AGRICULTUUE.

I am here in the name of the Government to welcome the delegates to Fredericton and to express my appreciation of the work in which you are engaged. You may rest assured that you have the sympathy of every member of the Government and I believe of every member of the Legislature, irrespective of party affiliation. In your endeavors for the advancement of the conditions of the homes and the amelioration of the numerous troubles and ills of life, the Institute should have the hearty co-operation of all thoughtful people. It is for this reason that the Department of Agriculture took such an interest in women's work, and had established the Women's Institutes.

New Brunswick is not the first Province to take up women's work and establish these organizations. Institutes have been in existence in Ontario for fifteen years, and it was claimed that the people of that Province found the work of such value that the statement was made that no other organization had done so much for the upbuilding of the individual, the community or the nation. I believe that the women of this country, although christian and civilized, did not exercise the beneficial influences that they might, and I am pleased to see the marked interest being manifested in the new departments for the advancement of women's work. By having Women's Institutes in the various section of the Province and the annual Convention, the women are enabled to know one another better and through the discussion of the various matters of interest that would necessarily arise, the years to come would undoubtedly find results that are not felt today. I am glad to note that so many subjects of vital importance are included in the program of the Convention. The training of children has been one of the matters discussed, and there is no more important subject than the bringing up of young people. Canada is a young country, making immeasurable progress, and if she is to attain the greatest development it is necessary that the young generation should be properly trained, because the time will soon arrive when they will have to shoulder the duties and responsibilities of our country. Any influence can be carried to the country by teaching that influence to the younger generation. The ancient history of the Spartans and Athenians affords a striking illustration of what results can be obtained through the education of children. By educating the second generation the Athenians had been able to defeat the Spartans. If the people of New Brunswick gave their children the proper education they would be able to obtain any reasonable results from them. The children form the family, the family forms the community and the community forms the nation. As the children shall be trained so shall the family be trained, and as the family shall be trained so shall the nations be trained. I trust that the women of the Institute will study this question thoroughly and bring new facts to bear on it year by year.

I believe tnat I am safe in saying that New Brunswick has one of the best educational systems in the world, and in substantiation of the statement I wish to remind you that about fifteen years ago a commission was appointed by the Government of South Africa to visit America and study the educational system in vogue. Not only did the commission investigate the educational systems of Canada, but also those of the United States, and my proof for making the statement that New Brunswick's system is a splendid one, was that the commission after giving careful thought and attention to the matter, decided that the educational system of New Brunswick was the best of all they had visited. Therefore, it is not my intention to decry the system but I want to point out that some school buildings are totally inadequate. In some sections the buildings are dark, dreary and cold. The desks are not proportionate to the size of the pupils. That condition of affairs afforded scope for the efforts of the Women's Institute. My experience with the women has been that if they want anything they are going to get it. I strongly urge the women to discuss these matters and give their assistance to the authorities in reaching a solution of them.

There should be closer connection between the home and the school. Parents in some cases were not in sympathy with the teachers instead of co-operating with them in the education of their children. The school surroundings might be beautiful to a large extent, while other improvements are also desirable.

I am very anxious that you continue your good work. I am very much in sympathy with the movement and trust that the work in the different sections will be vigorously prosecuted. Trained ladies are necessary, carrying scientific training in Food values and Cooking, Domestic Art and Home Nursing, to the rural districts. Earnestness and perseverance will undoubtedly bring material results, and I have no doubt that as a result of the labors of this Institute there will be better home-keeping and a higher status of community life in this Province in the years to come.

The Convention closed by the singing of the national anthem.

Miss Powell presided at the last session. Several reports were read by the Institute delegates present.

Miss S. Waycott, of Fredericton, gave an instructive talk on "Business methods for Women" and many points were brought out of much value.

MATRON OF HOSPITAL, FREDERICTON.

Mrs. Richard's paper on "The Value of Pure Air, Sunshine and the Bath" contained much practical information.

Mrs. Thomas Bullock, Pres. Local Council of Women, addressed the Convention on the work of the Local Council and spoke of affiliation with the Institutes, as in the other provinces.

Miss Thorne, of Fredericton, gave a very instructive talk on "Vocational and Liberal Education" which was most attentively listened to by all.

Miss Powell conducted a Model Institute meeting showing the delegates how much more can be accomplished by following methods in the regular monthly meetings.

The following resolutions were passed by the Convention:—

Mrs. M. G. Siddall, of Port Elgin, on behalf of the delegates, moved a vote of thanks to Miss Daisy Harrison, the acting Supervisor, and to the Department for the excellent arrangements which had been made for the Convention.

It was moved and seconded that Miss Daisy E. Harrison, of Gondola Point, who has so successfully carried on the superintendency of the work in New Brunswick during the past two months be continued as Supervisor for the next year.

The Convention was closed by the singing of "God Save the King."

WELSFORD BRANCH.

RESULT OF THE INSTITUTE IN OUR COMMUNITY AND REPORT.

Previous to the visit of Miss Daisy E. Harrison and Miss E. E. Smillee in September last, we had in Ford's Mills a small band of workers, the proceeds of their sales going towards an Agricultural Hall (for some few years there has been a splendid Agricultural Society whose membership is still increasing). At the conclusion of their meeting the ladies explained what the Women's Institute was and wished us to organize, when it has explained to them what the band of workers were working for. They told us all we should have to do was to change the name of our society from "The Ladies' Aid" to "Women's Institute," and elect our officers. For different reasons this was not done that day, but receiving the address of the Supervisor, Mrs. Dunbrack, I wrote for rules and regulations and she was kind enough to loan us her office copy.

On the eve of October 9th, we organized. Since then we have had three monthly meetings and one Executive meeting, and our membership list is twenty-six, including officers at time of organization.

We began an Autograph quilt, making somewhere nearly 100 paper blocks. We sent these to friends in various places. Up to the present time only 42 blocks have been returned, which has netted us $42.55. At time of organization we had $10.00 on hand, result of a Dime Social. With this we started two sewing clubs (as the homes of our members are greatly scattered, covering an area of 10 miles), meeting once in two weeks. On Xmas eve we held a Basket Social at which we realized the sum of $48.70. We are quite proud of the financial result of the Institute so far.

Regarding papers, etc., got up and read, they have been on various subjects. Some readings were on work done in other Institutes and how they were conducted, to get in touch with Institute work.

Our meetings have simply been of a social nature and "Institute Night" is looked forward to with great interest and enjoyed by all. We usually have a number of visitors with our members.

When Miss Harrison learned that I was delegate from "Weldford Branch Institute" she wrote and asked me to give our report under the heading of "Result of the Institute in our Community." As you will know, our Institute has been so recently organized it is somewhat difficult to write on the "Result." However, we feel that it has prompted a sociability in our community as nothing before has done, each member alike having the same interest in the Institute and its work. What we seem to lack is self-confidence in each member. No cooking demonstrations have been given as each think, "Woman is a born cook and no one knows as much as another." However, we trust to greatly improve our Institute in the future and ask help from Institutes older than our own, which will encourage each member to do her utmost to make "Welsford Branch" a splendid success in the years to come.

We thank the Department for Government grant, which came last week.

Yours very truly,
Mrs. John Cail,
Ford's Mill, N. B.

Lime and Clover.

In this abundance of talk on the use of lime on land, it is well for us to establish certain well known principles in our minds to start with.

1. That we should not use burned or quick lime, unless thoroughly air-slaked, because of its caustic property whereby it eats up the humus or vegetable matter in the soil thus robbing it of its best nitrogen holder.

2. That our main object should be to use lime in order that we may increase the capacity of our land to grow clover or alfalfa.

On these two plants we must depend for a proper rotation, for through them we increase the nitrogen in the soil. Once get our land to producing abundant and sure crops of clover or alfalfa, then we have the key, with proper management, to further enrichment of the land. Hence we should use the ground limestone or marl first of all for the purpose of growing clover or alfalfa. If we keep these principles and objects in mind we will be sure not to go wrong. It used to be said: "Everything is possible on the farm that can grow clover abundantly." There's the secret of the uplift of our land. We get our crops from the combined use of manure and turned under clover and it is the limestone that helps to establish the clover.

Advantage of Drainage.

The advantage of drainage is not limited to carrying away the excess of water. It prevents the accumulation of stagnant water in the soil and deepens the soil for the work of roots, thus assisting to prevent the evil effects during the periods of drought. The soil is also rendered much warmer, while the penetration of the air brings oxygen to the vegetable and mineral matter in the soil, hastening chemical reaction. When a field is tile-drained, it can be plowed a week or ten days earlier than the wet places, which enables the crop to get a better start in the first stages of growth.

The use of commercial fertilizers is often advisable on thin land, but care must be taken to see that there is vegetable matter in the soil in sufficient quantity to insure results with the fertilizer to compensate for poor preparation, inadequate cultivation and lack of humus.

HORTICULTURE.

Fruit Growers at Sheffield Mills.

A meeting of the fruit growers was held in Bligh's warehouse at Sheffield Mills on Friday, Feb. 28th. Although the day was stormy a goodly number were present, and attentively listened to what was said and illustrated on the spraying question.

Mr. F. G. Newcombe, as chairman, in a short speech called the meeting to attention, stating its object, and informing the growers that it was not for the benefit of the individuals in presenting this power sprayer, but more for the good and profit of the growers—the growers got all the profit. Capt. C. O. Allen was then called, who mounted the top of a power sprayer (s very appropriate spot to talk spraying from) and stated that owing to the storm, some of those who were slated to speak, had not arrived, and in order to commence the meeting would read a few extracts from letters received from some of the most reliable growers throughout the valley. Following are extracts from the various communications. C. R.Grafton, says in brief: "Sprayed thoroughly and had as clean a lot of apples as could possibly be expected for a 1912 season. One young orchard did not spray; picked 45 barrels and took them to the canning factory, lost enough in this orchard to pay for spraying entire orchard." A. S. Banks, Waterville, says: Out of 661 bbls. 327 of which were Gravensteins, got 73 p. c. ones; 15 p. c. twos; 12½ p. c. threes. Lime-Sulphur is better than Bordeaux. There is a great gain in the quantity of fruit a tree can mature, because of the improved condition of the foliage of trees sprayed with Lime-Sulphur over those whose growth is checked with Bordeaux or fungus growth." W. B. Burgess, Kinsman Corner says: Last season used 7 casks Lime-Sulphur with splendid success. Book me for 15 casks next season. Apples keep fine, pack 10 No. 1's and 2's to 1 No. 3. Care and good power sprayer can produce perfect fruit with Lime-Sulphur. D. H. Sarsfield, Kingston, says: "Our pack to Jan. 1st, is 491 bbls; 274 No. 1's, 97 No. 2's, 120 No. 3's. Have more Baldwins than any other variety, and as it was in this my loss was, had I sprayed Aug. 1st, would have averaged over 80 p. c. No. 1's. Result is a lesson to me. Will do more through spraying and also thinning, as I have proved that in this, lay the best paying operations of the fruit industry." George E. Hutchinson, Berwick, says: "Used Lime-Sulphur past two seasons with good results. Have heard it said that a light application was as good as more. For fungicide it requires strong solution and drench trees well. If not mixed properly and applied thoroughly, might as well stay in the house."

Capt. Allen then remarked that there was no doubt but that a lot of growers near at hand had obtained just as good results, but had not made it known. The speaker said that F. M. Chute, Mgr. Waterville Fruit Co., gave his permission to use the following record from one member who had raised 1500 bbls: Out of 400 bbls. Gravensteins, had packed 4 barrels No. 1's. The whole lot of this sort only netted him 55c. per barrel. Out of 100 barrels Spies did not get a barrel of No. 1's. Out of whole season's crop did not pack 100 barrels No. 1's. Mr. Chute considered the man lost over $1,000 by not spraying. The Captain went on then and said that the government had a man lecturing in Annapolis Co., who is exhibiting a statement on canvas showing the results of how all the mebers of the United Fruit Co's Gravensteins packed out in comparison with 7 of the best spraying members in the Berwick Fruit Co., which works out as follows: Loss to the companies on 57,780 barrels, $27,734. Assuming the United Fruit Co's handled half the crop, the aggregate loss to the valley by insufficient spraying on Gravensteins alone this season has amounted to over $55,000.

Manning Ells, Secretary of the N. S. F. G. A., then took the "power" stand and made some crisp and trite spraying statements. There are three essentials in spraying: Proper time, proper material and proper manner. Had always found Lime-Sulphur an excellent spray, giving splendid satisfaction. The power sprayer was a great advance in improved conditions, and through it spraying could be accomplished satisfactorily and at the proper time. It is a profitable investment.

At the meeting it was both asserted and proved that the Duplex power sprayer was by far the best power sprayer on the market. Several fruit growers in the valley had purchased other outfits, without the agitator, and are now applying to and buying from the Niagara Spray Co. for outfits and agitators to put in their old gears in order to keep the arsenate of lead and Lime-Sulphur thoroughly mixed, which is one of the most essential features of a power sprayer. —N. A. W. in Kentville Advertiser.

Consider the Strawberry.

Editor The Maritime Farmer:—

As a profitable farm crop, it is hard to beat the strawberry and this especially applies to Nova Scotia. Two factors count in reckoning the profit of a crop;—cost of production, and price received from the finished product. In cost of growing we compare favorably with any place in Canada; and the want of available labor at picking time, is the only drawback. The price received for the crop is equalled only in the far West, and is far ahead of that received by the growers in Ontario.

In conversation with Ontario fruit growers, I have learned that if they can sell by the season at five cents per box they are well satisfied. Nova Scotia growers net from eight to twelve cents F. O. B. cars, and as yet have not raised enough to nearly fill the demand. The prices paid by consumers in the manufacturing and mining towns in Cape Breton for native strawberries per box, is about the same as they pay for a pound of butter, or a box of chocolates; and thousands, because of this price cannot afford to eat this most delicious of nature's foods.

Without a doubt there is a home market for double and treble the quantity we are producing to-day; and at good paying prices, if they were handled and distributed in a proper manner. In berry growing districts in the South the farmers have united and are selling and distributing their crops through co-operative agencies the same as apples are handled in the Valley with great profit to themselves and immense benefit to the consumer. Berry growers should be almost ready for some such organization here. At the present time nine-tenths are sent on commission to Halifax, and so as a result we soon have a glutted market and low prices. The small towns should receive more attention; for every one eats strawberries if they can get them, and in the aggregate these small places consume a wonderful amount. As our farms are all small comparatively speaking, no one is safe who depends altogether on one crop. Where apples are the principal money crop, a great deal of attention must be given the orchard in the spring; and whatever is raised to supplement this, must not compete for attention at the same time. This is one of the reasons why the growing of potatoes has been given up by so many orchardists; one or the other was bound to suffer.

Orcharding and strawberry growing go hand in hand; the strawberry crop being harvested just after the last cultivation is given the orchard, and the cover crop sown. At this time of the year, too, the apple grower's finances are apt to be at a pretty low ebb so the proceeds of his berry field will arrive at just the right time. Any kind of land is suitable for growing berries if it is well drained; however, a light loam or a sand loam is to be preferred. Do not plant on an old sod that has been ploughed down; this rotted sod is almost sure to be the nursery of the larvae of the June bug, or the white grub as it is called, and it is very fond of the roots of the strawberry plants. The June bug lays its eggs in old pasture swards or anywhere that the sod has been undisturbed some years without ploughing. It is not safe to set strawberry plants for three years after this sod is broken up. In preparing the land plow in about sixteen two-horse loads of barnyard manure to the acre as early as the land is fit to work in the Spring, or the fall before. Harrow thoroughly and then firm the surface with a heavily weighed roller or planker. Mark off in rows three and a half feet apart with a marker and set the plants twenty-four inches in the row. Try to have the land ready and plants set before they have started growth in the Spring, or while they are still dormant. This is very important if a good stand is wanted for after the plant has begun to put out its leaves it is a great check to its growing system to transplant it. I prefer to add what commercial fertilizer is needed to supplement the manure after the plants have been set about a month, and just as they are beginning to grow nicely. In most soils not much potash is needed; about two hundred pounds of murate containing one hundred pounds actual potash should be sufficient for an acre. This can be applied when harrowing or later. For the phosphoric acid and nitrogen I mix five hundred pounds acid phosphate and one hundred and fifty pounds nitrate of soda on the barn floor and sow along the rows on top of the young plants when they are perfectly dry, then it will not burn the leaves. This amount is for one acre and, as I said before, I like to put it on when the plants are beginningto grow nicely. This fertilizer is very soluble and when the next hoeing and cultivation takes place mix it with the soil, the plants are able to lay hold of it immediately. It is wonderful to see how in a few days they will seem to almost double in size, and take on a rank, healthy color. On the other hand, this soluble fertilizer is sown broadcast and harrowed in; before planting it is likely to be leached from the ground by heavy rains before the plants are strong enough to lay hold of it. Hoeing and cultivation must not be neglected if profitable results are expected. As a commercial proposition I would say: hoe four times and cultivate with the horse six or eight. If the land is very weedy you will need to give them more attention than this, but remember no crop will pay for this extra cultivation more than the strawberry, and a big, full-crowned, healthy plant is storing up strength to carry a bumper crop the following year. Keep a path between the rows free from plants and small runners if possible, that the pickers can work without getting on the vines. In this country with our changeable winter weather and after nate thawing and freezing it is necessary to mulch. Oat straw is as good as anything, using about two tons to the acre. Marsh hay, swamp hay, or

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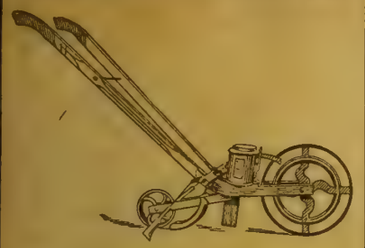
A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

GARDEN SEEDERS



Our **seeder** has years of success behind it and with improvements recently added, makes it without a doubt the best machine of the kind on the market.

The seed discharge of this machine can be exactly regulated by moving the steel plate at the base of the seed cup as per directions on the side of each seed cup. **The flow of seed** can be instantly stopped by a **swinging cut-off** operated by a chain attached to the handle. This prevents any loss of seed at the end of the row.

The marker is held firmly in place and is easily adjusted. **The covering wheel** is attached to a swinging frame and by varying pressure on the handles, the operator can roll lightly or otherwise. **The main wheel** is high with a wide rim which keeps it from sinking into the soft earth.

Each year finds the demand for our garden seeders greatly increased. No better **seeder** can be built for accurate and fast sowing of **turnip, cabbage, sage, carrot, onion, parsnip, spinach, beet, pea, corn** and all other kinds of **garden seed.**

Every machine carries our **absolute guarantee.**

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Market gardeners and large planters everywhere place absolute confidence in Ferry's seeds. Professionals make their profits by knowing where to put their trust. Ferry's vegetable and flower seeds have averaged best for half a century. They are pure and they are vital. For sale everywhere.

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Gentlemen,—Theodore Dorais, a customer of mine, was completely cured of rheumatism after five years of suffering, by the judicious use of MINARD'S LINIMENT.

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Fullline of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

Say I Saw It in The FARMER

any cheap litter can be used, however. Do not apply heavily or the plants will smother and rot. All that is needed is to shade the ground and it should be put on after the frost has made everything solid and you can drive on the field without injury. Do not disturb this mulch in the spring but allow the plants to come up through it. The straw will keep them moist and the berries clean; often in a dry season this mulch makes the difference between a fair crop and no crop at all. For the commercial grower the question of varieties is an important one, and one who sells plants can always tell the amateur by the number of varieties in his order. We have extra early, early, medium, late, and very late as descriptions in Nurserymen's Catalogue; but after being in the business a while we soon learn that they do not vary in time of ripening as much as we were led to expect.

I have never seen an earlier berry than the "Senator Dunlap" that could be classed as a market berry and it hangs out with the best of them on light land. On heavy soils the "Sample" seems to be the most popular but it is considerably later and never catches the twenty cent market.

S. B. Chute, of Berwick, who has probably been in the game as long as any one in the Valley and grows from four to five acres a year raises the "Dunlap" exclusively.

In Pereaux where the soil is much heavier and they have no frosts the "Sample" is the money maker with some other varieties like the "Dunlap" for a pollenizer. At picking time all preparations must be made in advance; boxes and crates on hand, etc,, for this crop will not wait. pickers should be engaged and some arrangements made to hold them all through the season. A cent a box is the usual price paid, and if a bonus is offered of a quarter or a half a cent extra to all who come every picking day you give your pickers an incentive to stay by you. One picking neglected means soft berries and unsatisfied customers all through the rest of the season.

Five thousand boxes is a good crop for an acre but three thousand is nearer what is usually harvested. Much larger yields than this are common, however, running up as high as twelve thousand boxes but at the lowest figure there is a good profit, for the expense including labor should not exceed one hundred and fifty dollars which would leave at average prices received, one hundred and fifty dollars clear.

That our fruit growers are not taking advantage of their opportunities considering the market and returns is evident. Our young men who are looking at the green and distant fields with longing eyes might do well to investigate these opportunities that are laying right at their doors.

At one time in Australia farmers built their fences of stones that were filled and loaded with gold never dreaming of the treasures laying all unnoticed at their feet.—M. K. E.

Sprouting Seed Potatoes.

Experiments were carried on at 322 centres in Ireland, in 1911, to test the effect of sprouting seed potatoes before planting. Taking the average results for the different countries, the increase in yield per acre due to sprouting varied from 12 cwt. in Co. Dublin to 2 tons 19 cwt. in Co. Carlow. The average results of similar tests carried out in the last nine years show that in about a thousand tests the average increase in yield due to sprouting was 2 tons per acre.

More profit per acre

HOW ?

Manufacturers have found that their costs per unit of production whether it be a pair of shoes, a machine or a yard of cloth, are reduced by increasing the output of the factory. The same principle applies on the farm. Increasing the yield per acre reduces the cost per bushel, thus making more profit. Increased production chiefly depends on increased available fertility which is obtained by the use of high grade fertilizers.

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Write anyway for our illustrated catalogue and calendar before you buy your spring fertilizer. We want you to know what we can do.

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Original and largest manufacturers of special fertilizers.

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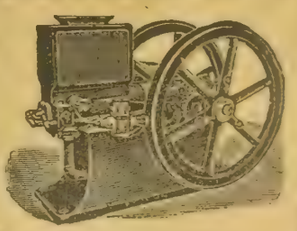

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DAIRYING.

Selling Holsteins on Their Merits.

Editor Maritime Farmer.

We are pleased to report the most prosperous year since we began breeding Holsteins, some 25 years ago. I will give you a list of our sales for the last couple of months, which will give you some idea of the extent of the demand for Holsteins.

To Glassburn Agricultural Society we sold Cobequid Helbon Donald, a son of Helbon DeKol's Prince and Blanche La Honda a grandson with a record of 76 lbs. milk per day and above 60 lbs. per day for over three months.

To Toney River Agricultural Society went Cobequid Helbon Lad. This is a fine deep-bodied son of old Lilac, well known in the dairy test at Amherst. Lilac made over 15000 lbs. milk in one year.

To Illsley Bros., Somerset, Kings Co., N. S., we sold Vida's Snowball Prince, a bull of fine type and exceptional breeding. His two nearest dams averaged over 20,000 lbs. milk and 820 lbs. butter in 1 year, both entered in Canadian R. O. P.

To Wm. J. Gibson, Marshfield, P. E. I., we sold the most promising young bull we have handled for some time. His two nearest dams average over 25½ lbs. butter in 7 days. Their milk averaged 4.15 per cent. fat. Mr. Gibson bought him to head his herd of pure breds and we will be badly disappointed if this bull does not make a name for himself in his hands.

Prof. Stevenson, of the N. S. A. C. purchased Artis Rosie, the first prize cow and Cobequid Rooker LaHonda, the first prize three-year-old at Amherst Winter Fair. The Prof. tells what a bargain he got. However, that does not hurt us any.

Mr. John C. Chisholm, Lower South River, Antigonish Co., got De Kol Jewel 3rd, a regular machine for making milk. In a recent letter, Mr. Chisholm states that she gave 2,029 lbs. milk in January, and she had been milking for six weeks previously.

Mr. Geo. Hunter, East Fairville, N. B., got the heifer calf Cobequid Helbon Polly. Her dam, Cobequid Rooker Polly made the most milk of any heifer in the yearling class in test at Amherst.

To R. L. Parker, Waterville, Kings Co., we sold a fine bull out of Daisy, the heifer that scored highest in the two-year-old class at ehe Fair in 1911.

The Fertilizer Experimental Farms, Ltd., Sydney, C. B., are starting a herd of Holsteins and for a foundation they took Aggie Emily, a five-year-old cow with official records at four years of 18.60 lbs. butter in 7 days and at 2 years and 1 month she made 14.6 lbs. in 7 days, also a fine two-year-old, Cobequid Helbon Lottie. Both of these cows were in calf to Royalton Canary Mayor, whose dam has an official record of 34.6 lbs. butter in 7 days and 111 lbs. milk in one day at four years old. They also got Cobequid Helbon Ida with heifer calf at foot sired by Mayor. We venture to say that this is the best bred bunch of Holsteins that have changed hands in the Maritime Provinces for some time.

Mr. R. R. Wannamaker, of Nauwigewauk, N. B., while attending the short courses, bought Cobequid Helbon Polly, third prize yearling at Amherst, 1912. This is a very promising heifer and if she has a chance she will make the best step sonie. He also bought Cobequid Helbon May, a fine two-year-old from Miss LaHonda, the first prize three-year-old and highest scoring cow at Amherst in 1911. We expect to officially test Miss La Honda soon and look for a good record. C. H. May was in calf to Royalton Canary Mayor. This is probably the best heifer we ever sold and it took a good figure to move her.

Mr. P. L. Morse, Berwick, N. S., a former student at the N. S. A. C., got Cobequid Helbon Posch. This is a fine, stylish, breedy looking bull with record breeding, being sired by Helbon De Kol Prince and from a daughter of Cornelia's Posch, three times champion at Toronto and the sire of a number of high record cows.

To Mr. S. C. Clark, Cape Traverse, P. E. I., goes the bull, Cobequid Helbon Duke. His dam is Cobequid Rooker LaHonda, first prize three-year-old at Amherst in 1912.

Walter S. Dickie took with him to British Columbia six fine, young cows, among them were Cobequid Orne Belle, reserve junior champion at the Dominion Exhibition, at St. John. Orne Rooker Posch, a grand cow that won first prize in two-year-old class in dairy test in 1910. She milked 61 lbs. per day as a two-year-old, and over 75 lbs. as a three-year-old. He also took Cobequid Bessie Posch, third prize two-year-old at dairy test in 1912.

Nearly every inquiry we get asks for the records and it is getting plainer every day that the people want the cows that can produce.

We expect before very long to have young bulls sired by Royalton Canary Mayor. The first calves sired by him are just arriving now and we must say that we are well pleased with them.

Samuel Dickie & Sons.
Central Onslow, N. S.

June Butter in February.

Editor Maritime Farmer.

When we decided to carry on a side line of farming and keep a cow or two, we fully made up our minds that there should be absolutely clean milk from the beginning such as was delivered to us in bottles at New York by the Borden and Campbell people. Milk with black settlings or any other kind of sediment for that matter was to be tabooed. The first important step was to secure a sanitary milk pail. We looked up Ads. in the agricultural papers and wrote one firm in the United States. Circulars came announcing that the price would be four dollars at the factory. That, with duty and expressage, seemed prohibitive and smacked of graft. Another advertisement with a cut of a pail stated the price openly as two dollars. That was certainly better, but as this latter pail was made in the United States also, it would involve duty and some considerable expressage. So I cut out the picture of the pail and took it to a local tinsmith and from the design he produced an honest article that should wear for years, weighing with the cover complete four pounds. It is made of the heaviest tin plate, having a close fitting cover with a strainer (with a rim around it) so that the milk is strained before it enters the pail. Another strainer at the spout strains the milk again as it is poured out of the pail.

I neglected to say that previous to milking, the cow's udder and teats were washed carefully with warm water. There were no settlings in this milk, not even once; it had the flavor of milk and not of cow.

The tinsmith continued making these pails and is making them now of the same quality, a perfect article, at $1.50 each. They are getting to be quite popular, he says, especially with up-to-date people, and the people at the creamery think they are "all right."

Now, as to June butter in winter. Since early in Febraury our milk has been principally from an Ayrshire

What The Dealer Can Show You

GO and see the Standard cream separator at our agent's in your locality. It will strike you as being a handsome compact, convenient-looking machine.

First appearances will delight you. And naturally you'll want to know more about the

Standard

You'll want to hnow why it has earned the title of "The World's Greatest Separator." Our dealer will be glad to show you.

He will show you the low supply can. You will smile cheerfuily when you notice that it is over one foot lower than the supply cans on ordinary separators. The high and awkward lifting of a pailful of milk are banished with the Standard.

Then he will get you to step over and turn the crank. You will see right away that you don't have to do any back-breaking stooping. The Standard eliminates that, by having the crank shaft four inches higher than on other separators.

Easy to Clean

Next he will show you the wide open bowl. You will observe that there are no milk or cream tubes to clog up. And the discs, on a special disc holder, can all be washed in a minute. If your wife is present, this feature will make her happy.

And when you are looking at the discs, the dealer will call your attention to the unusually wide open space between the discs and the bowl. This space accomodates the impurities in the milk and prevents the discs getting clogged. It means absolutely clean cream and no waste.

He will next direct your attention to the fact that the only visible moving part of the separator is the crank, the gearing being entirely enclosed, which banishes all danger of the children getting clothes caught or fingers crushed should they venture to touch the machine when it is running.

Self-Oiling System

He will ask if you can find any grease cups or glass lubricators on the machine. You can't, because the Standard hasn't any. It's self-oiling system automatically supplies the working parts with a continuous bath of oil. And the oil cannot drip on to the floor and be wasted either.

He will show you--but we've not the space here to tell you all you'll see. But we've a catalog that describes the Standard very fully. Also a folder entitled "Skimming Results," which gives what we believe are world's records for close skimming accomplished by the Standard. If you cannot conveniently visit the dealer write for this catalog and folder. Of course, you'll want them right away, so mail us a card or letter promptly.

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SKIPPED HILLS RAISE NO POTATOES

Every hill you miss in planting means money lost out of your pocket. No machine can plant perfectly unless there is hand correction of misses and doubles. 10 to 50 bushels more to acre, using

IRON AGE (Improved Robbins) **Potato Planter** (Now made in Canada)

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cow, which is rather lighter in color than that from the grade Guernsey, so we used a little Wells & Richardson's butter color, and that, with the sweet, creamy taste of clean milk, is the finishing touch in the making of June butter in February, and completes the illusion. The deduction is that the sweet flavor of June butter is due, not only to the fresh, new grasses of that time of year, which add both flavor and color, but much to the fact that the cows are cleaner when in the pasture than when they are in the stable expecially when not carefully bedded. The open pail does the rest in destroying the flavor of winter butter.

Of course, there are other important factors in making butter in winter or summer. The milk must be kept at the right temperature and care should be taken to avoid developing the bitter bacteria, especially in winter. When the lactic acid culture is properly developed, it is safer to insure its succession by adding a little of the buttermilk containing it to the first of the next lot of cream intended for the churn. We find that if the churn is placed on the back of the range shortly before time to churn and the cream slowly heated to a temperature of 65 degrees Fahr. the butter will come after from ten to twenty minutes' churning—and this with an old-fashioned stoneware churn and ordinary dash. To insure the butter keeping sweet and creamy, be sure to work out all the buttermilk. It is not necessary to wash the butter. Cleanliness and a little science is the whole secret. If the government could enforce sanitary measures in the handling of milk, our creameries could do themselves better justice, and the public would be better served with good milk and better products. —G. Campbell Creelman, Yarmouth, N. S.

Cow-Testing Associations.

Editor Maritime Farmer.

Much has been said and written about dairy herd improvement but this very important matter cannot be too strongly emphasized. Throughout the development of dairy cattle in years past improvement has been brought about through breeding and selection carried on by men who have worked with a definite end in view. We must bear in mind that the function of the cow in her natural state was solely to maintain herself and to produce enough milk to feed her calf. She has been taken out of that natural condition and developed into more or less of a machine; a machine the function of which is to consume food in its crude state and manufacture that food into milk from which we may make cheese and butter. The dairy cow has, therefore, been raised to a comparatively high standard of culture and the natural tendency is downward. This tendency must be counteracted by careful breeding and management on the part of the dairy farmer.

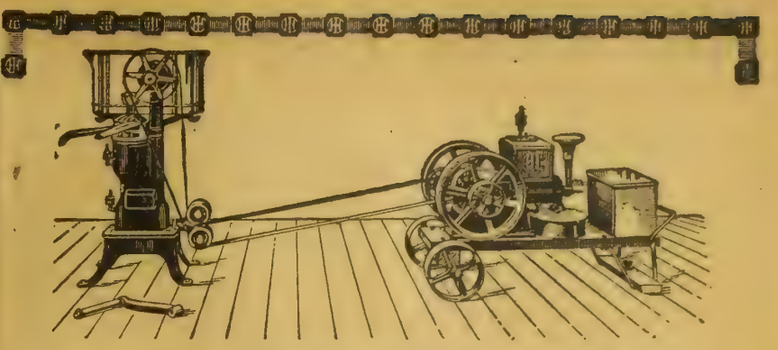
We have in New Brunswick a great many cows which do not pay for their feed; cows which are simply boarders on the owners hands or, in some cases, eating up the profit made by good cows. The first step which must be made in the improvement of our dairy herds is selection. As a means of making this selection we have the work of the Cow Testing Associations.

Such an association is composed of men who agree to keep records of their cows. This involves the weighing of the milk from each cow at both milkings on at least three days each month, e. g., 10th, 20th and 30th and the taking of samples at the same time the weighing is done. These samples are preserved till the end of the month and then tested by the Babcock test for the percentage of butter-fat. Each man must furnish himself with a spring scale, 70c. to $1.25; a sample bottle for each cow, 4c. each; and a sample dipper. The Dairy Division agrees to furnish all record sheets, preservative tablets for preserving the milk, sulphuric acid for testing and to pay for having the testing done at the rate of 5c. per test each month.

In sections where there are cheese or butter factories we have them as natural centres of an association and the samples may be brought in at the end of each month to be tested. In other sections where there are no factories it is quite possible to make other arrangements regarding the testing.

When information has been obtained regarding the amount of milk produc-

(Continued on page 449)



Cream Separator Savings

AN I H C cream separator saves money for you in more ways than most people know. It saves cream because it skims practically all the butter fat out of the milk. It saves on the feed bills. Calves and pigs thrive on the sweet, warm skim milk that comes fresh from the separator. It saves fertility. The dairyman who feeds the skim milk to animals parts with a very small amount of fertility. The man who sells whole milk loses close to $4.80 per cow per year in fertilizing matter. These three savings, while not all that a cream separator makes, are important enough to warrant the most thoughtful consideration.

I H C Cream Separators

Dairymaid and Bluebell

are also furnished as complete power outfits, as illustrated above. The engine is a one-horse power, back geared, hopper-cooled, I H C engine which can be detached and used to run any small machine. The separators are built for long life and skimming efficiency. They have heavy phosphor bronze bushings for bearings; a never-failing splash oiling system; trouble proof bowl spindle bearings; dirt and milk proof spiral gears which are easily accessible for cleaning. There are four convenient sizes of each style. Ask the I H C local agents who handle these machines for demonstration. Get a catalogue and full information from them, or, write the nearest branch house.

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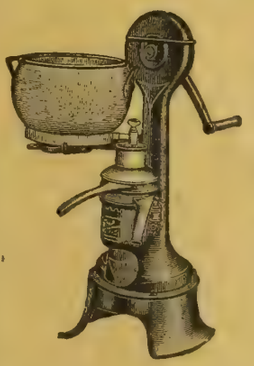

Your hand and ear are wonderful judges of mechanical perfection. They detect poor construction no human eye could see.

Five seconds after you touch the crank of the quiet running Waterloo Boy cream separator you know it is perfectly designed, otherwise it could not run with such remarkable ease.

While you hold one ear within a foot of a Waterloo cream separator running at full speed you can hear the ticking of a watch held near your other ear.

That is excellent proof of perfection.

Insist on getting the clean skimming, easy running Waterloo Boy if you want the best.

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LIVE STOCK.

The True Situation Re Tubercular Cattle on the College Farm, Truro, N. S.

In the House of Assembly at Halifax, in the course of a discussion of the agricultural policy of the Government, Mr. Howard Corning, member for Yarmouth county, took occasion to inquire into the methods pursued by the Agricultural College at Truro, in order to insure absolutely healthy stock being distributed through the country.

In the report of the Secretary for Agriculture for Nova Scotia, the farm superintendent, L. S. Stevenson, states that he has placed the herd under the Bangs system, according to which calves are at birth, removed from their dams and reared under conditions where there is no possibility of their developing tuberculosis or any other disease which the dams might happen to have.

From a persual of Mr. Carning's speech one might derive the idea that the college management had not adopted as rigorous methods as should be adopted. We ourselves, knowing the calibre of the men at Truro felt sure that any such reflection was not in accord with the methods of these men and we, therefore, interviewed Dr. J. Standish, the college veterinarian in regard to the matter.

From him, we learned that the college management had decided to put the herd of cows under the Bangs system and had accordingly, under his direction tested them.

They made public announcement of this, the Principal himself stating both in letters and viva voce from the platform the facts and ordering that, until he was absolutely satisfied as to the condition of the herd, he would not allow a single animal to be sold for breeding purposes until July 1st next.

To show how thorough the management were, Dr. Standish added "Mr. Stevenson under my direction recently tested a part of the herd with tuberculin, supplied from the office of the veterinary Director General, at Ottawa, not a single individual reacted. Had we been satisfied with this, the test, that would ordinarily have been the only one applied, we could say to the public that there is not a single reacting cow in the herd. However, the principal was anxious that the matter be further investigated and asked to have the herd tested with tubercilin secured from another source. The result of this test was that some of the cows that passed under the Ottawa tuberculin test, reacted under the Parke Davis tuberculin test. Now it does not necessarily follow that, because they reacted, therefore they are tuberculous. Moreover, if they are tuberculous, the test gives no idea as to the nature or extent of the infection. But, in order to keep absolute faith with the public, the Principal has done just what anyone who knows him would expect him to do, viz., assume that these animals are tuberculous and segregate them from the rest of the herd and raise the calves under the Bangs system as described above."

The Doctor added that "Dr. Torrance, the Veterinary Director General, had personally thanked the principal because of the thorough methods pursued at Truro which gave him possession of facts that would lead him to inquire into the quality of the tuberculin which was being used."

In writing thus, we do not cast any reflections upon that most efficient officer for every one knows that products of organic life, like tuberculin, are not absolute and that there is always a danger of their lacking virility. If, however, all testing were only done as carefully and efficiently as it was at Truro a better control than is ordinarily possible could be kept on tuberculin testing.

In conclusion we may say that in so far as Mr. Corning's speech was for the purpose of enlightening the public, as the Principal and the other members of the college staff had previously been doing, it will serve a useful purpose. For the public should be better posted than they they are on the whole subject of tuberculosis. The fact that it is estimated that from 15 to 30 per cent. of the cattle of Canada will react to the test and a much larger proportion of the cattle of some of the older countries shows that everyone should be on their guard. We hope this was as far as Mr. Corning purposed. In so far, however, as his speech may have unwittingly cast reflection upon the efficient college staff, we think he should take pains to ascertain all the facts and let the public know them.

Castration of Lambs.

The advantages of flockmasters of emasculating lambs has been thus summarized by Professor Shaw, of the Ontario Agricultural College, Guelph. He states that (1) lambs will increase more rapidly in weight when castrated than when reared as rams. This is more particularly true after the procreative powers become capable of performing their functions. It is true for the reason that when the energies of the system act in one direction, as in meat-making, better results may be looked for than when they act in two directions, as in meat-making and procreation. The former is the condition of the castrated animal, and the latter of the uncastrated. (2) Meat-making is arrested in the uncastrated lamb by a condition of unrest which is entirely absent in the castrated animal, and more particularly during the breeding season. All breeders and feeders know very well that a restful condition is essential to the highest success in meat-making. (3) It is much more convenient for the feeders to handle lambs in the castrated than in the uncastrated form. It is impossible to feed ram and ewe lambs together in the winter, as the ewes would become pregnant, which would be fatal to well-doing as meat producers. Many feeders, in Guelph district, purchase their lambs in the leading live stock centres, and they naturally reject consignments in which uncastrated rams are mingling with the ewes. He gives the following reasons, among others, why the consumer cannot afford to pay so much for the uncastrated lambs:—(1) The quality of the meat is inferior. In rams, and, in fact, in all uncastrated males, there is a tendency to development of strength of bone. Because of this the proportion of bone to the meat is unduly large. (2) There is undue development of the inferior proportions of the carcass, as the head and neck. A butcher who retails a carcass of mutton cannot get nearly so good a price relatively for these inferior portions, hence he cannot afford to give so much for the same. (3) The meat is also inferior in flavor. There is a rankness about it not found in the carcass of castrated lambs, and this so far detracts from its flavor. More especially is this true in the breeding season. Castration should take place at an early age in the life of the animal.

A Good Record.

Walter M. Lea, Victoria, P. E. I., writes:—

We have just finished a yearly milk and butter record with the Holstein

Fourth Annual Maritime Horse Show

Amherst, April 9, 10, 11

The Show will be bigger and better than any previous one

Cheap Rates on all railway lines

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For Potatoes For Grain For Fruit

The base of our formulas is Bone-Blood and Tankage-with Chemical Salts added to give the crops an early and vigorous start.

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JOHNSON'S ANODYNE LINIMENT

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GUARANTEED ANALYSIS	
PROTEIN	20 per cent
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Save $15.00 to $20.00 a Ton on your calf meal

SEND FOR BOOKLET AND PRICES

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TORONTO, ONT.

THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking,

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address me personally;
E. O. MORRIS, Manager 1900 Washer Co'p'y.
357 Yonge Street, Toronto, Can.

cow, Nettie McDonald, No. 4258, that we think is one of the largest fat records yet made in the Maritime Provinces. While it is only a semi-official record, as the Government inspector tested her on the farm on six different occasions during the year, it is not accepted in record of performance on account of a premature birth, eight months after beginning of test. But for this accident, which was caused by an over-gorge of frozen roots, which sickened the cow and put her badly off her milk, this record would be considerably greater. She lost the calf on November 3rd, and was again bred and conceived on November 27th, so she was in calf during nearly the full period.

Nettie McDonald is only a medium-sized Holstein and never ate over 16 lbs. meal in a day at any time and never was forced or fed more than twice a day. At the time of the inspector's visit in March, according to the prices charged cows entered in the official record test she was producing milk for fifty-six cents per hundred pounds. But, according to our prices, the cost was about seventy cents. However, she at all times produced milk most economically and well and at the provincial exhibition milk test, eight months after calving, she gave 34 lbs. milk testing 4.3 per cent. fat, in one day.

Her best month's milk record was in March, 1,785 pounds testing 3.6 per cent. Her best month's fat record was in May, 66 pounds, testing 4.0 per cent. She gave during the year 14,538 pounds milk, testing an average of nearly 4.1 per cent. butter fat, a total of 590 pounds fat.

Her total cost of feed was $112.00 and her butter and skimed milk was worth almost $200.00 at our prices making a profit of $88.00. In this calculation we priced everything at just what it was worth in the line of feed at market prices and the butter at the current prices. The skim milk was valued at 25 cents per hundred.

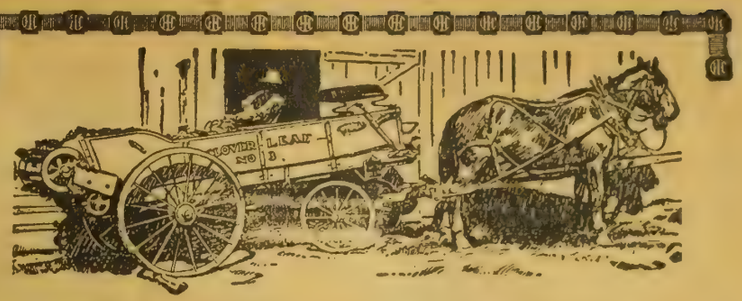
Barley as Hog Feed.

Subscriber asks:—"What is barley worth a bushel to feed hogs at $7.00 to $8.00 per cwt. live weight? If bran and shorts are recommended as good cheap feed at $1.20 to $1.30 per cwt., would not No. 2 and No. 3 wheat mixed with barley or oats, and ground, be just as good or better and cheaper when the price of No. 2 wheat is 64 cents per bushel?"

This is a question of very general interest, and a great many experiments have been conducted on this very point. In order to make our figures as fair as possible, we will take the average results of four very complete experiments in feeding barley chop to hogs. At Ottawa it was found that it required 435 pounds of barley chop to produce 100 pounds of gain; at Ontario Agricultural College it required 456 pounds; at South Dakota experiment station 458 pounds and at Wisconsin state college 471 pounds. An average of these widely separated stations gives us 455 pounds to produce 100 pounds of gain.

Allowing that hogs are worth $7.00 per cwt., this makes 455 pounds of barley worth $7.00, or a bushel (48 pounds) worth 73½ cents.

The latter part of the question raises a valuable suggestion. Barley should never be fed alone for best results. It is composed of a very high proportion of carbohydrates (fat and energy producing constituents) as compared with protein (flesh producing constituents), and as such is an unbalanced ration in itself. The most economical method of feeding barley, therefore, is to mix with it some of this cheap wheat. By so doing the feeding value of barley could be increased to considerably more than 73½ cents per bushel.



An Unsolicited Testimonial

A CLEAR-EYED young farmer stepped up to a manure spreader demonstrator at the 1912 Chicago Live Stock Exposition and, pointing to one of the spreaders in the exhibit said:

"I own one of those machines. It is the strongest spreader I ever had on my farm, and I've had a number of different machines. I honestly believe that if I filled that spreader with soft coal it would spread the stuff for me. I wouldn't trade it for any spreader I ever owned or saw."

This unsolicited recommendation from a man who had used an I H C spreader, and therefore knew what it would do, carried weight with his hearers. They might have doubted whether an I H C manure spreader would spread soft coal—but there was no doubt in their minds that an I H C spreader had spread manure to this man's entire satisfaction. This is a typical case showing what users think about

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Corn King and Cloverleaf

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The rear axle is placed well under the box, where it carries over 70 per cent of the load, insuring plenty of tractive power at all times. Beaters are of large diameter to prevent winding. The teeth that cut and pulverize the manure are square and chisel pointed. The apron drive controls the load, insuring even spreading whether the machine is working up or down hill, or on the level. I H C spreaders have a rear axle differential, enabling them to spread evenly when turning corners.

The local agents handling these machines will show you all their good points, and will help you decide on the one that will do your work best. Get literature and full information from them, or, write the nearest branch house.

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THE HORSE.

New-Born Foals.

It is estimated that some 25 per cent. of the annual foal crop is lost. Most of this mortality might be prevented by treating the mare intelligently and giving proper attention to the navel and bowels of the newborn foal. It is the purpose of this article to furnish practical instruction on these matters for the guidance of those having the charge of brood mares and foals.

NAVEL AND JOINT DISEASE.

The navel cord (umbillicus) connects the foal's body with the afterbirth (placental membranes) of the mare. It is made up of gelatinous tissue covering a large vein coming from the foal's liver and carrying impure blood to be purified in the lungs of the mare; two arteries carrying pure blood from the arteries of the mare, by way of the placenta, to the arteries of the foal, and a tube (urachus) from the foal's bladder which, while the colt is in the womb, discharges urine into one of the envelopes (allantois) covering the foal.

When the navel cord breaks at birth its blood vessel and tube promptly close, if all goes well. If pus-forming germs from filthy or soiled bedding, floor, or ground, get on to the raw navel cord, however they cause infection, inflammation and collections of pus at the point involved and thence germs are carried into the system and form colonies (secondary abscesses) elsewhere in the body, and notably in the joints of the extremeties.

In cases of generalized infection (pyaemia) abscesses may be found in the liver, kidneys, lungs, brain, muscles and subcutaneous connective tissue. If the urachus fails to close, urine dribbles or streams from the navel opening, and, in that event abscesses of the joints eventually appear, the infection having become general. The latter condition is termed "pervious" or "persistent" urachus. A majority of infected foals die. Recovery is seldom perfect. The colts fail to thrive or develop perfectly and are apt to have chronic affections of the joints. Treatment of the disease can only be properly conducted by the trained veterinarian, and he may employ a special (antistreptococcie) serum with some degree of success, both as a preventive and curative agent.

Seventy-five per cent. of the cases of this disease affect foals during the first three weeks of life. Fat, flabby often the get of overfed, pampered, underexercised stallions, or from mares in like condition—are especially prone to the disease and are most likely to succumb. Foals that have small navel cords and are lively at birth, soon on their feet and nursing, are much less liable to attack.

Stallions should be worked, or abundantly exercised, and so fed and maintained as to ensure virality, vigor, stamina, robust constitution and the perfect health of every organ. Mares should be similarly treated. Foals will then be likely to come into the world healthy, lively and strong to resist disease.

SYMPTOMS.

A few days after birth the foal is found to be weak, lame, feverish and with impaired appetite. One joint, or another, is swollen, hot and painful. Usually the attack affects the fetlock, hock, stifle hip, knee, elbow or shoulder. Sometimes abscesses form at the poll, about the ribs, or along the spinal column. The swellings rapidly increase in size and several joints are effected at one time. There is swelling of the navel, and pus oozes from one or more openings. Pus forms in quantities in the affected joints. Diarrhoea usually comes on, or may be alternated with constipation. Soon the foal is too weak to stand, loses appetite entirely, and dies in a few days, or in two or three weeks, in lingering cases. Often urine escapes from the navel, or the foal passes bloody urine; but the latter symptoms may, for a time at least, be present without noticeable symptoms of pus infection.

THE PREGNANT MARE.

The mare in foal should be worked lightly or abundantly exercised every day. Exercise is absolutely necessary. She should occupy a roomy box stall. Here she will take some additional exercise and will not be afraid to lie down. She will be less likely to become "cast" and escape having "stocked" legs and dropsical swellings of the udder and abdomen. The bedding should be kept clean and dry.

Feed the mare sound, whole oats, bran and mixed or timothy hay. Avoid moldy hay or silage, damaged grain, woody, weathered fodder, dusty or rusty straw, or hay containing ergot. Keep pregnant mares out of corn stalk fields. Provide them with plenty of pure, cleanwater. In working mares avoid jerking, severe pulling, wading through deep mud, manure piles or snow drifts. Let the work be light, easy and steady. Keep the bowels active by feeding bran and a little flaxseed meal, carrots, or some sweet silage.

The mare goes 48 weeks, or about 340 days with foal. As foaling time approaches decrease the grain ration and increase laxative foods to keep the bowels acting freely. Constipation is dangerous. When wax forms on the teats, about three days before foaling, stop working the mare and place her in a prepared box stall where she can be watched until the foal is born.

After foaling, leave the mare alone for a time, if she is laying down. If she does not expel her afterbirth promptly when she rises from resting inject into her womb one half gallon of luke warm 1 per cent. solution of coal tar disinfectant, or other mild antiseptic. If the afterbirth then does not come away within an hour or two it should be removed by hand. An expert should be employed for this operation and when it has been performed the womb should again be flushed out with an antiseptic solution. Half an hour after the birth of the foal, or about that time, offer the mare a pailful of luke water and again at intervals of two hours. Mares are thirsty at this time and should be abundantly supplied with water. An hour after foaling the mare may eat a mash of steamed oats and bran, if she has been accustomed to such feed; otherwise give her a small feed of her ordinary grain ration. In a few days, if the weather is fine, the mare and foal may take some out-door exercise

(Continued on page 440)

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevents the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

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Use this preparation thoroughly for alland every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

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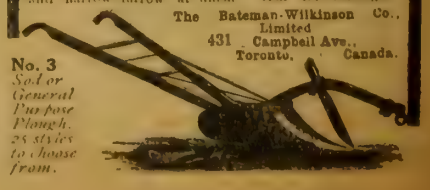

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Clydesdales--Showyard Versus Sale Types.

I have been interested in Clydesdales for almost forty years, and when I cast my mind back over those years I feel I have seen many changes in connection with the breed. My earliest recollections take me back to the days of the daughters of the celebrated Drummore Victor. These were big, roomy-bodied mares, with short legs, clean flat bones, first-rate feet and pasterns, strong as lions, and alike famed for their tempers and work. They were, in my opinion, typical Clydesdale mares. They were readily picked up, and many of them became the foundation of studs from which great, big, handsome horses possessed of substance and quality were bred. In those days one never heard of such a thing as constitutional weakness, of which we hear so much now. No breeder would then have dreamt of mating animals which were closely connected by blood. The now familiar term "Sib" was scarcely known.

It is a debatable point, even at this remote date, whether the breed has improved to so great anextent as we are led to believe. Fashion is a curious thing, and can change very quickly. Alas! not always for the better. The "seventies" brought a somewhat remarkable change in connection with Clydesdales; the typical animal of that period was possessed of strong bones. It was immaterial whether they were round or flat, but it was absolutely essential that they should be possessed of plenty of roughness about the legs. The favorite cry was for "hair." Fortunately this fashion was short-lived. It was found that neither the quantity of hair, nor quality of bone were calculated to make good lasting animals. So the fashion of "fosey" legged ones soon became obsolete. Coming to the present-day type of Clydesdale, I am strongly convinced that the leaders of fashion—i. e., the principal exhibitors in the show ring—are not accomplishing the very object for which agricultural shows are intended—namely, the improvement of the breed and the education of the farmer at large with reference to same. A typical Clydesdale should be up to size, possessed of good quarters, neck, and head, plenty of substance, with clean, sharp, broad bones, good feet and pasterns, fit for all kinds of heavy work, and free from any constitutional weakness by close or sib breeding. Instead of this we have a sib-bred animal (possibly with a double dose of it) possessed of what is known as sweet kind of bones, flash legs, long pasterns, and, in the vernacular of the showyard, "quality all over." This is what agricultural shows are attempting to educate us up to. Am I a pupil? I say no, most emphatically. We want size, strength, an substance, and there can be both, without deducting from the quality. Quality does not necessarily mean fineness and want of substance. More than that, we must look at it from a utility point of view, which type is to be to the advantage of the greatest number of people. It will stand no argument.

One of my principle objections to the present position of the Clydesdale world is (and I put it plainly without much fear of contradiction from the vast majority of your readers) that we find that no sooner do the judges enter the ring than they select unblushingly the modern type, which I have already described. The animal must be "quality all over." On the other hand, we find a great, big, massive animal possessed of every good point which goes to make up (in my opinion) a thorough typical Clydesdale is passed over, for the simple reason that he or she is "too strong." That verdict is enough; and the animal is at once banished from the ring without competition. A still more objectionable state of matters exists, and one which I have often spoken of, and that is the unreasonable and illogical attitude taken by some judges, many of whom are dealers and exporters of the breed. We find that they have no sooner left the show ring than they are ready to purchase our stock, but the first objection they inevitably take is, that the animals want substance and size for their purpose. This is surely a contradiction with a vengeance to their actions in the showyard. What the breeder should aim at is to breed big, great, powerful draught horses, up to weight, possessed of good, strong, flat bones, with good feet and pasterns. These will pay him better in the end than breeding the "quality all over" kind.

In conclusion, I verily believe the fashion (which I have for years anticipated) is about to become an accomplished fact, and that in a very short time the slimly-got-up animal, however sweet, will have to take a back seat to the animal of nobler and mightier dimensions.—Galloway Tam in Scottish Farmer.

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POULTRY.

Facts About Hens and Eggs.

While heavy laying is as a rule desirable, phenominal egg records are not a guarantee of strong, rugged offspring. There must be a limit.

The hen that lays 150 eggs in a year is doing mighty good laying, and she is not so apt to break down early in life as is the one which is trying to "break the record."

Pullets and yearling hens that have done such remarkable work in their first season, are not so apt to do heavy work in the second year.

As a rule, hens that lay steadily during cold weather are indifferent hot weather layers.

Extreme cold and extreme hot weather affect hens alike.

The regular layers give the best sized eggs, while the spasmodic layer generally produces an assortment of sizes.

The size of the egg becomes smaller as the hen increases the number of her product. So also does the color towards the close of the litter.

The majority of eggs are laid between the hours of 9 o'clock in the morning and 3 o'clock in the afternoon.

There is not very strong fertility in the eggs laid by a hen that will produce from 30 to 50 eggs in succession.

Pullets that delay laying until February are not profitable birds to keep. Those that start in November or early December are the ones to be relied upon for winter laying. On a large egg farm near my home it is a rule that pullets that have failed to lay an egg by New Year's Day are killed and sent to market.

An egg laid in November or December will bring twice as much money as the one laid in March or April.

There is no such thing as an egg-laying type. There is but one true test of the layers, and that is by the aid of trap nests.

Hens forced for egg production by high feeding and stimulants, may give the desired number of eggs, but he future generations will show the ffect in weak conditions and constiutions. Pure food judiciously given s the only material the hardy, workng hen needs.

Provide the good, comfortable ouses, keep them clean and in a ood sanitary condition, and there will be no trouble about winter eggs, provided, of course, the fowls are kept strong and vigorous. They must have regular care and the food must e of the purest kind. Egg growing rests not solely with the hen,—much depends upon the man in charge.

In handling a goose, it should always be taken by the neck, and when lifted from the ground the body should be turned with the back towards the person handling it. In that position it cannot strike, and will remain quiet. Partly support body by seizing the first joint of the wing with one hand. If the goose is held facing one, it will strike hard blows with its wings or scratch with its feet.

It becomes quite a study to keep pullets laying reguffarly. System in feeding has much to do with it. When pullets begin to lay they seem quite uncertain. Some will lay regularly every other day, and some only twice a week. Moving layers from coop to coop simply upsets their habits, and they begin all over again and study the new situation, and during this time they usually stop laying.

According to a large number of analysis made of American eggs at the various agricultural stations, an egg on an average weighs two ounces, and has the following percentage of compositions; shell, 10.5; water, 6.6; fat, 9.3; and ash, 0.9. A side of beef contains on an average about the same percentage of protein but a larger percentage of fat. Eggs belong to the nitrogenous group of foods, and would naturally and quite properly be combined in the diet with material supplying carbohydrates (sugar and starch) such as cereals, potatoes, etc.

It is said that a plan for supplying the public with fresh eggs is being tried in Germany in the hope that it will increase the demand for a strictly fresh article. Egg depots are established in the principle cities at which the quality and freshness of the eggs are guaranteed. For every bad egg the purchaser is entitled to get fifteen good ones. Every poultryman has to mark all eggs which he sends to one of these depots, in such a way that they can be traced back to him, and if it is found that he furnished bad eggs as fresh ones, he will not be allowed to sell to the depot.

The hardest task in maintaining a constant and continuous egg yield is to keep the laying stock in prime condition, says Col. E. O. Roessle. This means such a condition of perfect health that the eggs will not only be laid regularly, but they will not be uniform in size, according to the breed laying them. Under such conditions we should have large eggs from Minorcas, White and Buff Leghorns, Plymouth Rocks and Brahmas. When such breeds lay small eggs, with perhaps double yolks, or soft-shelled eggs, the stock is out of condition and usually overfat. The eggs will thus be laid irregularly, and many times laying will stop entirely. Layers should be kept active, and activity is induced by short feeding. A hungry hen is usually a good layer.

It is hard to fatten a stunted chicken.

There is always a good market for good stock, so it pays to keep in the front ranks. The market is never overstocked with good goods.

For the city market there is nothing between the broiler and the roaster.

Fall chickens find a good market as roasters during January, February and March.

A FARMER'S GARDEN

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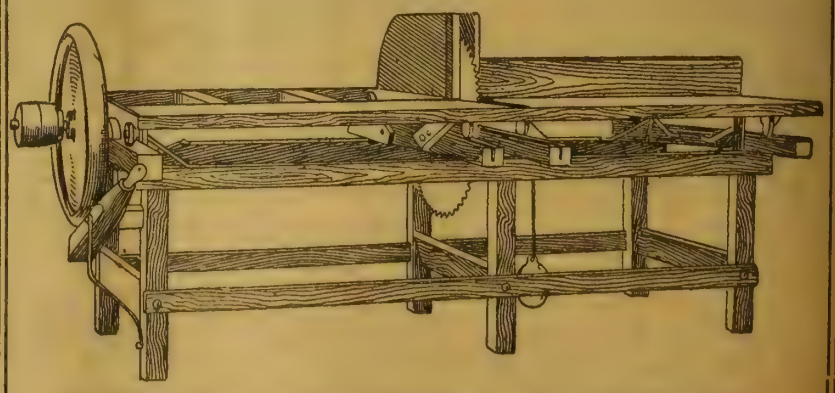

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Poultry Commission merchants say that one reason why a great many shippers are disappointed in the price they receive in good poultry is that they persist in shipping stock of sizes which are not in demand.

New York will take poultry either scalded or dry-picked. Boston wants what his customers will pay. When the market is well supplied the customers have a larger stock from which to select, and they always choose the best, leaving the second-class to be sold at hazardous prices.

The most important egg foods—mixed with exercise—are grit, bran, charcoal, cornmeal, pure water, clover or alfalfa hay, vegetables, green cut bone, cracked oyster shell, ground oats, scalded oats, sprouted oats, linseed meal, meat scrap or meat meal.

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Frozen eggs are sold by weight, and are in demand in cities with the large bakers and cracker makers. In certain classes of restaurants frozen eggs are used for scrambled eggs and omelets.

The price is not fixed by the commission merchant. He can only obtain what his customers will pay. When the market is well supplied the customers have a larger stock from which to select, and they always choose the best, leaving the second-class stock to be sold at hazardous prices.

In testing eggs by lamplight the object is to discern the size of the air space in the eggs. When the egg is perfectly fresh, the space is very small and can just be seen at the broad end. Each day this space increases in size, and when it becomes very large the egg is ranked second-class. Cloudy eggs, or those which rattle, are suitable only for cheap cookery or manufacturing purposes.

A very successful egg farmer once said that in winter he always had something in his coops for his hens to pick at—scattered grain, a cabbage hanging up, and even bones with a little meat on them, always something to find in order that his flock should not contract lazy habits. In this he was humoring the natural instinct of the animal. A hen let run at large is almost always hunting, picking and scratching—first at a blade of grass then a bug, then a worm, and next a seed.

Experiments have proved that yarded hens are more prolific layers than those allowed free range. It costs more to keep them, but the returns in eggs are larger. Yarded hens are fed on food that will make eggs, and naturally this food is converted into the object for which it is intended. On the other hand, the same food fed to fowls that are on a range, is more apt to go to the making of flesh,—bone and muscle—rather than to making of eggs.

There is very little difference in weight of chicks of any of the breeds as compared with the others, for the first six weeks. This is so even in comparing the weight of Leghorn chicks with Brahma chicks. There is a gradual increase, however, after that time, although not so very much until after eight weeks of age. Naturally, from then on the heaviest breed chicks show the greatest gain.

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Our firm name is stencilled on every bag. Do not allow the dealers to give you other than Read's oats for seed.

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To-day there are not enough Canadian CHICKENS or EGGS to go around. Thousands of chickens and hundreds of thousands of dozens of eggs are being shipped into Canada from the United States and other countries to help meet the demand.

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Poultry raising is the best business for any farmer, any farmer's wife or farmer's child. The poultry crop is the one crop that never fails. It pays better for the time and money invested; the profit is surest; it isn't overcrowded and never will be.

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One Kind of Farmer.

He sells the whole of the apple crop
Whatever the price may be;
And he sells his milk to the last lone drop,
And there's none for the family.
When he kills a pig, he sells that, too,
And the same with the beef or lamb,
While the family fare the whole year through
Is bacon and spuds and ham.

He sells his eggs that his hens may lay,
And the chickens themselves as well
For he says, "There ain't no farm can pay
If you eat what you've got to sell;"
And he takes his children out of school
As soon as the law'll allow,
For he says the teacher's a "goldurn fool,"
And he's "needing the kids to plow."

His wife is weary and bent and sad
With the labor that she has done,
And his children have never known or had
Their rightful portion of fun,
But his cattle are fine and big and fat,
And his horses are sleek and trim,
Now, here is the question, plain and flat:
Are YOU in a class with him?
—Berton Braley, in Farm and Fireside.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

Ham was quite in earnest as he. I dare say they would have said much more about her, if they had not been abashed by the unexpected coming in of Steerforth, who, seeing me in a corner speaking with two strangers, stopped in a song he was singing, and said: "I didn't know you were here, young Copperfield!" (for it was not the usual visiting room) and crossed by us on his way out.

I am not sure whether it was in the pride of having such a friend as Steerforth, or in the desire to explain to him how I came to have such a friend as Mr. Peggotty, that I called to him as he was going away. But I said, modestly—Good Heaven, how it all comes back to me this long time afterwards!—

"Don't go Steerforth, if you please. These are two Yarmouth boatmen—very kind, good people—who are relations of my nurse, and have come from Gravesend to see me."

"Aye, aye," said Steerforth, returning. "I am glad to see them. How are you both?"

There was an ease in his manner— a gay and light manner it was, but not swaggering—which I still believe to have borne a kind of enchantment with it. I still believe him, in virtue of this carriage, his animal spirits, his delightful voice, his handsome face and figure, and, for aught I know of some inborn power of attraction besides (which I think a few people possess), to have carried a spell with him to which it was a natural weakness to yield, and which not many persons could withstand. I could not but see how pleased they were with him, and how they seemed to open their hearts to him in a moment.

"You must let them know at home, if you please, Mr. Peggotty," I said, "when that letter is sent, that Mr. Steerforth is very kind to me, and that I don't koow what I should ever do here without him."

"Nonsense!" said Steerforth, laughing. "I mustn't tell them anything of sort."

"And if Mr. Steerforth ever comes into Norfolk or Suffolk, Mr. Peggotty," I said, "while I am there, you may depend upon it I shall bring him to Yarmouth, if he will let me, to see your house. You never saw such a good house, Steerforth. "It's made out of a boat."

"Made out of a boat, is it?" said Steerforth. "It's the right sort of a house for such a thorough-built boatman."

"So'tis, sir, so'tis, sir," said Ham, grinning. "You're right, young gen'l'm'n. Mas'r Davy, boy, gen'l'm'n's right. A thorough-built boatman! Hor, hor! That's what he is, too!"

Mr. Peggotty was no less pleased than his nephew, though his modesty forbade him to claim a personal compliment so vociferously.

"Well, sir," he said, bowing and chuckling, and tucking in the ends of his neckerchief at his breast: "I thankee, sir, I thankee! I do my endeavors in my line of life, sir."

"The best of men can do no more, Mr. Peggotty," said Steerforth. He had got his name already.

"I'll pound it it's wot you do yourself, sir," said Mr. Peggotty, shaking his head, "and wot you do well—right well! I thankee, sir. I'm obleeged to you, sir, for your welcoming manner of me. I'm rough, sir, but I'm ready—least ways, I hope I'm ready, you understand. My hous ain't much for to see, sir, but it's hearty at your service if ever you should come along with Mas'r Davy to seeit. I'm a regular Dodman, I am," said Mr. Peggotty, by which he meant snail, and this was in allusion to his being slow to go, for he had attempted to go after every sentence, and had somehow or other come back again; "but I wish you both well, and I wish you happy."

Ham echoes this sentiment, and we parted from them in the heartiest manner. I was almost tempted that evening to tell Steerforth about pretty little Em'ly, but I was too timid of mentioning her name, and too much afraid of his laughing at me. I remember that I thought a good deal and in an uneasy sort of way, about Mr. Peggotty having said that she was getting on to be a woman, but I decided that was nonsense.

We transported the shell-fish or the "relish" as Mr. Peggotty had modestly called it, up into our room unobserved, and made a great supper that evening. But Traddles couldn't get happily out of it. He was too unfortunate even to come through a supper like anybody else. He was taken ill in the night—quite prostrate he was—in consequence of Crab; and after being drugged with black draughts and blue pills, to an extent which Demple (whose father was a doctor) said was enough to undermine a horses constitution, received a caning and six chapters of Greek Testament for refusing to confess.

The rest of the half-year is a jumble in my recollection of the daily strife and struggle of our lives; of the waning summer and the changing season; of the frosty mornings when we were rung out of bed, and the cold, cold smell of the dark nights when we were rung into bed; of the evening schoolroom dimly lighted and indifferently warmed, and the morning schoolroom which was nothing but a great shivering-machine; of the alternation of boiled beef with roast beef, and boiled mutton with roast mutton; of clods of bread-and-butter, gog's-eared lesson-books, cracked slates, tear-blotted copy-books, canings, rulerings, hair-cuttings, rainy Sundays, suet puddings, and a dirty atmosphere of ink surrounding all.

I well remember though, how the distinct idea of the holidays, after seeming for an immense time to be a stationary speck, began to come towards us, and to grow and grow. How from counting months, we came to weeks, and then to days; and how I began to be afraid that I should not be sent for, and when I learned from Steerforth that I had been sent for and was certainly to go home, had dim forebodings that I might break my leg first. How the breaking up day changed its place fase, at last from the week after next to next week, this week, the day after to-morrow, to-morrow, to-day, to-night—when I was inside the Yarmouth mail, and going home.

I had many a broken sleep inside the Yarmouth mail, and many an incoherent dream of all these things. But when I awoke at intervals, the ground outside the window was not the playground of Salem House, and the sound in my ears was not the sound of Mr. Creakle giving it to Traddles, but was the sound of the coachman touching up the horses.

CHAPTER VIII.

My Holidays. Especially One Happy Afternoon.

When we arrived before day at the inn where the mail stopped, which was not the inn where mt friend the waiter lived, I was shown up to a nice little bedroom, with Dolphin painted on the door. Very cold I was, I know, notwithstanding the hot tea they had given me before a large fire down-stairs; and very glad I was to turn into the Dolphin's bed, pull the Dolphin's blankets round my head, and go to sleep.

Mr. Barkis the carrier was to call for me in the morning at nine o'clock. I got up at eight, a little giddy from the shortness of my night's rest, and was ready for him before the appointed time. He received me exactly as if not five minutes had elapsed since we were last together, and I had only been into the hotel to get change for sixpence, or something of that sort.

As soon as I and my box were in the cart, and the carrier was seated, the lazy horse walked away with us all at his accustomed pace.

"You look very well, Mr. Barkis," I said, thinking he would like to know it. Mr. Barkis rubbed his cheek with his cuff, and then looked at his cuff as if he expected to find some of the bloom on it; but made no other acknowledgement of the compliment.

"I gave your message, Mr. Barkis," I said: "I wrote to Peggotty."

"Ah!" said Mr. Barkis.

Mr. Barkis seemed gruff, and answered dryly.

asked, after a little hesitatian.

"Why, no," said Mr. Barkis.

"Not the message?"

"The message was right enough, perhaps," said Mr. Barkis; "but it came to an end there."

Not understanding what he meant, I repeated inquisitively: "Came to an end, Mr. Barkis?"

"Nothing came of it," he explained, looking at me sideways. "No answer."

"There was an answer expected, was there, Mr. Barkis?" said I, opening my eyes. For this was a new light to me.

"When a man says he wilkin,' said Mr. Barkis, turning his glance slowly on me again, "it's as much as to say that a man's a waitin' for an answer."

"Well, Mr. Barkis?"

"Well," said Mr. Barkis, carrying his eye back to his horse's ears; "that man's been a waitin' for an answer ever since."

"Have you told her so, Mr. Barkiss?"

"No—no," growled Mr. Barkis, reflecting about it. "I ain't got no

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call to go and tell her so. I never said six words to her myself. I ain't a goin' to tell her so."

"Would you like me to do it, Mr. Barkis?" said I, doubtfully.

"You might tell her, if you would," said Mr. Barkis, with another slow look at me, "that Barkis was a waitin' for an answer. Says you—what name it it?"

"Her name?"

"Ah!" said Mr. Barkis, with a nod of his head.

"Peggotty."

"Chrisen name? Or nat'ral name?" said Mr. Barkis.

"Oh, it's not her christian name. Her christian name is Clara."

"Is it though?" said Mr. Barkis.

He seemed to find an immense fund of reflection in this circumstance, and sat pondering and inеardly whistling for some time.

"Well!" he resumed at length. "Says you, "Peggotty! Barkis is a waitin' for an answer." Says she, perhaps, 'Answer to what?' Says you, 'To what I told you.' 'What is that? says she. 'Barkeis is willinj,' says you."

This extremely artful suggestion, Mr. Barkis accompanied with a nudge of his elbow that gave me quite a stitch in my side. After that, he slouched over his horse in his usual manner; and made no other reference to the subject except, half an hour afterwards, taking a piece of chalk from his pocket, and writing up, inside the tilt of the cart, "Clara Peggotty"—apparently as a private memorandum.

Ah, what a strange feeling it was to be going home when it was not home, and to find that every object I looked at reminded me of the happy old home, which was like a dream I could never dream again! The days when my mother and I and Peggotty were all in all to one another, and there was no one to come between us, rose up before me so sorrowfully on the road, that I was not sure that I was glad to be there—not sure but that I would rather have remained away, and forgotten it in Steerforth's company. But there I was; and soon I was at our house, where the bare old elms wrung their many hands in the bleak wintry air, and shreds of the old rooks' nest drifted away upon the wind.

The carrier put down my box at the garden gate, and left me. I walked along the path towards the house, glancing at the windows, and fearing at every step to see Mr. Murdstone or Miss Murdstone lowering out of them. No face appeared, however; and being come to the house, and knowing how to open the door, before dark, without knocking, I went in with a quiet, timid step.

God knows how infantine the memory may have been, that was awakened within me by the sound of my mother's voice in the old parlor, when I set foot in the hall. She was singing in a low tone. I think I must have lain in her arms, and heard her singing to me when I was a baby. The strain was a new one to me, and yet it was so old that it filled my heart brimful; like a friend come back from a long absence.

I believed, from the solitary and and thoughtful way in which my mother murmured hersong, that she was alone. And I went softly into the room. She was sitting by the fire, suckling an infant, whose tiny hand she held aginst her cheek. Her eyes were looking down into its face and she sat singing to it. I was so far right, that she had no other companion.

I spoke to her, and she started, and cried out. But seeing me, she called me her dear Davy, her own boy! and coming half across the room to meet me, knelt down upon the ground and kissed me, and laid my head down on her bosom near the little creature

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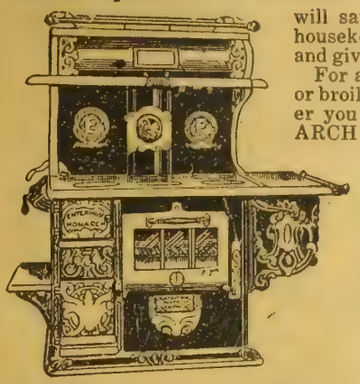

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18k Rolled Pendants, worth $3.00, our price..... ....**99 cents**

Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....**$1.36**

Boys Watch..... .....**69 cents** nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
Box D.
Sussex, New Brunswick.

Sounds the **150%** like West

The increase in enrollment of new students at

FREDERICTON The Business COLLEGE
W.J. OSBORNE PRINCIPAL.

for the months of January and February was 150% over that for the same months of 1912.

Spring term opens April 1st.

Send for free catalogue. Address,

W. J. OSBORNE, Principal,
Fredericton, N, B.

You judge a man not by what he promises to do, but by what he has done. That is the only true test. Chamberlain's Cough Remedy judged by this standard has no superior. People everywhere speak of it in the highest terms of praise. For sale by all dealers.

that was nestling there, and put its hand up to my lips.

I wish I had died. I wish I had died then, with that feeling in my heart! I should have been more fit for heaven than I ever have been since.

"He is your brother," said my mother, fondling me. "Davy, my pretty boy! My poor child!" Then she kissed me more and more, and clasped me round the neck. This she was doing when Peggotty came running in and bounced down on the ground beside us, and went mad about us both for a quarter of an hour.

It seemed that I had not been expected so soon, the carrier being much before his usual time. It seemed, too, that Mr. and Miss Murdstone had gone out upon a visit in the neighborhood, and would not return before night. I had never hoped for this. I never thought it possible that we three could be together undisturbed, once more; and I felt, for the time, as if the old days were come back.

We dined together by the fireside Peggotty was in attendace to wait upon us, but my mother wouldn't let her do it, and made her dine with us. I had my own old plate, with a brown view of a man-of-war in full sail upon it, which Peggotty had hoarded somewhere all the time I had been away, and would not have had broken, she said, for a hundred pounds. I had my own old mug with David on it, and my own little knife and fork that wouldn't cut.

While we were at table, I thought it a favorable occasion to tell Peggotty about Mr. Barkis, who, before I had finished what I had to tell her, began to laugh, and throw her apron over her face.

"Peggotty," said my mother. "What's the matter?"

Peggotty only laughed the more, and held her apron tight over her face when my mother tried to pull it away, and sat as if her headwere in a bag.

"What are you doing, you stupid creature?" said my mother, laughing.

"Oh, drat the man!" cried Peggotty. "He wants to marry me."

"It would be a very good match for you; wouldn't it?" said my mother.

"Oh, I don't know," said Peggotty. "Don't ask me. I wouldn't have him if he was made of gold. Nor I would not have anybody."

"Then, why don't you tell him so, you ridiculous thing?" said my mother.

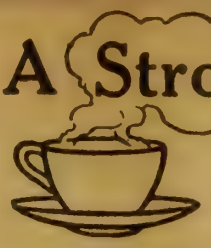
"Tell him so," retorted Peggotty, looking out of her apron. "He has never said a word to me about it. He knows better. If he was to make so bold as to say a word tome, I should slap his face."

Herown was as red as ever I saw it, or any other face, I think;but she only covered it again; for a few moments at a time, when she was taken with a violent fit of laughter; and after two or three of those attacks, went on with her dinner.

I remarked that my mother, though she smiled when Peggotty looked at her, became more serious and thoughtful. I had seen at first that she was changed. Her face was very pretty still, but it looked careworn, and too delicate; gnd her hand was so thin and white that it seemed to me to be almost transparent. But the change to which I now refer was superadded to this: it was in her manner, which became anxious and fluttered. At last she said, putting out her hand, and laying it affectionately on the hand of her old servant:

Editor's Note.—Owing to the fact that our next issue will be our Special Spring number for which we have a special story, the next instalment of the story, David Copperfield, will not appear until our issue of April 29th.

A Strong Tribute



People who have been persuaded for any reason to try other teas almost always return to Red Rose Tea. This is the strongest tribute to its **good** quality.

N.B.—Coffee users will find Red Rose Coffee as generously good as Red Rose Tea. 370

Women and Higher Education.

"The claim has been made," says Margaret Anglin in the American "World," "that higher education for women chills the heart in livening the intellect, that the development of the intellect along the pathways of culture and higher thinking makes women cold and cynical in regard to human emotions.

"We are told that the super-educated college woman is incapable of being swayed by the same deep feelings as the child of nature who knows not the meaning of psychology, and to whom ethics and the subtleties of philosophy are reduced to the primitive conception of right and wrong. I doubt this very much. The woman of high education or the professional woman feels the same forces swaying her, but she knows how to control them. What higher education and the professional life do for women, however, is to eradicate the ostentatious display of feeling so long regarded as necessary for the "womanly woman."

"The power to repress the emotion has no effect on the ability to experience them. Convention and good breeding necessitate self-restraint, but

An Encouraging Message

I have a message of hope and good cheer, of encouragement and inspiration to every suffering woman. I have endured the torture due to female troubles and the consequent despondency, and mental agony almost to the point of despair, and I have been restored from this condition to a state of vigorous health, and to the happy, exhilarating frame of mind which accompanies physical well being. This change has been brought about wholly by the use of ORANGE LILY.

In addition I have had the privilege and pleasure of inducing multitudes of other suffering women to give ORANGE LILY a trial, and have received thousands of enthusiastic acknowledgments of the blessings it has brought to them. The following is a sample:

Truro, N. S., April 5, 1909.

Dear Mrs. Currah,—Your very kind letter was received yesterday. In reply to your question about my health, I am thankful to say that I am very well. As I have never given you a statement of my case you may be interested in it

For several years I have suffered untold agony. This suffering was continuous, but I would have violent attacks every few weeks, each attack lasting several days. The first Sunday in November, I felt the pain increasing and so did not go to prayers. The rest of the family did go, and soon after the forcing down pains seized me and I had to remain on the floor until their return. I was in great pain all night and was very sick for a whole week.

Then Mrs. L. came to see me and told me of your wonderful medicine. I got my husband to send for it right away, as I was too sick to write myself. (My doctor could do nothing for me.) I have used 5 boxes of ORANGE LILY, have had three months of good rest, and am now well, never better in my life. I have not had the old pains since. I often ask my husband if it is myself that is going around and doing my own work. I can scarcely believe it. It brings tears of joy to my eyes. I could shout it to all the world. I cannot speak enough in its praise.

Your friend, MRS. E. H. F.

Receiving, as I do, dozens of such reports each day, I feel impelled to make known to my suffering sisters the merits of ORANGE LILY. It differs from other so-called remedies in that it is not taken internally. It is a strictly local treatment, and is applied directly to the affected organs. Its curative elements are absorbed into the congested tissues, expelling the stagnant foreign matter which has been irritating the membrane and oppressing the nerves, and a growing feeling of physical and mental relief is noticeable almost from the start. It is a positive, scientific remedy, and even if you use no more than the Free Trial treatment you will be very materially benefited.

FREE TRIAL OFFER

I want every reader of this, who suffers in any way from painful monthly periods, irregularities, leucorrhoea, inflammation or congestion of the womb, pains in the back, etc., to send me their addresses, and I will forward at once, without charge, 10 days' treatment. If your case is not far advanced it may entirely cure you, and in any event it will do you much good. I am so earnest in making this statement, and so positive that it is true, that I trust every sufferer who reads this notice will take advantage of my offer and get cured at home, without a doctor's bill. Address, enclosing 3 stamps, MRS. FRANCES E. CURRAH, Windsor, Ont.

Had Pains in Her Liver

Doctors Only Relieved Her For A Time.

When the liver is inactive everything seems to go wrong, and a lazy, slow or torpid liver is a terrible affliction, as its influence permeates the whole system and causes Biliousness, Heartburn, Sick Headache, Floating Specks before the Eyes, Jaundice, Brown Blotches, Constipation, Catarrh of the Stomach, etc.

Milburn's Laxa-Liver Pills stimulate the sluggish liver, clean away all waste and poisonous matter from the system, and prevent as well as cure all sickness arising from a disordered condition of the liver.

Mrs. Wesley Estabrooks, Midgic Station, N.B., writes:—"For several years I have been troubled with pains in the liver. I have had medicine from several doctors, but was only relieved for a time by them. I then tried Milburn's Laxa-Liver Pills, and I have had no trouble with my liver since. I can honestly recommend them to every person who has liver trouble."

Price, 25 cents per vial or 5 vials for $1.00. For sale at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

P. E. Island Seed Oats For Sale

In order that our local farmers should be supplied with the very best cleaned and true to name oats, we have purchased from the most reliable growers in Prince Edward Island, a large quantity and will therefore be in a position to sell to any who may want good, reliable seed.

Correspondence solicited.

The Sussex Mercantile Co., Ltd.
Sussex, New Brunrwick

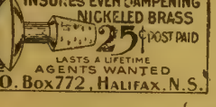
Gates' Nerve Ointment For Frost Bites

C. Gates, Son & Co.,
Middleton, N. S.

Gentlemen:--I had the misfortune to freeze my toe which caused me a great deal of suffering, and although I had it treated, yet without success till I used your Nerve Ointment, which has completely cured it, and I have no hesidency in recommending it to others as the best I ever used,

Yours sincereiy,
Matthew Wood,
Point Phillip, N. S.

HANDY CLOTHES SPRINKLER



INSURES EVEN DAMPENING NICKELED BRASS 25¢ POST PAID LASTS A LIFETIME AGENTS WANTED

HOME M'F'G. CO. Box 772, HALIFAX, N.S.

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

the woman who can control her feelings and whose breeding and education have taught her that unnecessary display of feeling is vulgar, experiences them just the same. It is this poise of the woman of culture and intellect, of business ability and professional standing, which gives rise to the complaint that she is not capable of human sympathy and emotion.

"Higher education, culture, and the broader life that has been opened to women in the last quarter century has done more toward the development of real human sympathy and feeling than all the artificiality and affection of the years before.

"When I speak of higher education I do not necessarily mean the accumulation of a lot of college degrees in dead languages or mathematics. Even in the lives of these self-restricted creatures the feelings which they have forced to lie dormant are liable to burst forth with the so-called sincerity of the untutored child of nature.

"By the woman of higher education and culture I mean one whose intellect has broadened her life by training, and whose mind has been able to comprehend and digest the facts which education has placed before her. A woman with keen sensibilities and a well-trained mind, a woman of strong intellectuality, despises the gushing display of feeling. If the charges of cold are brought against her it should be with a word of thankfulness. Lack of feeling is so often hidden by the disguise of hysterical protestation and gushing emotionalism, that women of culture and refinement shudder at the thought of being placed in the same category.

"With women who are incapable of feeling the easiest thing in the world is to assume setiment and emotion. Naturally, as in the case of all artificiality, it is apt to be overdone. There is no reason why the holiest of emotions should not be rational, nor is there any reason why woman's power of feeling should be placed upon the basis of absence of higher education."

Entertaining Guests.

There is one important thing that should not be overlooked in the entertainment of guests; treat them with equal courtesy. Be also careful to treat your poorer and humbler relatives, whom you have invited to your house, with due respect and cordiality—neither with any show of patronage, nor any marks of neglect. Whoever else may be your guests, let there be nothing in your manner to indicate that you are ashamed of the good old aunt that is visiting you, and the truest way to accomplish this is not to be ashamed of her. She may not dress in the latest fashion, and her talk may be of country matters; she may ask some queer questions, and show her familiarity with a style of life that is somewhat foreign to that of your other visitors; but if you are not willing, under all circumstances, to treat her with cordial civility, you should not have asked her to your house. No man ever loses caste, in the opinion of the truly refined and cultivated, by showing courtesy towards such as move in a lowlier sphere. Neither should the rich visitors be treated with overobsequious attention. They will not thank you for it, or respect you any the more for your excess of deference. Above all, never allude to the fact of their visiting you as an act of condescension on their part, or, by any word or look indicate that, in your opinion, they hold a higher position in society than you do. If you fall in with all their prejudices, and echo all their sentiments, and hang upon their lips, as the bees cling to 'every opening flower,' they will probaly see

IT must satisfy you.

If it doesn't, your dealer, backed by us, gladly returns your money.

Isn't that a sincere way to invite you to try it?

REGAL FLOUR

Maple Syrup Makers Enter This Contest

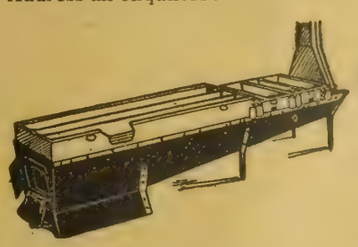
$500 IN GOLD CASH PRIZES

WHY not be a WINNER in this contest? We are giving away $500 in Gold Cash Prizes to users of the Grimm "Champion" Evaporator.

Cut Out This Coupon

Full particulars will be mailed on receipt of above coupon.

The competition will take place during the last two weeks of April and the samples of syrup and sugar received will be placed on exhibit in the show windows of the "Montreal Star." Every purchaser and user of the Grimm "Champion" Evaporator may take part in this contest. *Now is the time to properly equip yourself* to make high grade syrup and sugar—high priced and therefore profitable. Do it now before the sap runs. State the number of trees you will tap and we will give you prices on a suitably sized outfit. Address all enquiries:



PRIZE CONTEST

GRIMM MFG. CO.
LIMITED
56-58 Wellington St.
MONTREAL

(*Dont Forget Coupon*)

An advertisement in the Maritime Farmer will sell your surplus stock---Try it !

through it all, and place you accordingly. Last of all, whoever may be your visitors, keep the skeletons out of sight. Family woes and trials and misfortunes, if they are made the staple of conversation, will cause the visit of your guest to be disagreeable. If you have invited him for the sake of his aid and sympathy, and he understands it to be so, it is another matter. In this case he comes for your comfort, and not for his own pleasure. But if he visits you out of pure friedship, and expecting to have a good time, lock up your closets where you keep your skeletons. The deepest sympathy will not endure constant draughts upon its water with out running dry.

Keep the Refrigerator Clean and Sweet

Watch your refrigerator closely this summer. It's better to have no refrigerator at all than to have one not perfectly clean and sweet.

In the first place, keep the shelves of the food chamber in good order. Wipe up any spilled liquids at once, and keep all crumbs brushed away. Do not allow odds and ends of food to accumulate in the refrigerator. If they are not used at a reasonable time, throw them away before they begin to spoil and taint the other food.

Milk absorbs odors very readily, as do most cooked foods also, though in a less degree. It is best, then, to cover closely such articles as fish, cooked cabbage, and the like, when they must be put into the ice box.

CLEAN EVERY WEEK.

Once a week the refrigerator should have a thorough cleaning. Remove all food from the food chamber, cover, and set in a cool place. Then remove the racks and wash them well with hot soap suds. Rinse with hot soda water, then with clear hot water. Wipe dry, and set in the sun to air. Borax or ammonia may be used instead of soda.

Wash the interior of the food chamber thoroughly in the same manner, using a small scrub brush. Use a sharp wooden skewer to clean the grooves and ledges that cannot be reached with the brush.

AS TO THE DRAIN.

The ice chamber next demands attention. Remove the ice, wrapping it in a piece of old flannel or newspaper to prevent melting. Then wash out the ice chamber with hot suds, and rinse first with hot soda water, then with clear hot water. The drain pipe should be cleaned with a flexile wire to which a bit of cloth is attached. Then pour down it hot soda water, and afterwards boiling water. See that every part of the refrigerator is wiped dry, and leave it open an hour or more to air.

If the refrigerator drains into the house drain, the traps must be carefully cleaned and kept in good working order. If a drain pan is used, it should be washed in the same way as the other parts of the refrigerator.

If this cleaning is done regularly every week, it will not take long or be very hard, and you will never notice that "ice-box taste" about any of your food.—Kansas Industrialist.

Children are much more likely to contract the contagious diseases when they have colds. Whooping cough, diptheria, scarlet fever and consumption are diseases that are often contracted when the child has a cold. That is why all medical authorities say beware of colds. For the quick cure of colds you will find nothing better than Chamberlain's Remedy. It can always be depended upon and is pleasant and safe to take. For sale by all dealers.

IHC Wagons Are As Good As They Look

TO really know the value of a wagon you must know of what material it is made, how it is built and about how many years of satisfactory wagon service you may expect. When you know all there is to know about I H C wagons it is safe to say that your next wagon will bear the I H C trademark—the stamp of quality and honest value.

Every piece of wood used in I H C wagons is carefully selected and air-dried. Only in air-dried lumber does wood retain its full strength and elasticity. All steel or iron is selected with the same care to secure the greatest possible strength. Thorough knowledge of the strain each part must stand is necessary because a wagon, like a chain, is no stronger than its weakest part. Every part of I H C wagons

Petrolia Chatham

has the same relative strength. The men who build I H C wagons know why one part is built stronger than another, know the exact strain it will have to bear. This same thorough knowledge has enabled them to build a wagon of light draft, which puts the least strain on the horses, without impairing the strength or durability of the wagon.

The finishing touch, the thing that adds to the life and appearance of an I H C wagon, is pure paint. Cheap paint may improve the appearance of a wagon for a short time, but after that is a positive detriment. Only pure paint is used on I H C wagons. It fills the pores of the wood, prevents shrinking, swelling, warping and twisting, and acts as a wood preservative.

There are many other reasons why I H C wagons are such good wagons, why owners say they are the best and most satisfactory. Have the I H C local agent show you an I H C wagon, or, if you prefer, write the nearest branch house for catalogues.

International Harvester Company of Canada, Ltd

EASTERN BRANCH HOUSES
At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa; Ont.; St. John, N. B.; Quebec, P. Q.
Built at Chatham and Petrolia, Ont.

GOOD SEEDS FOR GOOD CROPS

Reliable Merchants everywhere sell

STEELE, BRIGGS' SEEDS

Look for them—accept no other.

Steele, Briggs' are the best grown. No matter what you need in Seeds, this name stands for highest quality.

Behind every packet is the strongest seed reputation in Canada.

Thousands of successful growers everywhere use **Steele, Briggs' Seeds** year after year because they are sure of what they are buying. We retain control of our packets and supply them fresh each season.

Look for this box at your local store. If your local dealer cannot supply you, send in your order direct.

STEELE, BRIGGS SEED CO. Limited
TORONTO, ONT. HAMILTON, ONT. WINNIPEG, MAN.

Put Any Weight on a Maritime Fence

and it stands the test. Man or beast can't break it down. Maritime Fence never sags or gets out of shape. Made from extra heavy imported hard drawn steel wire, thicker, stronger and galvanized so it is peel-proof. It is the last word in strength and durability.

The staying quality of Maritime fence is in the simple lock with the bull dog grip. It never lets go—never lets the fence get crooked. Maritime Fence is always sightly; always straight—always best. The quality of material and construction makes it best.

Don't buy fence until we have put our catalog and price list into your hands, postpaid, by mail. Costs you nothing to find out all you want to know about wire fence. Get your pen now and write on a postal "Send the catalog." 9

MARITIME WIRE FENCE

New Brunswick Wire Fence Co., Limited
Moncton New Brunswick

The Art of Breadmaking.

At the recent Women's Congress held at Lansing Mrs. C. W. Foulk, of the University of Ohio, gave a practical talk on bread and breadmaking, a report of which follows:

"There are two kinds of flours classified from the standpoint of the person who bakes; they are pastry flour and bread flour. If one is not in a position to have both kinds it is best to secure the bread flour, for the other kind can be made from the bread flour by the addition of a little corn starch and sugar. No attempt should be made to build a good loaf of bread out of flour for pastry baking.

"Again, flour may be classified into white flour, graham flour and whole wheat flour. The two latter are very good to use, but they have in some regards been overestimated as to nutritive value. For a well person who has a good digestive system that can care for the coarser indigestible fibre present in the unbolted kinds of flour they are all right and give a maximum of food value from the wheat used in the manufacture of the product; but for a person with a weak stomach it has been satisfactorily demonstrated in the laboratory that more of the white flour bread is digestible and that it creates less irritation to the stomach and other digestive organs. White bread flour is especially fitted for dyspeptics, although the contrary has been the general belief of laymen.

Yeast.—She proceeded next to explain that the yeast used in the manufacture of bread is a plant that grows when the condition of temperature, food and moisture for its development are provided. The quality of the bread largely depends upon the yeast and its growth. There are three classes of yeast used by housewives in the making of bread. They are liquid yeasts, dry yeast and compressed yeasts. A goodly number of women use the liquid yeasts. They are made with starter. To get good yeast two weeks is the longest one should keep them when expecting to have every batch of bread good. Dry yeasts are generally to be recommended above the liquid type; but the speaker was most favorable to the compressed kind. These are less likely to be contaminated, being wrapped in tinfoil. Care should be exercised that they should be fresh and sweet. Yeasts thrive best on sugar, and for this reason the speaker advised the addition of salt last in the mixing of bread instead of earlier, as it arrested in part the action of the yeast plant.

Mixing.—Two methods of making bread exist among our farmer women. They are known as the short and long methods. By the shorter method the bread is set in the morning and finished the same day. The long method requires that the bread be set in the evening and finished the following day. The long method requires less yeast. The speaker did not approve of this method. Many women who follow it get up in the middle of the night to mix the dough. This wholly unnecessary and should be abandoned for the shorter way. As indicated above, the short way of making bread demands the use of a larger amount of yeast. To learn how much yeast could be added without producing a noticeable flavor in the bread, experiments were tried in the cooking department of the University of Ohio, where it was found that seven yeast cakes to one loaf of bread did not impair the quality of the resulting loaf. Hence one should not fear to get too much of the yeast mixed with the flour. Mrs. Foulk stated that they would be able to finish their bread by following the short method in from three to four hours.

A comfortable living room is suited to the raising of bread. The temperature, however, should be even and no cold drafts be allowed to strike the container of the dough. Often sour bread results from keeping the bread in a too warm room.

Bread should not be kneaded too long. Long kneading makes a white loaf, but it is not the best flavored. Then, too, the finest loaves are those baked in small tins. It has been observed by the speaker that not a single contestant who baked bread in large double tins won in contests over those who used the small tins. The loaves baked in the small single tins are sure to be baked better, and other things being equal, are certain to be favored over those made in the larger tins.

The bread should be allowed to rise until it is double the original bulk and then worked down again. If it is permitted to rise more than this the second rising is apt to be slow and consequently give inferior results. By mixing when double the first bulk one gets a desirable action from the yeast again. She advised but the two mixings.

Baking.—The oven should be at such a heat when the bread is put in that a piece of unglazed paper will be browned in four minutes. Place the bread and then increase the heat during the next ten minutes, when the bread will stop rising. In the second ten minutes the loaves should become a rich golden brown. After this the heat should be gradually diminished. Leave the bread in from 40 to 60 minutes. It is better to have it overdone than not quite done. Loaves without a rich brown crust should be avoided, they are not fit for eating. If one does not like the crust, cut it off. This point was emphasized by the speaker, who stated that much ill-health results from the poorly baked bread that is eaten in this country.

After baking, the bread should be taken from the oven and pan, laid upon a clean white cloth, but not covered, and allowed to remain until cooled.

The question of the use of bread mixers was raised and the speaker stated that they were all right for the beginner, but the older women who had learned to make bread by hand-mixing found that they could not determine so well when the bread was mixed to the proper consistency. These women seem to know by feeling when to stop mixing.

The address was closed with a suggestive recipe for the making of good bread. The following ingredients were given:

One cake of compressed yeast; one pint water and one pint of milk heated to scalding point and cooled; two tablespoonfuls of sugar; two tablespoonfuls of lard or butter, melted; three quarts of sifted flour; one tablespoonful of salt.

Dissolve the yeast and the sugar in the liquid (water and milk), add the lard or butter (shortenings), and one-half of the amount of flour. Next beat with a spoon until smooth. This is for the purpose of working air into the dough for the yeast to feed upon. Add balance of flour or enough to make a dough that can be handled. Add the salt last for the reason mentioned above. Knead until smooth and elastic. Place in a greased bowl, cover and set aside where the temperature will be suitable and allow to stand until it doubles in bulk. Then mould into loaves. Place in well-greased bread pans of small size, filling half full. Bake from 40 to 60 minutes. You may use two cakes of the yeast instead of the one. This bread can be made in three hours. Where dry yeast is used make in the same manner except that the yeast must be first dissolved.—Mrs. C. W. Foulk.

Your Crops don't eat enough meat

Perhaps you think this is rather a strange saying.

Not at all. Your crops eat, just as you do. Just as in your case you grow healthy and strong with good and proper food, and thin and weak with poor food, so they---your crops---with proper food will grow healthy, abundant and strong, and bring you big returns.

The food your crops feed on consists of Nitrogen, Phoshoric Acid and Potash, and that food which they depend upon for size and quality of their fruit is POTASH, which we have aptly termed the "meat" that your crops eat.

"POTASH PAYS"

And we can prove that POTASH pays. Hundreds of farmers in Canada have doubled their crops with the proper use of POTASH, and this is the way they have done it.

They have taken the ordinary fertilizer which they buy from their dealers and which contains less than 10 p. c. POTASH and they have added enough POTASH, under very easily followed instructions, to make that fertilizer a 10% fertilizer.

The results have brought many a penny to their pockets. **YOU** can do the same. Your crop, no matter whether it is oats, wheat, apples, potatoes, tobacco, corn or anything else, removes from your soil **three times** as much POTASH as it does Phosphoric Acid. But the ordinary low-grade fertilizer contains only 2% POTASH as against 8% Phosporic Acid.

So, Mr. Farmer, this does not give back to your soil the proper amount of POTASH. Naturally you must increase this amount of POTASH in order to make a proper fertilizer. You don't have to take our word for this. Ask any Agricultural expert in any part of the world and he will tell you that it is true.

So, then, if you want to raise a bumper crop--if you want to get the maximum amount of produce from your soil, use a 10% POTASH fertilizer. Insist upon it. If your dealer does not sell POTASH we will gladly ship you the POTASH which we have stored ready for immediate delivery in warehouses at Montreal, St. John, N. B., and Toronto. You can mix your own fertilizer at home if you want to, and our experts will tell you how to do this free.

Send for free booklet which will tell you how to properly fertilize the kind of crop **YOU** raise. We will gladly send you this important and interesting booklet free.

Send your order for POTASH through your dealer or if your dealer has not got it, send us the dealer's name and we will quote you prices and send full particulars.

"Potash Pays." Make this year's crop a bumper crop. Ask us to help you---write for free expert advice TO-DAY.

GERMAN KALI WORKS, Inc

TEMPLE BLDG., TORONTO

HAD BOILS
ON FACE AND BODY
WAS TROUBLED FOR 8 YEARS.

Boils in themselves are not a dangerous trouble, but still, at the same time are very painful.

They are caused entirely by bad blood, and to get rid of them it is absolutely necessary to put the blood into good condition.

For this purpose there is nothing to equal that old and well known blood medicine, Burdock Blood Bitters.

Mrs. James Mageean, Floral, Sask., writes:—"I was troubled for eight years with boils on my face and body, and I tried everything I could think of. My neighbors told me to drink water off of sour corn meal, but I kept getting worse until one day a woman in town asked me why I didn't try Burdock Blood Bitters. My husband got me two bottles, and before one was gone my boils had all disappeared, and I feel like a different woman. I can't tell you how thankful I am for your medicine. I will recommend it to all suffering women."

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

MAXWELL'S HIGH SPEED CHAMPION

The Wringer Board extends from the side, out of the way of the cover. This allows practically the whole top of the tub to open up—makes it easy to put in and take out clothes.

No other washer has as large an opening. No other washer can be worked with crank handle at side as well as top lever.

Do you use Maxwell's "Favorite"—the churn that makes quality butter?

Write us for catalogues if your dealer does not handle them. 89

DAVID MAXWELL & SONS, ST. MARY'S, Ont.

PUPIL NURSES

A 56 bed new Hospital with modern equipment, and new Nurses' Home can accommodate a few pupil nurses. Course two years and three months. Allowance towards uniforms, books, etc. Prospectus sent on application.

FRANKLIN CO. HOSPITAL,
Greehfield, Mass.

Engine Bargains !

3 H.P. Guarantee make, $50
5 H.P. American make, $60.
4-6) H.P. Guarantee, $75.
7 H.P. Defiance, $100.
7 H.P. Eacine, $75.
5 H.P. 4-Cycle, $100.
12-18 H.P. Fairbanks Speed Engine.
20 H.P. 4-Cycle Craig, heavy duty.
7 1-2 H.P. Mianus, $95.
4 H.P. Stationary, Fairbanks.
4 H.P. International stationary.
6 H.P. for Land and Water use.
6-7 1-2 H.P. Guarantee, $90.
Pumping Engine, Small Farm Engine, and about 10 other Marine Engines, all rebuilt and in good order.

GUARANTEE MOTOR CO.
369 Bay Street North, Hamilton, Ont.

FLORICULTURE.

Mrs. S. A. J., St. John, writes:—Is it possible to grow Geraniums and Fuchsias in the same window? I am informed that Fuchsias will not grow in the same window as Geraniums because the odor of the latter will kill them. Which is the best season to repot plants generally—spring or fall? Where can I get seeds of the Wander Berry? Is it a pretty plant for the garden?

This old superstition of the incompatability of temper as between Geraniums and Fuchsias is furnished on facts to the following extent only: The former requires plenty of sunshine and the latter partial shade, such as a north window. The color has nothing to do with it. Spring is the best time for repotting generally Fall repotting is, of course, also necessary with most plants. You can get seeds of the Wanderberry, so called, from J. L. Childs of Floral Park N. J., its disseminator, and from some other catalogue seedsmen. From observation of its culture this past season under the climate conditions of New Brunswick, it could not, by any stretch of imagination be considered as a very ornamental plant from the florist's standpoint.

Ferns, St. John, sends four leaves of ferns for identification. These are as numbered: One, Pteris Senalota; two, Polystichum Vulgare; three, Pteris Adiantoids; four, Pteris Wimsetti—all good ferns for fern dishes. The Polystichum should not be too prominent in mixed dishes as they require and will make a period of rest.

Tree Lover, Hampton, writes:—Please tell me the botanical name of the Norfolk pine? Is it a satisfactory house plant as compared with a palm?

Anracaria Exceisa is the required name. This plant is a most satisfactory house plant and its treatment is practically identical with that of palm. The spring like weather of the past few days is causing all house plants to freshen up and start new growth. Where possible repot all pot bound plants of soft texture. Ferns and Rubber plants, of course, excepted unless you are sure that they need repotting.

Do not the spring catalogues make one think of that little place in the country or our little city plot. I think very few vines or shrubs would conceal an unsightly fence or building. It is wonderful what results can be obtained.

Persons owning summer camps should plant a few shrubs or tall flowering plants near a verandah to "tie the house to the ground" as the landscaper expresses it. Much quicker results can be obtained by this method than with permanent vines.

Important Publication.

The Department of Agriculture of the Dominion of Canada has just published a neat book, composed of the reports of Mr. W. H. Bunting, the expert that the Department sent over the Dominion to inquire into the fruit raising conditions of the various provinces. Referring to Novg Scotia Mr. Bunting says:

MORE THOROUGH SPRAYING NECESSARY. 1912.

"However, partly on account of the immense size of the trees, and partly on account of lack of suitable appliances, spraying has not been carried on with the energy and thoroughness necessary to produce the best results. Careful and thorough spraying, followed up by a systematic thinning of the fruit in seasons like the one just passed, will work wonders in equalizing and regulating the crop and enabling Nova Scotia fruit to be on the market every year with a first class article."

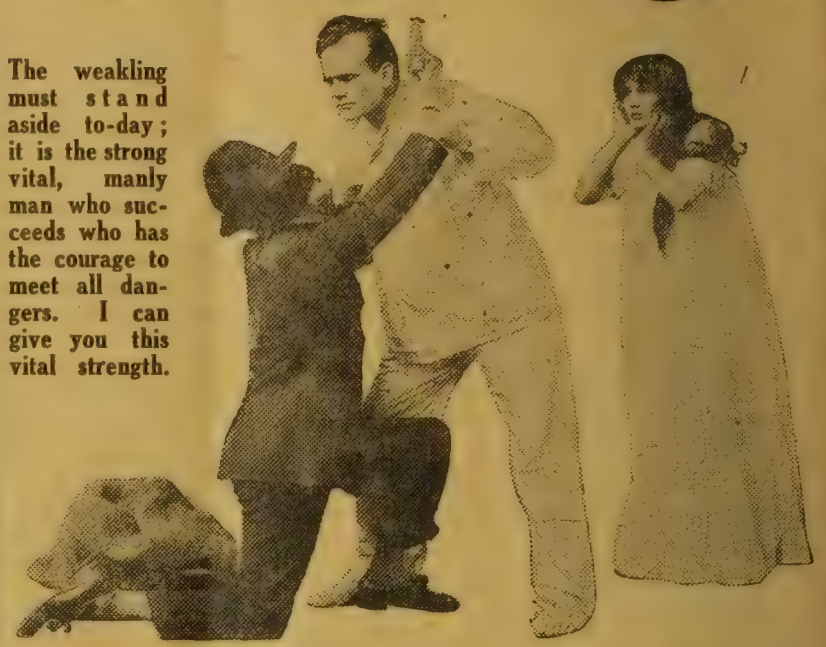
In a summary on the whole province upon spraying he further says:

SPRAYING.

"It is only a few years since spraying has come to be considered one of the essentials of successful orcharding. A solution of lime and sulphur, combined with a certain proportion of arsenate of lead has become the panacea of the fruit grower for nearly all troubles which threaten his orchard, be they insect or fungus. "Spraying without ceasing" has become the watchword, and woe betide him who, when the time comes to dispose of his crop, has neglected this part of the care of his orchard. The inspector will be after him, the buyer will neglect him, and the general public will roundly censure him because his product will not by any means have the quality which careful, thorough spraying would have insured."

Restores Men To Vital Vigor

The weakling must stand aside to-day; it is the strong vital, manly man who succeeds who has the courage to meet all dangers. I can give you this vital strength.



Vitality is the thing which makes success; it gives men that compelling power which sends them forth eager and equipped to meet and overcome all obstacles; it is the thing which gives our young men courage to face death; it is the thing which inspires and holds a woman's love and faith. No matter what your age, I can give you this same vitality. I can restore the vigor you lost, no matter what early or later indiscretion may have sapped your streagth. I can make you "young" and keep you "young." From an intimate and studious observation of possibly 100,000 weakened men I say to you that vitality or the lack of it means all the difference between a manly man and a half man. The man who bubbles with vital power will exert a pleasing influence upon all with whom he comes in contact; women are naturally attracted to him, as are men. Lack of vitality is a negative condition, and it even repels. You wear my Health Belt and suspensory attachment all night; it sends a great, glowing, health-giving current of electro-vimut into your nerves, blood and organs; it takes all the "kink" out of your back and all the coward out of your makeup; it puts you right up in the "feeling fine" class and keeps you there. No stimulation, no false results; just a sure return to manhood and courage. Recommended also for rheumatism, pain in the back, kidney, liver, stomach and bladder disorders. It makes you feel young and keeps you feeling young forever.

Let Me Send You THIS BOOK Free

Here is my latest illustrated book, "Health In Nature, containing a fund of privrte information relating to weaknesses of men. All men, young or old, can read every word of this little publication with great profit Sent to you in plain, sealed envelope by mail. The book is not written with the idea of compelling you to use my Health Belt; it is meant merely as a guide for men, and while my Belt is fully described, there is absolutely uo obligation on your part to purchase. I simply want you to read this book that you may know certain truths about all weaknesses, which have never been printed before. Vitality is the greatest thing in the world, and I can supply you with it. Please fill in the coupon for the free book.

DR. M. F. SANDEN, CO., 140 Yonge St., TORONTO, ONT.

Dear Sirs:—Please forward me your Book, as advertised, free.

NAME .....

ADDRESS .....

Experiment in Winter Hog Feeding.

A two months' feeding test has just been completed at Brandon Experimental Farm, in which chopped barley has been compared with shorts as a winter feed for young pigs. The pigs used were early fall pigs, and had received no milk nor any commercial substitute for it. Up to the start of the experiment they had been fed on shorts, barley and feed flour.

They were divided on December 14th into two lots as nearly evenly as possible, there were three Berkshires and one Yorkshire in each lot. They averaged slightly over 70 pounds each at the start. One lot received barley chop and the other shorts; in addition both lots received a small quantity of feed flour and some mangels. The quantities fed daily at the start were; Barley or shorts 2¼ lbs. per pig; feed flour, ¾ lbs. per pig; mangels, 2 lbs. per pig. These quantities were increased as the pigs grew. It was found that the pigs on the barley could use more food and they were consequently given a little heavier ration. The quantities in each case were kept to what the pigs would clean up with relish. The grain feeds were purchased at the following rates: Barley, $15.00 per ton; shorts, $20.00 per ton; feed flour, $28.00 per ton. The mangels were grown on the farm and are valued at $3.00 per ton. The results are as follows:

	Lot 1	Lot 2
No. of Pigs in lot	4	4
Weight at start of test lbs Dec. 14.	292	282
Weight at end of test Feb. 14.	492	425
Gain in 2 months	200	143
Gain per pig per day	.81	.58
Total amount of barley fed	708	
Total amount of shorts fed		637½
Total amount of feed flour fed	248½	248½
Total amount of mangels fed	488½	488½
Total cost of feed	$9.52	$10.58
Cost of feed per 100 lbs. gain in weight	$4.26	$7.40

This is certainly a decided victory for barley. Of course it would not be possible to buy barley at ¾c. per lb., but even if it were the same price as the shorts, the results would still be decidedly in its favor. It is possible that the similarity between the shorts and the feed flour made the ration that contained both, not so palatable and well balanced as the one that had barley and feed flour, and part of the failure of the shorts is due to that cause.

A Royal Warrant.

The L. C. Prime Company, Limited, St. John, N. B., have just received a cable announcing the fact that a Royal Warrant has been issued to the Manufacturers of "Molassine Meal," the well known live stock food.

This means that the Molassine Co. is entitled to call themselves Purveyors to the Royal Family and to use the Royal Arms.

This is perhaps the greatest honor of all of the many that have fallen to this enterprising firm.

MOLASSINE MEAL has been recognized in Great Britain for many years as the leading Live stock Food.

Good Values in Shorthorn Bulls.

Walter S. Eaton, Upper Canard, N. S., writes:—I have lately sold two good young Shorthorn bulls to Agricultural Societies in this Province. Among the bulls offered in my ad. in The Maritime Farmer are some exceptionally good ones.

A One Idea Business

THE business of making Oliver plows is built on one idea: "Satisfy the customer." Nearly fifty-eight years ago when James Oliver was both making plows and selling them to farmers he applied to his business the principle of customer satisfaction, which has since become a fundamental business rule. He built plows, tested them, then sold them, and last of all interviewed his customers to get their suggestions for further improvements. Not many years of such work as this were required to establish Oliver plows in a high place in the estimation of the men who used them. For over fifty-seven years the same idea has dominated the business of building

Oliver Plows

When the plant at Hamilton was erected the problems of Eastern Canadian plowing came up for consideration. As a result of the careful study of those problems and the experimenting that followed it, Oliver plows for Eastern Canada stand in a class by themselves as satisfaction givers.

The line includes walking plows, three-wheel sulkies, walking gangs, hillside plows, high and low lift gangs, and riding cultivators. There are one or two plows in the line which are specially adapted for most Eastern Canadian conditions. Among these are the Oliver 1-C sulky and 1-C gang. In both these plows most of the weight of the plow is carried on the two furrow wheels which, of course, ride on a smooth surface all the time. There is a spring on the land wheel which, in connection with the two bails on which the plow is hung, insures an even depth of plowing.

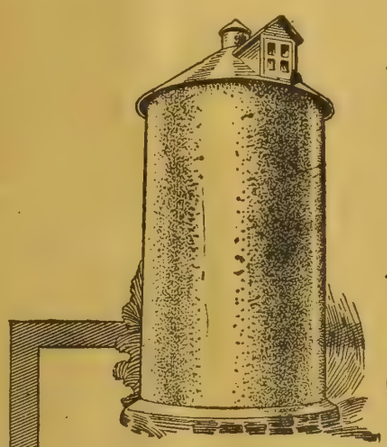
Oliver plows are handled exclusively in Canada by the International Harvester Company of Canada, Ltd. You can see any plow in the Oliver line at the place of business of the I H C local agent. If you will tell him what kind of plowing you want to do, he can show you the plow that will do your work best. See him for catalogues and full information, or write the nearest branch house.

International Harvester Company of Canada, Ltd

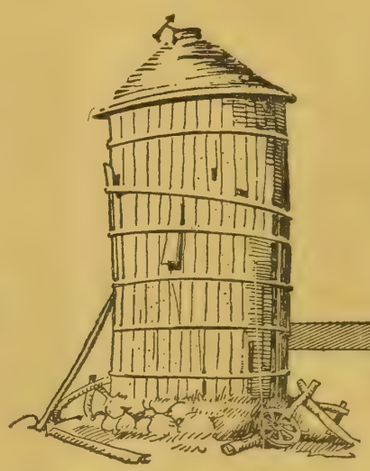
EASTERN BRANCH HOUSES

At Hamilton, Ont. London, Ont. Montreal, P. Q.
Ottawa, Ont. St. John, N. B. Quebec, P. Q.

Oliver Plows are built at Hamilton, Ont.



What kind of a silo will yours be?



Wood—or Concrete?

IF you were to build two silos—one of wood, the other of concrete—side by side, and then could see them as they will look after five years of service, you wouldn't have to think twice to decide which is the best material. In a few years more there wouldn't be much of the original wooden silo left—the repairing you'd have to do would be as troublesome and cost as much as the building of an entirely new one. But the passage of five, ten, fifteen or even twenty years will make no difference to the hard-as-rock wall of the concrete silo.

CONCRETE SILOS LAST FOREVER

WIND, rain, fire and lightning are alike defied by concrete. You need no insurance against its destruction, because it *cannot be destroyed.* Concrete silos are best for another reason. The concrete keeps the ensilage at an even temperature, so that it "cures" better, and therefore contains more food-value for your stock.

YOU CAN BUILD ONE YOURSELF

NO matter whether you have ever used concrete or not, you can build a concrete silo. Our book, "What the Farmer Can Do With Concrete," gives all the information you will need, not only about silos, but about scores of other uses for concrete on the farm. It isn't a catalogue, nor an advertising circular. A handsome book of 160 pages, well illustrated, and written for farmers. It is free. Just send your name and address on a postcard or in a letter and the book will be sent free by return mail.

Address Publicity Manager

Canada Cement Company Limited

507-561 Herald Building, Montreal

WHEN you buy Cement be sure that the "Canada" label is on every bag and barrel. Canada's farmers have found it to be the best.

Order Your Horse Posters from us.

Churning IS SO EASY
When You Have
MAXWELL'S
FAVOURITE CHURN

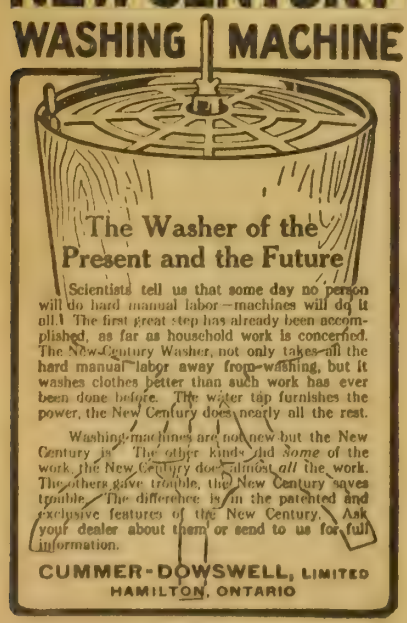
The light but rigid angle steel frame, the bolted trunnions the combined foot and hand drive, the roller bearings, the strength and durability—these are features that have made Maxwell's "Favourite" famous the world over.
8 sizes—ask your dealer or write for catalogue.
DAVID MAXWELL & SONS, St. Mary's, Ont.
135

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

NEW CENTURY WASHING MACHINE



The Washer of the Present and the Future

Scientists tell us that some day no person will do hard manual labor—machines will do it all! The first great step has already been accomplished, as far as household work is concerned. The New Century Washer, not only takes all the hard manual labor away from washing, but it washes clothes better than such work has ever been done before. The water tap furnishes the power, the New Century does nearly all the rest.

Washing machines are not new but the New Century is. The other kinds did *some* of the work, the New Century does almost *all* the work. The others gave trouble, the New Century saves trouble. The difference is in the patented and exclusive features of the New Century. Ask your dealer about them or send to us for full information.

CUMMER-DOWSWELL, LIMITED
HAMILTON, ONTARIO

New-Born Foals.

(Continued from page 428)

and in two weeks, or thereabouts, she should have recovered from foaling and be taking her usual feed, grazing grass and getting ready to resume light work in harness.

THE FOALING BOX STALL.

Two 14 by 14 foot box stalls should be kept ready for the use of mares on every farm where foals are raised. No mare should be allowed to foal in an ordinary stall, or unprepared box stall. Navel and joint diseases will not be likely to attack foals born in clean places. An absolutely clean foaling place is necessary and should be prepared as follows:—

Remove and burn all loose litter and manure. Cleanse and scrape the floor; then saturate it with a 1-50 solution of coal tar disinfectant, or a solution of 4 ounces of sulphate of copper (bluestone) to one gallon of hot water. Scrub and cleanse the walls with a similar solution of coal tar disinfectant or a 1-1000 solution of corrosive sublimate. Cleanse the ceiling in the same way; then apply to walls and ceiling fresh made lime whitewash, to each gallon of which has been added one-third of a pound of chloride of lime. Cover the floor with fresh, dry planing mill shavings in preference to any other bedding material. Remove manure as soon as it is dropped.

When the foal is born and has been cared for and the afterbirth of the mare has come away, remove the mare and foal to the second box stall, prepared as was the first. Then clean out, disinfect and whitewash the stall just used and put in fresh, clean dry shavings in readiness for the reception of the next mare. The mare must always occupy a clean, specially prepared box stall and it should be perfectly ventilated and as sunny as possible.

Where but one box stall is available clean it out, burn the afterbirth and soiled bedding, use a disinfecting solution freely on the floor, and put in plenty of fresh, dry, clean shavings as soon as possible after the birth of the foal. If the mare foals on grass treat the foal as if it had been born in the stable. Navel infection is less liable to occur on grass, but this is possible, and preventive treatment, therefore, is necessary, no matter where the foal is dropped.

TREATMENT OF FOAL AT BIRTH.

Attend to the navel cord (umbilicus) as soon as the nose of the foal has been cleared of afterbirth. If possible avoid tying the navel cord. It is best for it to break off naturally. If it fails to break and the mare is lying down, make her get up and the cord may break.

If found necessary to tie the cord, use a clean disinfected string. A dirty string may cause infection. Soak the string in a five per cent. solution of lysol or carbolic acid, or a 1.500 solution of corrosive sublimate (bichloride of mercury). Tie the cord one inch or a little more from the belly: then sever the cord with a clean knife. An emasculator or esseur (castrating instruments) may be used to sever the cord in place of tieing it and then cutting through below the knot.

Saturate the stump of the navel cord immediately, whether tied or not, with the following disinfectant; Powered corrosive sublimate, 2 dr; boiling water, 1 pint. When it has cooled, color the solution with 2 drachms of tincture of iron, label the bottle "poison," gnd keep it out of the way of children. Repeat the application twice a day until the cord shrivels up, drops off, and no raw

Is This Offer Fair?

You do not risk a cent. You must be either delighted with this tea's rich, mellow flavor, or else your dealer wants you to take advantage of this guarantee:—

You have only to return the broken package to get your money back, if you do not like the flavor exceptionally well.

KING COLE'S excellence prompts this offer. The 40c. grade is unusually flavorful. You will surely admit this if you try it.

35c., 40c. and 50c. per lb.

MONEY IN POTATOES

$48.00 per acre
OR

$128.00 per acre
WHICH?

When it comes to a difference of $80 an acre on a potato crop, let us take off our hats to the Potato experts.

They can show a practical farmer how to turn an average crop of 120 bushels per acre into a bumper crop of 240 bushels. Simply changing a few old methods of potato growing does it. In this day of high prices, that means $128.00 per acre clear profit instead of $48.00—a difference of $80.00.

The big profit is on the extra bushels because the first cost remains the same.

How experts worked it out through years of experimenting is told in simple words in our little book "Money in Potatoes." A book full of sound ideas—no theory. Every difficulty you could have in potato growing is dealt with.

With this book to refer to you can double your potato crop. Send in the $80.00 coupon for a free copy to-day. 17

The $80.00 COUPON

H
The Canadian Potato Machinery Co. Ltd., Galt, Ont.

As a Potato Grower I would like to have a free copy of your book, Money in Potatoes.

Name .....

Address .....

Chick Success

The raising of chicks is not difficult when conditions are right. Try our way, and make this your most successful season. Feed

Pratts Baby Chick Food

for the first three weeks. No feed on earth will give the youngsters such a vigorous start, and the cost is but 1c per chick.

In boxes and bags, 25c up

Pratts White Diarrhea Remedy

25c 50c

prevents and cures the bowel troubles which are so common and cause such heavy loss. Just drop the tablets in the drinking water for all broods up to one week of age.

Pratts Poultry Regulator

should be mixed with the daily ration after the third week. It induces rapid growth and early maturity by keeping the digestive system in perfect condition.

25c, 50c, $1; 25-lb. Pail, $2.50

"Your money back if it fails"

Our products are sold by dealers everywhere, or

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Pratts 160-page poultry book 4c by mail

Free Barn Plans

to any Farmer of good standing by the "LOUDEN" Barn Architect

If you are going to build a new barn or re-model an old one—tell us your needs. Our special barn architectural department will send you plans FREE.

No! we are not in the barn building business, but having been 47 years in close touch with the farmers' needs and requirements and helping farmers to lay out their barns, we have secured a wide experience, which in the interests of good farming, we will gladly pass on to any Canadian farmer of good standing. Write us regarding your building requirements.

THE NAME

LOUDEN

has been connected with Barn Equipments and Barn planning for over 47 years. We make a special study of means to save time, save labour, and save money for the farmer.

Every up-to-date Farmer should have this Book

It describes and illustrates the full line of Louden Hardware Specialties for the farm. You will find it a handy book of reference.

Write for free copy to-day.

PERFECT BARN EQUIPMENTS

The LOUDEN MACHINERY CO.
Dept. 50 - GUELPH, Ont. 5

spot remains. To keep the solution from blistering the foals' belly smear carbolized vaseline or unsalted lard around the navel before making the first application.

A good way to use the solution is to put some of it in a shallow, wide-necked bottle, then hold the bottle against the foal's belly with the navel stump immersed so that it will be completely covered by the fluid. If the navel cord has been tied remove the string as soon as possible, squeeze out the blood clot and instantly soak the navel stump with the corrosive sublimate solution. Use the solution twice a day until the navel is perfectly healed. Remove sloughing portions of the cord each morning, so far as possible, to allow the solution to wet all raw parts of the cord.

GIVE ATTENTION TO THE BOWELS.

A strong foal will be on its feet trying to nurse in less than an hour from birth. Such a foal needs no help, but a weak one will have to be held up to suck until strong enough to do so without help. Wash the udder of the mare with a lukewarm two per cent. solution of coal tar disinfectant and then rinse off with warm water before the foal is allowed to suck for the first time. The external organs (gentials), tail and hind parts of the mare should be washed with a similar solution once a day for the first week or so after the birth of the foal.

Keeping the udder free from infective matter in this way tends to prevent the foal from scouring, for that condition of the bowels often is due to germ infection of the intestinal tract by way of the mouth. Disinfection of the navel cord also tends to prevent scouring. At birth the intestine of the foal contains a sticky mass of fecal matter (meconium). This should come away promptly and usually this is accomplished by the first milk (colostrum) which possesses purgative properties. To assist nature, either insert a small tallow dip candle (made for this purpose) in the foal's rectum, or, within an hour after birth, give an injection of either warm water, warm slippery elm bark tea, flax seed tea, sweet oil, or a mixture of equal parts of cream, molasses and warm water, and repeat in twelve hours if required. Harm may be done by injecting a large quantity of strong soapy warm water with an ordinary horse syringe."

Fountain syringe is to be preferred and small, hard rubber nozzle, or a small clean rubber hose and funnel. Smear vaseline or lard on the nozzle and in the rectum before giving the injection. If the bowels do not move within twenty-four hours from birth and the foal seems sick, shake up two to four tablespoonfuls of pure castor oil and sweet oil, according to size of foal, and give as one dose. Then continue the injections at intervals of six hours.

In case the mare dies or has no milk the foal may be raised on cows' milk, if the attendant conducts the work patiently and intelligently. Choose the milk of a cow that has recently calved, preferably one which gives milk low in butter fat, for mares' milk while rich in sugar is poor in fat. Sweeten the milk with molasses or sugar and dilute with warm water. Give a little of this prepared milk at short intervals from a scalded nursing bottle and large rubber nipple. Be careful to keep the bottle and nipple scrupulously clean. Add an ounce of lime water to each pint of the prepared milk, and allow half a cupful once an hour at first.

As the foal grows, gradually increase the amount of milk fed and lengthen the intervals between meals. In a few days food may be given six times a day and later four times daily. The foal will soon learn to drink from a pail if allowed to suck the attendant's fingers at first.

Until the bowels move freely, give rectal injections night and morning. If the foal scours at any time give two to four tablespoonfuls of a mixture of sweet oil and pure castor oil shaken up in milk and stop feeding milk for two or three meals, allowing sweetened warm water and lime water instead. Let the foal lick oatmeal as soon as it will eat, and gradually increase the amount and add wheat bran. In five or six weeks some sweet skim milk may be given and the amount gradually increased daily until in three months or so it may be given freely three times a day in place of new milk. The foal at this age also will be eating freely of grass, grain and bran.

At all times supply pure cold drinking water. Let the foal run out in a lot or grass paddock for exercise. Accustom it to be handled daily. Feed small quantities of nutritious food often, keeping all food vessels clean, and the foal should thrive and develop well.—Agricultural Station, Madison, Wisconsin.

SPRAYERS

For large or small orchards, market gardens, potato farms, grain, mustard, tobacco, home and garden work, poultry plants, whitewashing, cleaning, cold water painting, etc. From *Bucket, Knapsack* and *Barrel Sprayers* to *Traction* and 50, 100, 150 and 250 gallon *Power Sprayers*—complete or in parts to build up. Sprayers already in use. 40 combinations.

They have outside pumps, no corrosion. Unit sprayers, so you can build bigger when necessary. Ask your dealer to show them and write for new booklet, "*Spraying Vines, Trees and Bushes.*" We also make full line potato machines, garden tools, etc.

The Bateman-Wilkinson Co Limited
434 Symington Ave., Toronto, Ontario

NA-DRU-CO.

Prepare Yourself For Winter's Worst

Don't wait till you have caught one of those nasty colds—fortify yourself against them by taking a course of

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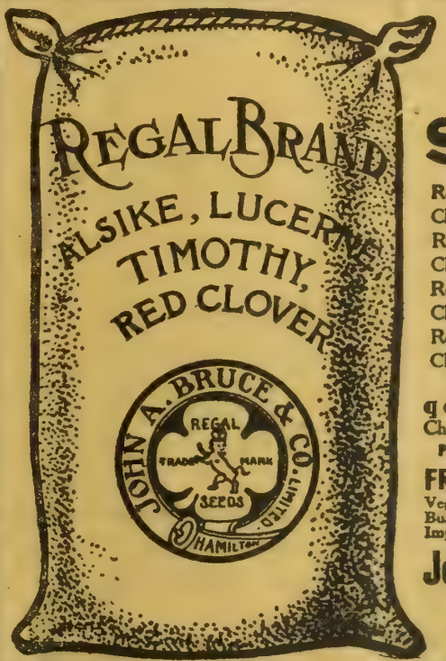

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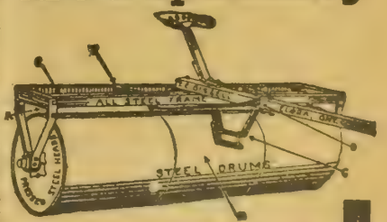
"Bissell" rollers are a specialty



The "Bissell" Rollers are built by men who have made a life study of this work, and are SPECIALISTS IN THE BUSINESS. Search as you may, there are no such perfect Land Rollers on the Continent as the "Bissell." Make a note of these points and compare the "Bissell" Rollers with any other Land Roller in America. If the "Bissell" does not convince you that it is the best Roller, then don't buy, but you ought to know the facts, and it will do any person good to make the comparison. No need to send special travellers to sell "Bissell" Rollers. Practical farmers see the difference and prefer the "Bissell."

The 18 cold rolled anti-friction Bearings ⅛ inch thick with lathe cut ends, held in the one piece Malleable Iron Cage, is a single point placing the "Bissell" Roller away ahead.

Look for the name "Bissell" on every Roller. No other is genuine. Ask Dept. M for free catalogue. 61

T. E. BISSELL CO., ELORA, ONT.

Soil Characteristics.

(Continued from page 419.)

1844, the average yields for the ten years 1892 to 1901 were 12.3 bushels per acre on Plot 3 (unfertilized) and 31.8 bushels on Plot 7 (well fertilized), but the amounts of both nitrogen and phosphorus in the subsoil (9 to 27 inches) were distinctly greater in Plot 3 than in Plot 7, thus showing that the higher yields from Plot 7 were due to the fact that the plowed soil had been enriched. In 1893 Plot 7 contained per acre in the surface soil (0 to 9 inches) about 600 pounds more nitrogen and 900 pounds more phosphorus than Plot 3. Even a rich subsoil has little value if it lies beneath a worn-out surface.

METHODS OF LIBERATING PLANT FOOD.

Limestone and decaying organic matter are the principal materials the farmer can utilize most profitably to bring about the liberation of plant food.

The limestone corrects the acidity of the soil and thus encourages the development not only of the nitrogen-gathering bacteria which live in the nodules on the roots of clover, and other legumes, but also the nitrifying bacteria, which have power to transform the insoluble and unavailable organic nitrogen into soluble and available nitrate nitrogen.

At the same time, the products of this decomposition have power to dissolve the minerals contained in the soil, such as potassium and magnesium, and also to dissolve the insoluble phosphate and limestone which may be applied in low priced forms.

Tillage, or cultivation, also hastens the liberation of plant food by permitting the air to enter the soil and burn out the organic matter; but it should never be forgotten that tillage is wholly destructive, that it adds nothing whatever to the soil, but always leaves the soil poorer. Tillage should be practised so far as is necessary to prepare a suitable seed-bed for root development and also for the purpose of killing weeds, but more than this is unnecessary and unprofitable in seasons of normal rainfall; and it is much better actually to enrich the soil by proper applications or additions, including limestone and organic matter (both of which have power to improve the physical condition as well as to liberate plant food) than merely to hasten soil depletion by means of excessive cultivation.

The Annual Report of the N. S. Secretary for Agriculture.

The Annual Report of the Secretary for Agriculture for Nova Scotia for the year 1912 has just been issued and is now available as long as the copies last for free distribution on application to the Secretary for Agriculture or to any of the members representing the counties of Nova Scotia.

The report consists of an outline of the year's work in the Department of Agriculture including Exhibitions, Agricultural Societies, Farmers' Associations, Field Crop Competitions, Meetings, Dairying, etc., and also the report of the work at the Agricultural college showing the progress that has been made in the various Departments of this Institution.

Besides this matter dealing with the routine work of the Department and the College, the Report contains a series of articles on Swine Breeding in Nova Scotia. This series is a continuation of the series of articles which have been appearing in the report of the Secretary for Agriculture since 1907. These previous reports have dealt with Sheep Raising, Dairying, Soils and Soil cultivation, Orcharding and Horse Raising. As in previous years, the series of articles on topical subjects are being printed in separate cover and may be secured either by themselves or under the same cover with the General Report of the Secretary for Agriculture. We may state that any who have not received copies of the previous reports may get them on application to the Secretary for Agriculture at the same time when they apply for a copy of the present Report of 1913.

The series of articles on Hog Raising includes a description of the various breed of swine, methods of feeding, care, breeding, etc., and there is also a valuable article on the Housing of Swine which contains plans of various types of houses recommended for keeping of swine. The series is concluded with a splendid article on Diseases of Swine and Their Treatment. The whole series is a valuable one and should be in the hands of everyone interested in swine breeding and feeding in the Province of Nova Scotia.

A limited number of these reports are also available for distribution outside of the Province. Those who are interested should apply to M. Cumming, Secretary for Agriculture, Truro, Nova Scotia.

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Montreal—Winnipeg—Calgary—Vancouver.

ROOFING

Description of some of the More Important Varieties af White Oats.

BANNER.

The panicle is of medium size but well supplied with upstanding productive branches. The spikelets are long with narrow glumes. The grain belongs to the long type with a somewhat drawn-out tip, but otherwise plump and well filled with a relatively thin hull. The degree of stooling is medium, while the straw is long and quite elastic. This sort ripens medium early or a few days later than six-rowed barley. As regards yield, this variety occupies a front place and is most in demand at present over Canada generally. It thrives in a great variety of soils.

SIBERIAN.

This sort resembles quite closely the above variety in many particulars. The kernal is quite similar in type, as is also the panicle and character of straw. In some districts, it is said to give a slightly higher yield than Banner, although in others the reverse is the case. This sort has not obtained nearly so wide a distribution over the country as a whole as has the latter sort.

LIGOWO

This oat possesses a grain of fine quality, being exceptionally large and plump with a relatively thin hull. The awn is usually coarse but falls off easily. The spikelets are inclined to be three kernelled. This sort ripens considerably earlier than Banner and can therefore often be cultivated to greater advantage where early maturing sorts are desired. The sraw is of medium length and of fine, firm quality, thus rendering the sort eminently suited for cultivation on rich, vegetable soils. On drier soils, the stand is liable to become too thin and the yield of both srraw and grain lower. Under proper conditions, the yield of this sort is good.

DAUBENEY.

The panicle is rather small with stiff, upright branches. The spikelets are small and ordinarily two kernelled. The grain is comparatively small and unattractive, yet quite plump and with a relatively thin hull. At the Ontario Agricultural College, Guelph, and at Macdonald College, Ste. Anne de Bellevue, Que., it stands among the very highest yielders, although at other stations, it does not occupy quite so high a place. The greatest virtue of this sort is its ability to mature early, ripening as it does about the same time as our common varieties of six-rowed barley. For this reason, it is highly recommended in Ontario and Quebec at least, as a sort suitable for growing in a mixture with barley of the above class. The straw is rather short but abundant and of good quality.

ABUNDANCE.

This sort enjoys a high reputation in many parts of Canada, especially in those districts where a relatively early variety is desired. The grain is of fine quality, being large and plump with a relatively thin hull. The panicle is comparatively large and rich, pyramid-like in contour, with upright, spreading branches. The spikelets are inclined to be three-kernelled, and rather broad. This sort usually ripens from 4 to 6 days before Banner, hence its popularity in certain districts as above mentioned. The straw is of good length and strength and of fair quality.

Annapolis Valley Fruit Farm.
228 Acres, Only $1900

Bldgs. worth more than price asked; good 8-room house; nearly new 40x60 ft. barn, ties 20 head stock, holds 70 tons hay; 40 acres rich tillage, fine for potatoes, hay, grain and apples; 20 young trees now set; wood and timber will make new owner rich; wire-fenced and spring-watered pasture for 25 head; near neighbors, schools and all advantages; owner has other farms, must sell one; a big snap to quick buyer; part cash; for traveling instructions write Box D., Sussex, N. B.

The Maritime Horse Show.

Although the first show was held only a few years ago it is now one of the events which is eagerly looked forward to. From the first it seemed to meet a long-felt want.

Coming as it does at a time when our noblest of animals are looking their best, and man is glad to take a holiday before the struggle of a summer toil and the fair sex are resplendant in Easter bonnets and spring suits it offers a rare combination of profit and pleasure.

The promptness with which horsemen from all parts of the Maritime Provinces have come forward with their good ones, the readiness they have displayed in adopting up-to-date equipment all speak volumes for the future of this popular show.

Nor is this true of the "light horse" alone. Perhaps nowhere has progress been greater than in the farmer's horse. Last year farmers' "teams," and "four-in-hand" were such as to elicit exclamations of surprise and praise from gentlemen who are in the habit of attending much larger and older shows.

The management are to be congratulated on the rapid growth of this show. From the first it has been their aim to give the visitors value for their money.

The events are brought on promptly and with no confusion. A first class band is in attendance and the events are interspersed with music.

To those who want to gain knowledge and enjoy a holiday we know of no better place than at the Maritime Horse Show at Amherst.

Hogs in the Orchard.

On July 1st we turned into our orchard three shoats weighing 100 lbs. each. One month later we lost the smallest one. We fed them milk twice daily and for the first month about four quarts of grain. When the apples began to fall we stopped feeding the grain and when there were more apples than they could pick up daily we omitted the milk. They had access to running water, and on September 1st they weighed 250 and 225 pounds respectively. They turned over about two acres of ground which we wished to plow as a means of improving the orchard. We find money in hogs.

Wheat and Rye for Pigs.

"How do entire ground rye and entire ground wheat compare in slop for growing pigs?"

Experimental evidence indicates that entire ground wheat is superior to entire ground rye for making gains on hogs of various ages. However, from the composition of the digestible nutrients of the two grains, rye contains a higher per cent of the more important food nutrients for growth. Since rye contains a higher per cent of phosphorus, which is essential for bone growth, it is doubtless of greater value for young growing pigs than for more mature hogs. On the whole, there is apparently little difference in the feeding value of entire ground wheat and rye of the same quality for growing pigs.—Herbert W. Mumford, University of Illinois.

Amatite ROOFING

Why Practical Men Demand Amatite

ROOFING that needs paint every two years can't hold the market against Amatite—which *needs no paint whatever.*

Practical men know the great advantage of a roof that *needs no painting.* They know what a nuisance the painting is. They know how much it costs. They know how liable they are to neglect to paint their roofs at the proper time.

Painted roofings are waterproof only where the paint is. Amatite is waterproof all the way through.

Amatite is sold in the usual convenient rolls of 110 square feet with a smooth lap where the mineral surface is omitted, so as to secure a tight joint. Nails and cement are packed in the center of each roll.

Free sample and booklet on request to nearest office.

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Big Ben

The Men Who Make Big Ben

About 26 years ago a German clockmaker came from the East to La Salle, Illinois.

His only baggage was an idea—the plan of an automatic process he had invented, and which would make more alarm clocks and better alarm clocks than hand labor could ever hope to turn out.

With the backing of some local merchants and with a handful of clockmakers, a small factory was started on the edge of the town. —Beginnings were hard, competition intense. They weathered storms that would have knocked the fight out of weaker hearted men.

But when success at last came in sight they had built one of the best equipped clock plants in the world and one of the greatest names in the American clock industry—*Westclox, La Salle, Illinois.*

Today, the Westclox people number 1,200. Every week day of the year they turn out 10,000 alarm clocks—alarm clocks of every description and style — their name "Westclox" is on every one of them and *Big Ben* is the king of them all.

Big Ben is the ideal of the Westclox people. He is their conception of what a perfect alarm clock should be. He is only two years old, but in this short time 6,000 Canadian dealers have already accepted him.

Only the finest materials are used in his making. He is strong, massive and practical. His face is frank, open, easy to read. His keys big, handy cass to wind. He rings steadily for five minutes or intermittently for ten. He costs you $2.50 at any time you say. If you have time enough every other year, there is no telling how long he will last.

Big Ben's price is $3.00 at any dealer's. If you cannot find him at your dealer's, a money order sent to *Westclox, La Salle, Illinois,* will bring him to you, carefully packed and express charges paid.

Feed Value of Roots.

In a recent talk on the feed value of roots, Prof. G. E. Day, of the O. A. C. said that usually the feeding value of roots is based on the dry matter contained in them. He seemed, however, to agree with the view of those who hold that even the water in roots is not without special value in the ration.

Taking dry matter alone as the basis of value roots are not equal to corn. Experiments carried on in Maine showed a return of only 3,415 lbs. of dry matter per acre from Swede turnips as compared with 5,580 from fodder corn. Pennsylvania experiments showed 4,554 lbs. of dry matter from mnagels and 6,783 from corn. Ontario experiments showed 5,034 lbs. of dry matter per acre from mangels and 8,135 from corn.

SILAGE SURPASSES ROOTS IN MILK PRODUCTION.

A table given in Henry's Feeds and Feeding, quoted by Prof. Day, would also indicate that the dry matter in corn is more effective in milk production than is that in roots. This table shows the number of pounds of milk obtained per 100 lbs. of dry matter fed in roots and corn respectively at various experimental stations:

Station	Root Ration.	Silage Ration.
Ohio, 1889	59 lbs.	62 lbs.
Ohio, 1890	59 lbs.	60 lbs.
Ohio, 1891	62 lbs.	66 lbs.
Ohio, 1892	69 lbs.	76 lbs.
Pennsylvania	87 lbs.	82 lbs.
Vermont	113 lbs.	119 lbs.

It will be observed that in all cases, save one, that of Pennsylvania, the dry matter in corn gave a better return in milk than did the same weight of dry matter in roots. It is, as Prof. Day said, difficult to understand this unless the dry matter in corn was wrongly estimated. The dry matter is calculated by expelling all possible moisture and then weighing what remains.

The experiment station at Cornell also found that 1 lb. of dry matter in mangels is slightly superior to 1 lb. of dry matter in corn silage. Also that 1 lb. of dry matter in mangels is equal to 1 lb. of dry matter in grain, and that mangels may replace half the grain ordinarily fed in a ration composed of grain, mixed hay and silage. At the Copenhagen Station very extensive trials go to show that 1 lb. of dry matter in roots is equal in feeding value to 1 lb. of Indian corn, mixed grains or three-quarters of a pound of cotton-seed meal.

The results of tests quoted above are not exactly uniform, yet they all point to one thing, namely, that for dairy cows, the dry matter of roots is not materially different in feeding value from the dry matter in other foods.

SILAGE BETTER THAN ROOTS IN FATTENING.

At the Ontario Agricultural College, roots have been fed in comparison with corn silage for fattening steers, and in all cases the roots did not make so good a showing, pound for pound, as silage. In one series of tests, silage showed 25 per cent higher value per ton than roots, and in other tests the difference in favor of silage was greater.

A review of British methods of steer feeding shows a very heavy use of roots as high as 150 lbs. per steer per day in some cases, accompanied by a comparatively light meal ration. The comparatively low cost of labor in Britain, and the high price of concentrated food, renders it advisable for the British farmers to use roots as a substitute for a large portion of the meal ration. In this country such a practice would not be the most economical, more especially because we can raise corn for silage better than they can in Britain, and corn silage has been shown to be a cheaper food than roots for fattening steers.

At the Michigan Experiment Station sugar beets gave better results than corn silage for fattening lambs, but turnips were scarcely equal to silage.

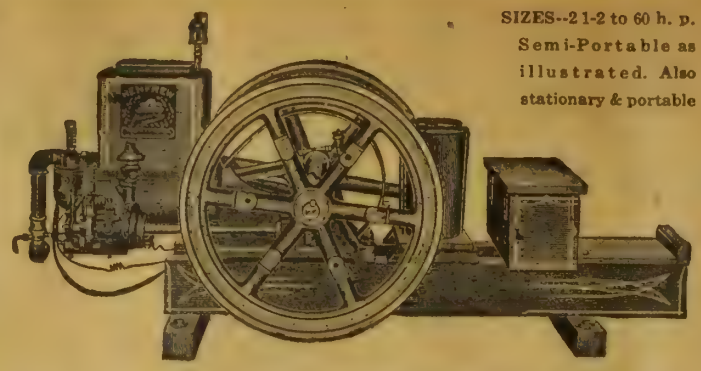
At the Iowa Experiment Station mangels were fed against corn silage. The daily gain was slightly in favor of mangels, and the grain consumed for 100 lbs. gain was less for the lot receiving mangels, but the lower cost of corn silage made it the more economical food of the two. In Great Britain, roots are used very liberally in sheep feeding, and the quality of sheep produced in that country speaks well for the suitability of the ration.

ROOTS IN HOG FEEDING.

The average results of feeding roots to hogs at five Experimental Stations show that 100 lbs. of grain were replaced by feeding 557 lbs. of roots. In tests at the Ontario Agricultural College, our best showing for roots was 442 lbs. of roots equivalent to 100 lbs. of grain, which may be regarded as an abnormally high value for roots.

In extensive feeding trials in Denmark it was found that one pound of ground barley was equal to 7.5 lbs. of mangel beets containing 11 per cent dry matter and 6.7 per cent. sugar.

The very high return from feeding roots at the Ontario Agricultural College is due probably, Prof. Day said, to the fact that the hogs which were not fed roots received an exclusive meal ration, and the roots appeared to stimulate the appetite and aid digestion, which was shown in the more thrifty appearance of the root-fed hogs. In the Danish trials, dairy by-products were fed to all the hogs, and hence the roots do not show to as great advantage, the dairy by-products giving the desired variety in the ration of the hogs which received no roots. It has also been found



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THE modern manufacturer and the modern farmer use strikingly similar business methods. The modern manufacturer is always on the look-out for labor-saving machinery for his factory—machinery that will do the work in less time and at less expense. The modern farmer is also on the watch for labor-saving machinery for his farm.

Renfrew-Standard

And of all the labor saving farm machinery, what can excel the gasoline engine? It saws wood faster than a hired man can saw it. It pumps water for the cattle quicker than he can pump it. It shells the corn faster, grinds the feed quicker. It will run the fanning mill and the emery wheel for you. It will run the cream separator, the churn and the washing machine for your wife. If desired, it will furnish the power to light your home or barn with electricity.

A good engine will produce gasoline power at a fraction of the cost per hour you would pay for man-power. Therefore it is good business to use gasoline-power wherever it is possible to substitute it for man-power. That's what the modern manufacturer would do if he brought his factory methods to the farm.

A good gasoline engine, such as the ***Renfrew-Standard***, will soon pay for itself. And it will last for years. It's built to last. It is so perfectly balanced and runs so steadily that it requires no anchoring.

Main bearings are of anti-friction metal. Cylinders are of close grained semi-steel, like those used in high grade auto engines.

The carburetor consists of but three parts. Nothing about it to confuse the operator or get out of order. The governor, which is the fly-ball type, like that of a steam engine, permits the speed to be varied while the engine is running. And you can start the engine easily without cranking in cold or warm weather.

The ***Renfrew-Standard*** is the latest and best type of gasoline engine sold in Canada today. A booklet giving complete description will be mailed promptly on receipt of your name and address. Just drop us a card by next mail. Also ask us about the Gifford 1 1-2 h. p. engine---truly a wonderful little engine.

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This is not merely a claim—it is a *proven fact*, which has been demonstrated annually, for for over forty years, by thousands of Canadians.

Don't stake your time, trouble, expense, and the season's use of your land, on an uncertainty. Get Ewing's Reliable Seeds and be *sure* of good crops.

WM. EWING & CO., Seedsmen

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EWING'S RELIABLE SEEDS MONTREAL

that the hogs fed equal weights of roots and meal produced a better quality of bacon than those fed grain alone.

Another important point brought out by Prof. Day, based on experiments carried on in Utah, was as to the effect of roots on dressed weights of carcass. In all cases, in these experiments, it was found that the shrinkage of cattle, sheep and hogs, was greater in killing where roots were a part of the ration than where they were not. But this might be accounted for by a fact that tells in favor of root feeding. In all cases root-fed animals showed more blood and heavier vital organs than those which had not had roots. More blood and stronger vital organs means, of course, greater vitality, a most important factor either in breeding or feeding stock. While, wherefore, roots may not possess as great feeding value as one would expect, this is probably more than made up for in the greater thrift they produce in animals to which they are fed.

Even the feeding value depends, in large measure, on where and how roots are used. Where the rations of hogs, say, contain considerable quantities of buttermilk or milk, the addition of roots need not be expected to show any marked results. On the other hand, where a ration lacks succulence the addition of roots will produce results out of proportion to their real feeding value.

Very little, if any, actual experimental work has been done in connection with feeding of roots to horses, but every horseman knows, said Prof. Day, the beneficial influence of a few roots, especially in the case of idle horses. Probably their laxative action is their main feature.

SILAGE FOR SHEEP AND HORSES

Questioned as to silage for sheep Prof. Day said that some men had good results from this sort of feeding while others declared they would not have it at all. For his own part he preferred roots to silage in the case of sheep. Still in one case a sheep belonging to the A. O. C., when apparently about to die, was given silage when it would take nothing else, and from that time on it began to mend. Roots are, however, safer than silage in the case of sheep, because they vary less from year to year. If silage is put in too green it will develop too much acid to make it safe for sheep, but if it is well matured it may be all right.

"What about silage for horses?" Prof. Day was also asked.

"We have fed some when short of roots," was the answer. "But in feeding silage, it is necessary to be absolutely sure there is no mold on it. Mold of any kind is exceedingly dangerous for horses."

CARROTS OR MANGELS FOR HORSES.

"What about carrots for horses?" came next.

"Our experience is that it matters little whether you use carrots, mangels or turnips, all are good," was the answer.

"What of apples for stock?" asked Geo. E. Fisher, canner and fruit grower

"If my memory is right," answered Prof. Day, "they have more water and less dry matter than roots; but, provided there is not too much acid, they should be valuable in proportion to their dry matter content."

Mr. Fisher said that sour apples really contain more sugar than sweet apples. Sweet apples are without sugar to turn to acid. Consequently sour apples have, he contested, greater feeding value.

"Perhaps you are right," said Prof. Day, "but I should fear the effect of the acid on the kidneys of the animals."—Address by Prof. G. E. Day.

MOLASSINE MEAL

Made in England

is made in England and is recognized by the leading veterinary surgeons in Great Britain—used in all mounted departments of the British Army—large Cartage Companies—Omnibus Companies—and all owners of horses having heavy work to do or for show or breeding purposes. It is

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A Splendid Economical Feed for Horses, Cattle, Sheep and Pigs

"MOLASSINE MEAL" is not only a good food itself but enables the animal fed on it to obtain the full nourishment from all other food. When MOLASSINE MEAL is fed regularly three times a day, you have no waste fodder of any kind. It costs you less for feed and the animals obtain more nourishment.

Get some from your dealer to-day. If he has not got it, write and let us know at once.

There are dozens of molasses preparations on the market but only **one** MOLASSINE MEAL

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Write to the Department of Inland Revenue, Ottawa, for their Bulletin No. 241, on Registered Stock Foods, and see the Government analysis of MOLASSINE MEAL. It is better than its guarantee and away ahead of any other molasses food.

Ridding Ewes of Ticks.

"Fifteen ewes will lamb in May. They are infested with ticks. Is it safe to dip in winter when they have heavy fleeces? Would a strong solution of stock dip kill the ticks? Will ewe lambs less than one year old breed?"

Since the ewes are to lamb in May, it is probaly best not to dip them, but to shear them about April 15. A great many of the ticks will be removed in the process of shearing and generally the remainder disappear shortly after the fleeces are removed. After warm weather comes, the ewes and the lambs should be dipped twice, the second dipping following the first in about two or three weeks. Any of the proprietary dips will kill ticks, if the directions of the company making the dip are followed. It is comparatively safe to shear the ewes at the time stated if adequate shelter is available and if the operator is careful in the process of shearing. Well grown, vigorous ewe lambs usually will breed in the later autumn months.

W. C. Coffey.
University of Illinois.

Many sufferers from rheumatism have been surprised and delighted with the prompt relief afforded by applying Chamberlain's Liniment. Not one case of rheumatism in ten requires any internal treatment whatever. This liniment is for sale by all dealers.

Double Crops for Roughage.

Let the reader remember that the following system of double-cropping is not especially exhaustive on soil, the products not being allowed to thoroughly ripen, as more vitality would be sapped from the land while they were maturing and the grain was filling and ripening. Of course, under such cropping the soil should be well cultivated, fertilized as often as practical and systematic crop rotation practiced to avoid rubbing the land. Ground on which this double crop was grown one season produced 65 bushels of corn to the acre the following year.

Preparing the ground as early in the spring as possible, we sow oats at the rate of about three bushels to the acre (more or less, according to the fertility of the land). Heavy disking will do in preparing the seedbed, but thorough stirring is better. Also broadcasting the seed will give satisfactory results, but we find drilling more profitable as the oats then will withstand any drought that may occur. While the grain is the "milk" to the "dough" stage we mow the oats, raking them and putting them in shock to prevent scorching by the sun; then haul and stack or mow them away for winter feed. By this early cutting the whole product retains the rich flavor and natural succulence, the tender blades are not brushed off nor blown away as in other hay and the roughage is entirely cleaned up by the stock. At the same time there is sufficient grain in it to make the feeding of other grain unnecessary. This is one of the finest feeds we ever had any experience with, being especially adapted to dairy feeding on account of the "milk" cured and stored away in the grain. It is also very fine for younger stock.

Just as soon as we can get this first crop off the field, we again prepare the land for seeding and sow with a mixture of millet, oats and corn (about a half-bushel of millet to the acre, the remainder of the seed being in whatever proportion the land seems adapted to growing). Many object to millet as a roughage, but I have found it good if cut early enough. If it is allowed to grow up rank and heavy with grain, it is an undesirable feed for the stalks are hard, dry, tasteless and with very little nourishment in them. This ripening of grain anh stalks is also most exhaustive on the soil. But by cutting millet just as it is filling the heads, there will not be too much grain in it, while the plant itself will possess those admirable and most nourishing qualities above mentioned in the oat-hay—tenderness, succulence and richness of flavor. We have taken yearling calves through the winter with practically no other feed but these two roughages; one-half of oat-hay and the other half of millet, corn and oats combined. No other grain was supplied except what was on these products and we feel that the cheapness with which it was produced will recommend it to all in these times of high priced roughage. —M. Coverdell.

220-Acre Fruit and Grass Farm
$3050 Income Last Year

Borders water offering best of salt water advantages; good 8-room house with running water; 40-ft. barn; near P. O., boat landing, store, etc.; apple orchard producing 600 bbls. in season; variety small fruits; good chance to develop large commercial orchard; cuts 30 tons hay; wood and timber valued at $1000; owner an old man must sell; if taken immediately price only $3200, part cash; for all details and traveling instructions to see this and many other farm bargains throughout Nova Scotia and the N. E. States, see page 67, our "New Mammoth Farm Catalogue No. 36," just out; beautifully illustrated and filled with a wonderful assortment of money-making farms; send today for your free copy, it will save you lots of time and money. E. A. Strout Farm Agency, Station 2612, 294 Washington St., Boston, Mass.

A World's Ayrshire Record.

On March 2nd, 1913, the Ayrshire cow, Daisy of Ferndale,—26735, qualified in the Canadian Record of Performance test with 15533.9 pounds milk and 578.17 pounds butter fat, equal to 687 pounds butter, given in 365 days and is due to freshen April 25th, next.

This cow is owned by W. C. Tully, Athelstan, Que., and was slightly over 4 years of age when she entered in the test.

Mr. Tully is a young man, who started selecting and breeding Ayrshires two years ago and is to be congratulated on his success, as he has also a number of other cows making good records.

This cow now holds the yearly record for milk and butter in the 4 year old class, outstripping Bessie, of Rosemount, owned by Geo. A. McFadden, Bryn Mawr, Pa., that held for some time the world's record with 14102 pounds milk and 587.17 pounds fat.

What is a Good Boar Worth ?

Several hundred dollars is not too much to value a good boar. Figure it this way: An Indiana subscriber writes that he raises 500 to 800 hogs a year which he markets at seven to eight months of age, when they weigh 200 pounds. With corn at 60 cents per bushel, middlings $26 and bran $24 per ton, it costs him five cents per pound to produce his pork.

A New Jersey farmer tells us his pigs average 240 pounds at this age and cost 4½ cents a pound to produce, feed being $1 a ton higher than in Indiana.

At 8 cents per pound the extra 40 pounds is worth $3.20, while the saving of ½ cent per pound in cost of production means $1.20 more, or $4.40 on each hog. If through the use of better breeding stock this gain could be made on 500 hogs yearly it would mean $2200 extra income—enough to buy several good boars and an automobile.

Lambing in New Zealand.

New Zealand farmers have been favoured with exceptionally fine and dry weather for the lambing season, and are rejoicing over the high percentages they are getting. The latest reports from the North Island estimate the crop of lambs at from 15 per cent to 20 per cent above the average. Some phenomenal returns are recorded. In many large flocks 120 per cent. and upwards have been docked and marked, while one flock of Romney-Lincoln ewes is credited with 175 per cent., of which the first 90 lambings were twins. The lambing season is a few weeks later in the South Island than in the North, and only a few returns are as yet available, but, as the weather was favorable and grass abundant, large percentages are expected.

Lrce on Live Stock.

At this season of the year many farmers are troubled by having the cattle and horses covered with lice. Lice are easily killed. Insect powder can be sifted into the hair and will kill the lice. Kerosene emulsion or a solution of creolin to fifty parts of water is good. Kerosene emulsion is prepared by using one-half pound of hard, soft or whale-oil soap, one gallon of boiling water and two gallons of kerosene. Dissolve the soap in the water, add the kerosene and churn for five or ten minutes. Use one part of this solution and twelve parts of water.

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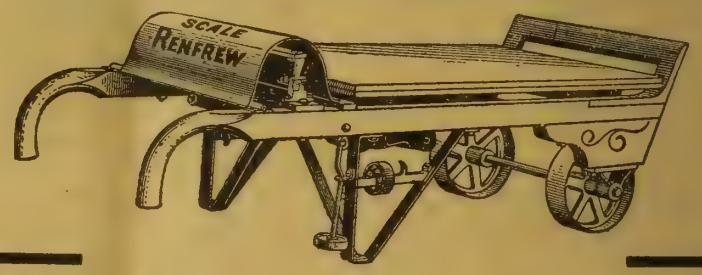

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Potato Leaf-Roll.

Last summer the plant pathologist of the Maine Agricultural Experiment Station found a field of potatoes badly attacked with blackleg where there was every evidence that the disease, along with the potatoes, had been imported from Scotland to Colorado a few years ago, taken from there to Idaho and then sent to Maine. In this case the Idaho grower had received a prize for raising 645 bushels of potatoes per acre. The name of this Scotch variety was new to the Maine purchaser, and he naturally thought that on account of the published yield that it was superior to those grown at home. Therefore, he paid a fancy price for enough of the Delmany Challange potatoes to plant several acres. This price was materially increased by the cost of freight nearly across the continent. When the field was seen in August, there was no evidence that the crop was materially better than that from home-grown varieties, but it did give an excellent illustration of how blackleg and other diseases may be introduced, particularly from Europe, with what are purchased for the highest grade of seed.

A new disease has made its appearance in some of the western states in 1911 and 1912 which is more serious than any yet experienced there. This is what is known as the leaf-roll disease and has been particularly severe in the irrigated regions of eastern Colorado and western Nebraska. The potato crop, which in these sections has been very profitable, has now been rendered so uncertain that the growers have been compelled to greatly curtail their average.

The leaf-roll disease is now thought to be a physiological trouble and not one caused by a living parasite. Some have suggested that it might be the result of unfavorable climatic or soil conditions, but as yet no one has been able to show under what conditions it is produced, or how it can be avoided. Hence, no remedy can be recommended. The important thing for the potato grower to know at present is that it is carried by the seed tubers. Moreover, potatoes from a field on which leaf-roll appeared will, if planted, produce a crop which is usually more badly affected than the first.

Leaf-roll has been known in Europe for some years and has been prevalent in certain sections since 1905. It has received much attention from some of the best German plant pathologists during the past seven years and there is coming about a feeling there that lack of care with regard to the quality of the seed stock used has much to do with the trouble. The same is true in all probability with regard to conditions in America.

When our potato growers will realize that careful selection of their own seed will improve their crops infinitely more than any "changing seed," and when they have reached the point where they will insist that no potatoes be planted on the farms whose source is unknown or which cannot be guaranteed by some responsible party as being free from disease, then we may expect to avoid most troubles of this kind. Of course, it will be wise to be on the lookout for new and improved varieties, but they should be bought under a guarantee of being free from disease and should be tested out first on a small scale before risking the infection of large fields with a new and dangerous disease. The common practice of selling off the entire crop and then picking up seed tubers from any available source and of any available grade, and the notion that seed must be "changed" frequently, is responsible for the present wide distribution of blackleg and scab within the state.

Plants attacked by the leaf-roll disease resemble in appearance those affected by blackleg and by the Fusarium wilt. The blackleg disease may be distinguished by the characteristic blackening of the base of the stem from a little above the soil downwards. With the Fusarium disease there is usually a distinct browning of the stem below ground and the tubers frequently show a discolored ring at the stem end.

The leaf-roll disease is characterized by a decided upward rolling of the leaves at the midrib. The foliage appears unhealthy, usually of a decided yellow, but often having a reddish or purplish tinge. While the growth of the affected plants is checked and the formation of tubers is prevented, they may live nearly as long as healthy ones. Plants attacked by blackleg, on the other hand, usually die before they have attained much size, and in ordinary seasons have entirely disappeared by the first or the middle of August in Maine. Plants affected by leaf-roll sometimes set small tubers clustered around the base of the stem, or numerous rudimentary ones are produced on the stolons. They also sometimes form aerial tubers in the leaf axils, but this may happen in the case of the blackleg or the Fusarium disease, or even mechanical injury of the stem at or near the surface of the soil.—Chas. D. Woods, Director Maine Experiment Station.

A Horse Forty-two Years Old.

Editor Maritime Farmer:—

Your readers will doubtless be interested in the account of an unusually long-lived horse, which belonged to Chester C. Culver of Albany Co., N. Y. I knew Mr. Culver well and there is no question as to the horse living to be past forty-two years of age at the time of death on Feb. 1.

This horse was born on the farm of Mr. Culver's father, July 4, 1870, and on the same day Mr. Culver was born. Boy and horse grew up together. When Chester was three years of age the elder Culver gave the horse to him and the ownership was continued until the death of the horse. Before young Culver was five years old he had learned to ride the horse, a very spirited and powerful animal. On July 4, 1876, centennial year, there was a great celebration in the village of Branchport and six-year-old Culver, on his "twin", headed the procession amid great applause.

One night, several years ago, Mr. Culver was awakened by a noise near the window of his sleeping room. He went out and found that the horse had been sticking his front feet against the house to attract attention. Mr. Culver went to the barn and found two tramps sleeping in the stall next to the one occupied by the horse.

Mr. Culver became much attached to the horse, which was always a fine roadster even up to his later days. Last spring he was a candidate for sheriff. The single vote against him was cast by a neighbor whom Mr. Culver went to see on foot. Every man whom he and the horse called upon in company voted for Mr. Culver.

This horse was forty-two years six months and two days old on the day of his death, was never sick and appeared as usual on the day before his death.

T. M. CHADWICK,
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International Stock Food
Is Equally Good for Cows—Horses—Pigs

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We guarantee that it will make your colts, calves, pigs, shoats and lambs grow rapidly, and keep them healthy and thriving all the time.

Tell us the number of head of stock you own and we will send you a copy of our $3,000 Stock Book—Free.

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CANADA'S JETHRO BASS (19383 A. G. C. C.) (380 C. N. R.) Weight at yr 10 mos. 1075 lbs.

Jethro Bass (11366 A.G.C.C.) Site of Rose of Langwater, 751 lbs b. fat
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Half brother to Dolly Dimple, world's record 3 yr old heifer, 906 lbs. b. fat.

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Cow Testing Associations.

(Continued from page 425)

ed and the percentage of butter-fat it is quite easy to find the number of pounds butter-fat produced by each cow and that is really the only fair standard by which we can judge our cows.

We have now reached the time of the year when the majority of the cows in New Brunswick freshen. Now is the time to begin keeping records and then persistent work is required that complete records may be obtained for the whole year or whole period of lactation. Incomplete records are very deceiving and practically useless.

It is hoped that much more interest will be taken in the work this year than ever before. This chance of obtaining a knowledge of the individual merits of their cows is the opportunity of the dairy farmers. They would certainly do well to give this matter serious consideration. It is one of those little details which go to make up success. Surely the results to be obtained will more than counterbalance the little trouble and expense involved.

Factory owners and managers would do well to give every encouragement to this work. These men will sometimes go far to increase their patronage. Would it not be well for them to help along the cow-testing work which, if carefully followed out by selection and breeding, will double the milk yield from the same number of cows in a few years.

The cow-testing work is an effort to put farming on a business basis. Let all lend their co-operation to this work and when the business of dairy farming is carried on as a business great progress will be made.—H. N. Flewelling, Dairy Division Officer, Sussex.

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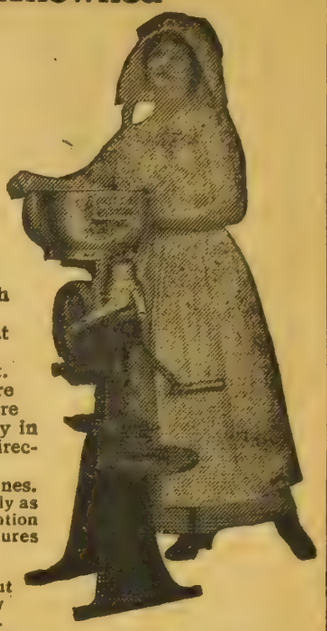

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Other things fail but dairying does not.

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About 1000 lbs. of the famous Gr. Top "Corning" Turnip Seed, crop 1912, grown from selected roots. Price 50c., postpaid 55c.

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Again we maintained our prominence as breeders of B. P. Rocks at Maritime Fair by winning Silver Cup for the best display of this variety. In heavy competition won 1st and 6th on hens; 1st, 5th and 6th on pullets; 2nd, 5th and 6th on cockerels; 1st and 2nd Mating pens (pullet); 1st breeding pen, and special for best female. High class stock for sale.

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FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

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From prize mating Rose and Single Comb R. I. Reds and Buff Orpingtons and S. C. Brown Leghorns. Eggs $2.00 per 15. Send for mating list.

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One pen all prize winners $3.00 for 15.
Barred Rock, utility stock, 75c per 15, $3.50 per 100.
For sale 3 Columbian and 1 R. C. R. I. Red ckls. at $1.50 each.

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Pure Bred Ayrshire Bull Calf

Dropped Jan. 12th, 1913. Bred from a daughter of Barcheskie Kings Own. Come and see him and his dam. Stables near the station.

ALLANDALE FARM, - Hampton, N. B.

FOR SALE

We have a number of choice cockerels and pullets of Barred Plymouth Rock, White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Eggs for hatching $1.00 per setting. Apply to

Walter McMonagle & Sons, Sussex Corner, N. B.

118 Acres, $1000 Cash Needed
2500 Apple Trees.

A little intelligent care will put this big Maine apple orchard on an extremely profitable basis; some man who knows his business is going to make a lot of money here; good farm, rich, fertile soil with 40 acres machine-worked fields, brook-watered pasture for 10 cows (cream sold at door) 1000 cords hardwood, 300,000 ft. timber in addition to the orchard of 2500 apple trees; 6-room house, 60-ft. barn; near neighbors, mail delivered, telephone; owner has made money, getting old, wants to retire, $2000 takes it; complete description of this and hundreds of other great farm bargains, page 9, "Strout's Farm Catalogue 36," filled from cover to cover with the best money-makers now on the market in Maine and other states, just out, write today for free copy which will be mailed you postpaid tomorrow. Station 2612, E. A. Strout Farm Agency, 294 Washington Street, Boston, Mass.

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KINGSDALE MATING LIST
Our mating list is now ready for 1913.

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Fully illustrated 60 pages all up to date.

EVERYTHING FOR THE POULTRY KEEPER

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RIVERSIDE HOLSTEINS

We have now for sale two exceptionally good high grade young cows, one 5 years old, is a show cow and 50 lb. producer, due to calve January 20th sired by Sir Rooker Posch Artis, Sire of 1911 Champion at Amherst and 1912 1st money Holstein cow, also several others forward in calf.

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Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

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Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

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I am offering a two-year-old bull for sale. He is out of the famous cow White Heather of St. Annes. I have also two other choice bulls that are fit for service. Correspondence solicited.

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We can supply Day Old Chicks from our Standard Utility Bred B. P. Rocks and White Leghorn Pens at rate of 20c apiece for April and 15c apiece for May delivery. Prices for Hatching Eggs supplied by customers is $3.50 per 100 eggs in lots of 75 or over.

With our modern Hatching Machinery, including new 3000-egg Candee Sectional Incubator, and long experience in the business we feel we can give satisfaction. Some 250 and 360 egg Model & Prairie State Incubator for sale.

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Rockview Farm, Welsford, N.B.
(Wm. S. Harding, Jr. Proprietor)

High Class Holstein Cattle. Young stock bred from heavy producing and showing ancestry for sale.

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Champions of Canada. Champion of World.

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Ayrshire and Shorthorn Cattle and Shropshire Sheep

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Custom hatching a specialty. Correspondence solicited.

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FOR SALE—Clydesdale stallion 3 1-2 years old weighs 1600 lbs. sired by the renowned Charming Lad. PETER FERGUSON, Graham Road, P.E.I.

FOR SALE—Two yearling pure bred Guernsey bulls from good size stock. T. D. BLAIKIE, Great Village, N. S.

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HOLSTEINS FOR SALE—Six bull calves ranging in age from three weeks to five months old. Also an aged bull, very quiet. JEFFRIES BROS. Sussex Corner, N. B.

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ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

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FOR SALE—Ohio Improved Chester White Pigs, registered. Five dollars at five weeks. Dam sired by first prize boar at Toronto and London exhibition. Pairs furnished not akin. WALTER S. COGSWELL, Centreville, N. B.

GUERNSEY BULLS FOR SALE—We have on hand 1 bull 2 years old in May; 2 bulls 14 months also 1 ten months. All good quality stock and from good dams and sires. We must sell to make room for young stock and will sell right. Come and see them or write us. WILLIAM COX & SON, Canard, Kings Co., N. S.

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Price if taken before April 1st, $40.00

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
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Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd. A few bull calves and yearling heifers for sale.

FRED S. BLACK, Amherst, N. S.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months. A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

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Bloomfield Farm. Shubenacadie, N.B.

IT will soon be time to set the hens. Try a setting of my turkeys (absolutely free from disease) $3.00 for eleven. Have booked a good many orders would like to add your name. Sicillian Buttercups from one of the world's best strains $3.00 a dozen, Indian Runner ducks, $2.00 for 13; splendid Single Comb Rhode Island Reds $2.00 for 15.

"How to Raise Turkeys" 25c. a copy.

SARAH E. MOSES SMITH,
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Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

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I have for sale the Senator Dunlop. This variety is acknowledged by commercial Strawberry growers to be the best and earliest market berry raised in the Maritime Provinces. Plants tied and boxed ready for shipment $3.50 per thousand. In lots of 5000 or over $3.00 per thousand, cash with order.

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Jerseys & Yorkshires For Sale

Bull calves by Foxhalls St. John O'Dreamwold, and young pigs, both sexes, ready to ship in April.

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

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Holstein Cattle and Shropshire Sheep

To make room we offer for quick sale at greatly reduced prices two extra choice Bull calves 4 mos. old. Both out of dairy test winners and sired by "Maple Grove Mercena Mercedes" who's dam gave in the R. O. P. 12064 lbs. milk and 567 lbs. butter as a 2 yr. old.

Also 8 registered Shropshire Ewes. All supposed to be with lamb to Imp ram and 2 ram lambs, first cheque for $75 takes the "lot of sheep."

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Holstein--Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

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R. R. I.
Amherst, N. S.

Ayrshire Bull For Sale

King of Islabank—381273

A choicely bred young bull rising 2 yrs, sire Cherry Bank Sunrise, dam Crouchville Lass that sold at the dispersion sale at Hill Grove Farm last May for $260.00, this is a rare chance to get a first class dairy bull.

For price and particulars write

EDWARD RILEY,
Coldbrook, P. O., St. John, N. B.

FOR SALE

Imported Clydesdale Colt "Spicy Robin" rising three year old, Sire Radium by Hiawatha. For further particulars apply to

J. MEIKLEJOHN,
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Size	Price doz.	Fifty tags
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No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample mailed free.

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Lawndale Stock Farm Shorthorns

We offer at present a few young heifers and bulls, as well as three cows, all bred in the purple.

Information cheerfully supplied to enquirers, Address,

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FOR SALE!

A few choice White Leghorn Cockerels from prize stock. Eggs for hatching all breeds. Send for catalogue.

Maritime Poultry Supply Co.
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FOR SALE

The pure bred Clydesdale Stallion Flash Favourite, imp. (12147) sired by Royal Favourite, dam by Flashwood. Imported and owned by the Nova Scotia government for four years at Truro, N. S. Flash Favourite has proved a sure foal getter and a sire of colts noted for their quality and size. Price reasonable.

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141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

For Sale

Pure bred Clydesdale Stallion, Marquis of Meadowlands, (No. 10749); dam, Imp. by Sir Hugo; sire, Kings College Imp. Foaled June, 1909.

Marquis is a fine upstanding horse with best of underpining and plenty of style throughout.

Full particulars apply to

Morris Scovil
Gagetown, N. B.

"HILLSIDE STOCK FARM"

We have for sale at right prices four Ayrshire bulls from twelve to fifteen mos. old. They are sired by the champion bull of 1911; a son of the renowned Scotch champion "Spicy Sam."

Prescott Blanchard, Truro, N. S.

Sea View Stock Farm

offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

Sgd. J. D. IRVING,
Buctouche, N. B.

HEREFORD TO OK FARM

Let us know how much money you want to invest in Hereford bulls, heifers, or cows with calf by her side or bred to "Prime Lad".

Buff Orpingtons and White Wyandottes, good laying and Utility strains, eggs $1.50 per 13.

R. R. BLACK, Amherst, N. S.

BOOKING orders for eggs now in the following varieties—R. C. Rhode Island Reds, Barred Plymouth Rocks, White and Silver Laced Wyandottes and S. C. Black Minorcas, Mating List Free also catalogue of Leg Bands. Agents wanted for OCULUM the great poultry remedy.

GEO. H. SEAMAN, Moncton, N. B.

"Women of Canada, I want You to House Your Family under A Perfect Fireproof Roof and within Fireproof Walls. See that Your Husband Gets My Book"

G. A. Pedlar

"I KNOW, when I talk to the women of Canada about making their homes safer against fire, and better as dwelling places, that these women will listen to me. And they will listen to me and act as well, when they learn that Pedlar products are moderate in cost, compared with the service they give and the labor and work they save."

"I have been in business a long, long time now. It has been one of my rules since the beginning to give the very best and most honest value in everything I make and sell. My line of goods has expanded in every direction."

"One of these is my metal lath. Use it in your homes when you are building with cement plaster. This makes each wall a fire barrier, and makes each ceiling a fire barrier, too. It is much safer than wood lath and lime plaster."

"But, if your house is already built, and especially if you live in a wooden house, either use my metal lath with cement stucco on the outside walls or use my metal siding in various patterns. This makes your house 'fire-retardant.' It cannot catch fire from sparks."

"In the same way, use my beautiful 'Oshawa' or 'George' Metal Shingle or my metal tile on your roof, instead of cedar shingle. It makes a clean, smooth roof."

"Talk to your husband about these things. I will be glad to answer any letters you send, but I would prefer that you write my nearest branch. Suppose you plan to fire-proof your home. Write, and tell about your house and its size and building material."

G. A. Pedlar

"Here is My New 'George' Shingle for Barns"

"I AM very proud of this 'George' Shingle. It is, like my 'Oshawa' Shingle, now sold all over the world, but is much bigger. My son, the late Geo. H. Pedlar, Jr., planned it to save labor time in laying roofs, for he foresaw how labor prices were going upward. They did rise, and the price of cedar shingles also. The result is that, to-day, this metal 'George' Shingle makes a less costly but far better barn roof than cedar. See your husband uses it. It fireproofs his barn roof."

"Save Barn Cost, and Fireproof It with My Galvanized Corrugated Iron"

"My Pedlar Galvanized Corrugated Iron saves the cost of barn walls, compared with wood. It makes a warmer, stronger barn, lightning-proof as well, and needs no paint like wood. It saves so much in high-priced labor during building that it pays to use it, without considering how much better it builds a barn."

"My Art Sidewalls and Ceilings Make Your Home Fire-proof"

"I spoke of using my metal lath and cement plaster to make a new house fire-retardant. For an old house, I have beautiful patterns in sheet metal sidewalls. Put these on wall and ceiling, right over the plaster. This little picture shows how such a wall looks. Get my catalogue 17CC for details."

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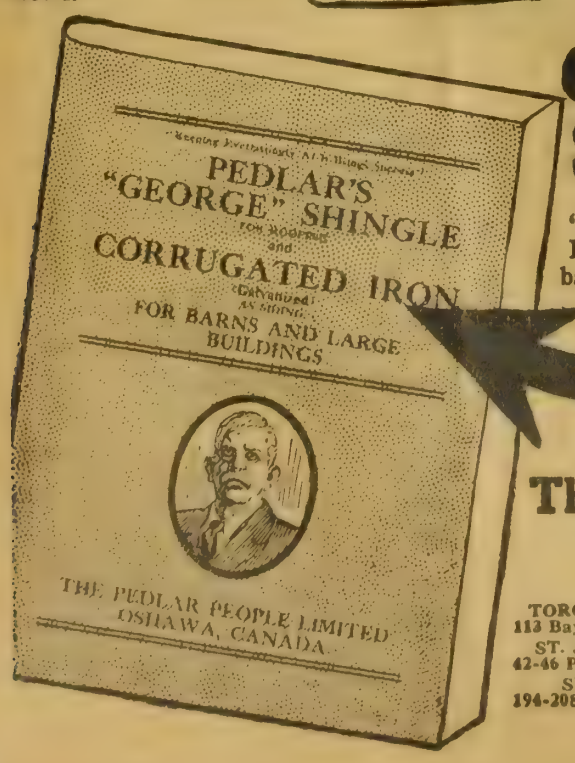

Get My 'George' Shingle Book

"This is a book for your husband. It tells how he can build his barn with Pedlar metal walls and roof, instead of burnable wood. Have him write, or write yourself. I will send it free."

"Get My 'Fireproof' Book for Your House"

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MARITIME FARMER

AND CO-OPERATIVE DAIRYMAN

Published twice-a-month in the interests of farmers of the Maritime Provinces of Canada.

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Vol. 18 **SUSSEX, N. B., APRIL 15, 1913** **No. 13**

Have Frost & Wood help in your hayfield

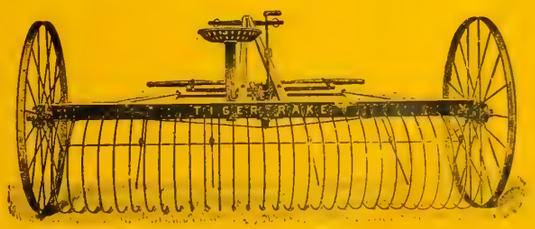
THERE is an experience of 75 years behind "Frost & Wood" farm implements. This means that few farm machines have the benefit of so many suggested improvements by so many practical farmers.

When you buy a "Frost & Wood" machine or implement, the purchase you receive has in it details, materials and features of design that make it as nearly perfect in service and dependability as skill can make it. You cannot be in error, if your implement bears the name "Frost & Wood."

Frost & Wood Mowers

The long pitman on this Mower avoids broken knives and wear at the knife head. The drive from the main wheel is by means of an ***Inside*** gear operating an ***Inside*** pinion. This keeps two gear teeth in contact with two pinion teeth. and reduces wear. These close-meshed teeth start the knife immediately, and prevent choking at the cutter bar, broken knives and sections, and strain on the Mower and team.

"Frost & Wood" Mowers have roller bearings on the power shafting, are easily oiled, and give years of service like a new Mower on account of the care taken in building each part.



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We have put a "perfect" Rake on the market—the "Tiger." In the first place, it is strong and simple. We support the frame with a truss on the larger sizes, and make this rod of heavy steel. The teeth are perfectly seated in the tooth bar, and are of the best steel. They are tempered in oil and are so carefully shaped that they slip along the ground, missing nothing, but still not digging into the sod.

The foot-trip is an easy-working cog device, operating at the centre of the axle where the weight of the load is most nearly even. Everything is the best material obtainable, and the "Tiger" will give long service and fullest satisfaction. See the catalogue.

Write us for Catalogue or see the Frost & Wood Agent about any Farm Implement you need, especially if you seek years of perfect service in your machinery.

Head Office & Works: SMITH'S FALLS ONTARIO

The Frost and Wood Co., Limited

SAINT JOHN, -- NEW BRUNSWICK

Branches at Montreal Que., Truro, N. S., Charlottetown, P.E.I.

The Sussex Manufacturing Company's Line Is Complete

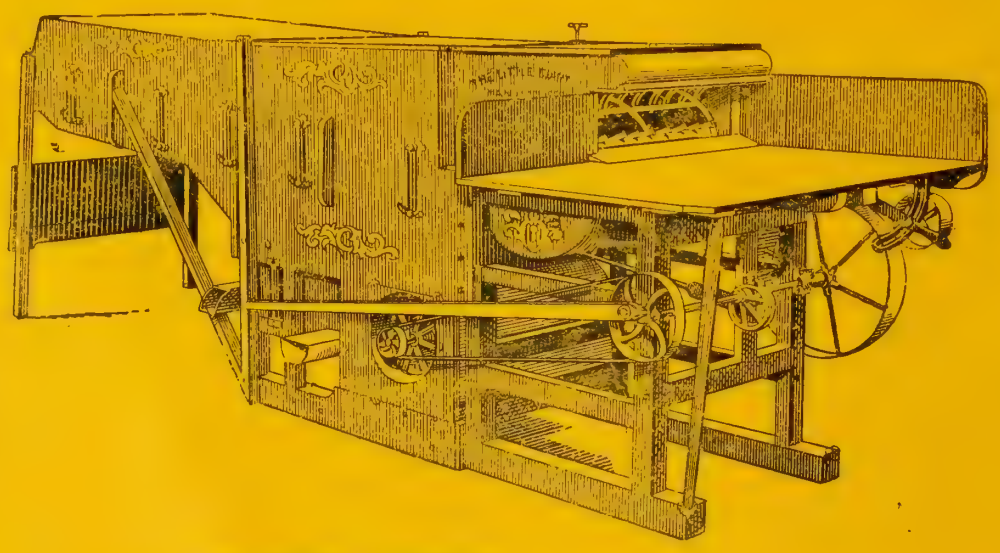
THE Sussex Manufacturing Company line is the best in their class on the market to-day. You will see by the cuts and the catalogue which we would like to send you that we have made many valuable and extensive improvements and have added to our lines a number of new machines which have been designed by expert mechanics.

In the construction of our machines we have availed ourselves of the services of highly practical men of long standing thus enabling us to offer to the public goods which are unsurpassed both for quality and service.

As an evidence of this large number of strong testimonials, which we will furnish upon request, have been received from satisfied customers.

Also being closely connected with one of the leading lumber concerns in Eastern Canada, we are in a position to get the very best lumber some years in advance of the time when it is required to be used; thus giving us an opportunity of thoroughly seasoning the wood by the air dried process and it is found that our machinery which is so constructed gives splendid satisfaction and is better able to stand the climatic changes to which it is subjected in actual use.

One of the strong features is, that every machine we build is set up and given a thorough test before it leaves our factory.



Two Horse Thresher

This is the machine on which our reputation has been built and is without doubt the best machine on the market.

Can be operated with Two Horse Tread Power or with Gasoline Engine. It is decidely in favor where limited quantities of grain are to be threshed.

Four Horse Thresher

Built especially for use with Gasoline Engines.

Experience has shown that Gasoline Engines are coming more and more into use as a power for threshing purposes.

With this power, the demand is for a machine small enough to be moved from place to place with ease and yet of sufficient capacity to turn out a big days work.

Our Four Horse Machine is especially built to meet this demand. A five to seven horse power engine will operate it with ease. Can be supplied with or without tailings elevator, bagger and also with trucks if so desired.

New Model Undershot

The Undershot Thresher is designed to meet the requirements of those who need a heavier and faster threshing machine then our Four Horse.

It is made very strong throughout. The frame is of the best straight lumber, well joined and thoroughly braced, so that when the machine is running at its full capacity there is very little vibration. The grain can be taken from either side of the machine and change can be made while in operation.

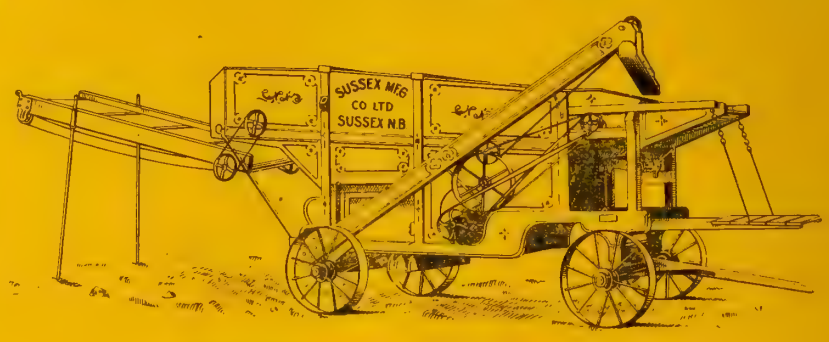
It is fitted with trucks, tailings elevator and one length of straw carrier. A bagging attachment is supplied at a slight additional cost and can be used on either side, to which bag can easily be attached, provision being made for two bags

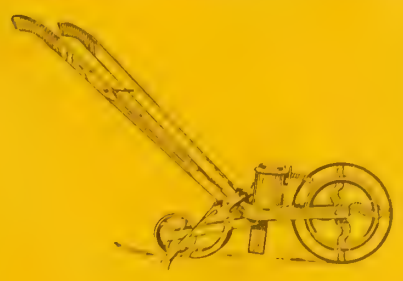
The New Model Undershot Thresher is operated with an eight to ten horse power engine. The main bearings are all equipped with compression grease cups. A convenient tool box is placed underneath the cylinder, thus keeping the tools that you need near at hand.

Inside of a New Model Undershot

The body is 40 inches wide. The separating device consists of a number of kickers which thoroughly agitate the straw and take it direct from the cylinder.

For the perfect separation of grain, this machine has no superior.





Garden Seeder

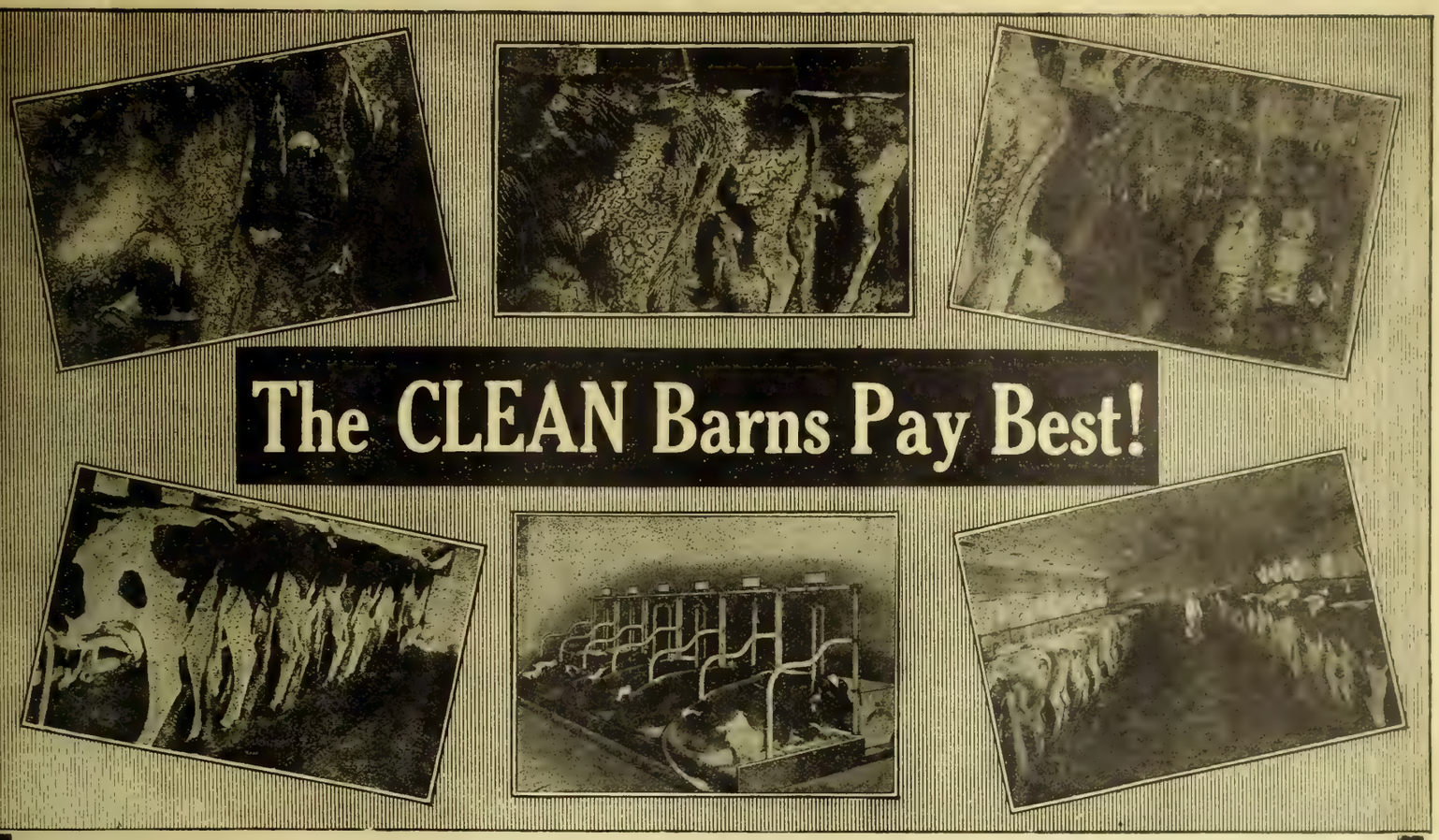
In selecting a Garden Seeder the best obtainable is the one you should have. Our seeder has years of success behind it and with improvements recently added, makes it without doubt the best machine of the kind on the market. The seed discharge of this machine can be exactly regulated by moving the steel plate at the base of the seed cup as per directions on the side of each seed cup.

The flow of seed can be instantly stopped by a swinging cut off operated by a chain attached to one of the handles. This prevents any loss of seed at the end of the row. The marker is held firmly in place and is easily adjusted. The covering wheel is attached to a swinging frame and by varying pressure on the handles, the operator can roll lightly or otherwise. The main wheel is high with a wide rim, keeping it from sinking into the soft earth. No better seeder can be built for the accurate and fast sowing of turnip, cabbage, sage, carrot onion, parsnip, spinach, beet, pea, corn and all other kinds of garden seeds.

Manufacturers of Threshing Machines in four sizes; Horse Powers in two sizes; Hay Presses, Wood Cutters, in three different sizes; Grain Grinders, Root Pulpers, Garden Seeders, Feed Boilers. A large and well assorted stock of Plow Castings, a large and complete line of House Finish, Refrigerators, School and Church Furniture and General Workers in Wood and Iron.

The Sussex Manufacturing Company

SUSSEX, N. B.



The CLEAN Barns Pay Best!

Modern Barns Are Easy to Clean—Easy to Keep Clean

If you could line up every cow so the manure would all drop into the gutter, ***none*** of it on the bedding in the stall—if you could ***remove*** the manure from your barn in half the iime, with half the work—wouldn't it be worth ***real money*** to you?

If you could feed your cows individually—giving each one her share—making it impossible for one to rob from another—if you could water them in the stall, all at the same time—if you could prevent cows from nosing their feed into the stalls—if you could make ***play*** out of getting the manure into the spreader, wagon or shed, or on the pile 30 to 40 feet away from the barn—wouldn't those advantages mean ***dollars*** and ***cent*** to you?

And if you found that the equipment necessary to make all these things *real* in ***your*** dairy, would pay for itself the ***first*** year and would last a ***lifetime***—would you be interested enough to investigate more thoroughly?

You will answer "yes"—if you are in the dairy business for ***profit***. That is why we want you to mail the coupon to-day, for our two fine free books which fully describe and illustrate the many advantages of

The BT Sanitary Barn Equipment

Stalls, Stanchions, Pens, Litter Carriers, Feed Carriers, etc.

There are five patented features of the BT Stalls and Stanchions that make them five times better than any other. Our Stall Book tells about them. The Alignment Device, Sure Stop Swinging Post, Double Curve Partition, Individual Self-Cleaning Mangers, Stanchion Rests. These are the features that make the BT Stalls and Stanchions the choice of dairymen who want the greatest efficiency in their barns.

The BT Manure Carrier has twelve or more advantages over any other, advantages that you cannot afford to overlook when deciding on the carrier to buy. The easy bent I-Beam Track requires no special curves. The adjustable button-on hangers, the movable track section, simple switches, double windlass chain, solid steel windlass shaft, clean, easy hand-wheel windlass, friction brake, latch trip, etc., heavy galvanized tub—think of all the features possessed by the BT Carrier, and every one a work-saver, time-saver and money-maker. Isn't it worth while to investigate the BT Equipment?

Barn-Building Book Free

For years we have had a special study of dairy barns—not only how they should be equipped, but how they should be constructed, lighted and drained how they should be designed and arranged to be most profitable to the owners.

Some of this knowledge is incorporated in our book, "How to Build a Dairy Barn." This book contains information that every farmer should know regarding sanitary housing of dairy cows. It describes lighting, ventilation, stable floor construction, and contains suggestions about silos, site, appearance, exposure, design, drainage and equipment, illustrated by many blue prints.

We will send a copy of this book free—providing you answer the questions in the coupon.

If you intend building or remodelling, write us for full information in regard to our Free Barn Planning Service.

Send in Your Name

We want you to write to us for our book; even if you only intend making a few changes or additions in your stable. We believe you will find many paragraphs of interest. the fine illustrations of modern barns—inside and outside views, the letters from owners of BT equipment, facts and figures. Simply fill in the coupon and the books you request will be mailed to you free at once.

Stall Books tells all about BT Stalls and Stanchions, Calf Pens, Cow Pens, Box Stalls, etc. Carrier Book about BT Litter Carriers, Feed Carriers, Milk Can Conveyors and Feed Trucks. Fill in the coupon and mail it.

BEATTY BROS.,
LIMITED
488 Hill Street, Fergus, Ont.

For Free Books

BEATTY BROS., LIMITED
488 Hill Street Fergus, Ont.

Please send me free, as per offer, books I have checked below.

( ) Stall Book, on Stalls, Stanchions, Pens, etc.
( ) Carrier Book, on Carriers, Trucks, etc.
( ) Building Book.

How many cows have you?.....
Do you contemplate remodelling?.....
Building?.....
If so, when?.....
Name.....
P. O.....
Province.....

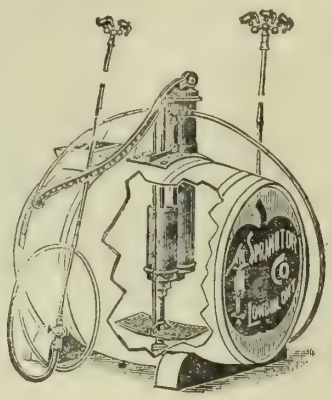
HAND SPRAMOTOR

A Machine that will Return the Money Invested in it Every Year and Then Some

A Hand Power Spramotor sprays an acre of potatoes ***effectively*** in 30 minutes—***annihilates*** bugs, germs and pests and makes the blight impossible—making your work ***vastly more profitable*** than ever before.

The Hand Spramotor has two lines of 10 feet hose—cuplings attached, patent valves, two bamboo extension rods with internal brass tube brass cupped ends, patent drip guard and two nozzle clusters.

A ***durable*** machine for all purposes — destroying weeds, spraying orchards and can be used effectively for white-washing or painting the buildings about the farm.



Note — There's a Spramotor ***built for your exact*** requirements. Prices range from $6.00 to $350.00. You owe it to yourself to find out all there is to know about it. We forward you the facts with our treatise on "Crop Diseases" without placing you under any obligation to buy.

SPRAMOTOR CO.,

1534 King Street E. - - LONDON, Can.

OUR VALUES

are summed up briefly under the following captions:

Style and Quality

Our goods are made to suit you no matter what your occupation may be or what they are needed for.

We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited

HALIFAX, N. S.

Make Your Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
IF
GIVEN
A
FAIR
TRIAL

EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT TE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

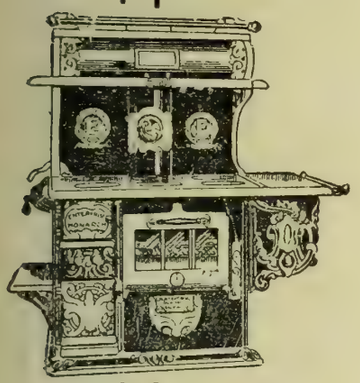
SUSSEX, N. B.

We do not sell these burners but each subscriber may get two beside one we furnish free by sending 35 cents for each additional one wanted.

Agriculture The True Basis of A Nation's Wealth

In other words, the Farmer is the backbone of the country. **BUT,** back of the Farmer is his Wife, the true source of his individual wealth.

If the wife is not a good cook and housekeeper, she can waste more in a week than the farmer can save in a month: **BUT** no housekeeper, however expert, can do good work with a poor stove, and unlike her city cousin, the farmer's wife cannot send to the corner store for cakes, pies and ready-made dainties if the stove "won't work." She must rely on her own kitchen equipment for all the cooked foods needed in the farm home. This is where the—



ENTERPRISE MONARCH STEEL RANGE

comes in, as an economical and reliable baker. With its large extension fire box for wood burning, heavy castings, large copper reservoir giving an ample supply of hot water, and every known device for accurate baking the **MONARCH** is just the range for the farm home.

EASY TO OPERATE **HARD TO WEAR OUT**

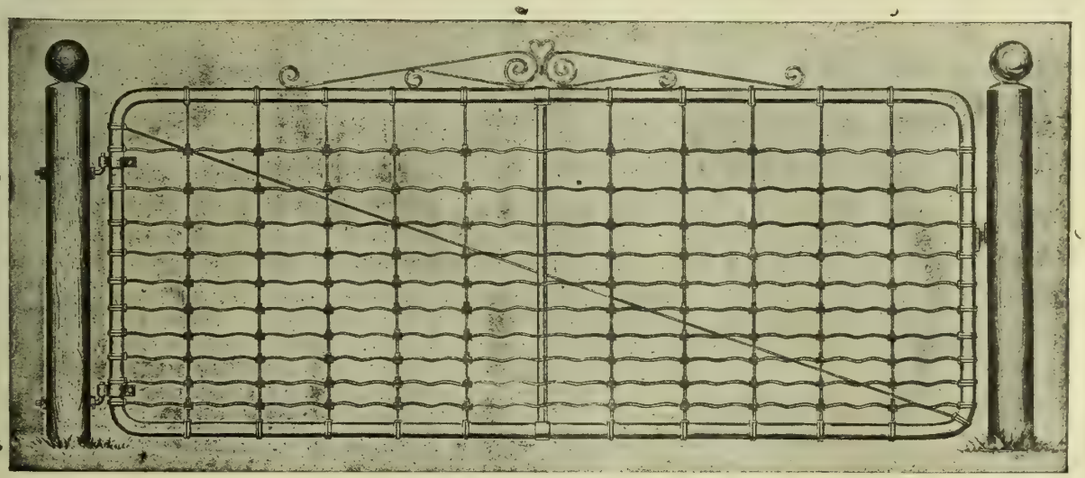
EASY ON FUEL **HARD TO EXCEL**

The price is low, being no more than many inferior ranges are sold for and we furnish a **written guarantee with every Monarch sold.**

Drop us a card for circular illustrating and describing its many special features.

Enterprise
FOUNDRY CO. SACKVILLE, N.B.

MANUFACTURERS.



Wire Fencing and Gates

Plain and Ornamental

Poultry Netting and Staples

Galvanized Wire

Netting for Fox Pens, etc.

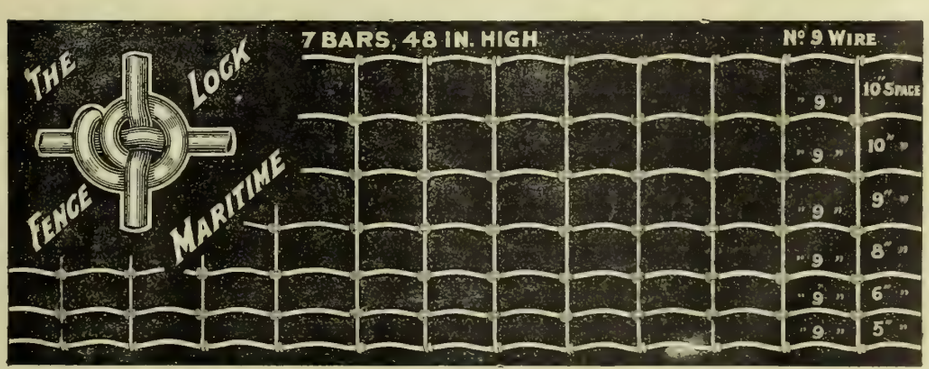
Coiled Spring Wire

Barb Wire

Plain Galvanized Wire
all sizes

Fence Staples

Fence Tools, etc.



New Brunswick Wire Fence Co., Limited MONCTON *New Brunswick*

DE LAVAL
CREAM SEPARATORS

Cheapest As Well As Best

Every sensible person wants the **best** of everything, but in many things the best is beyond their means and they must necessarily be content with something less.

In the case of the Cream Separator, however, the **best** is fortunately the **cheapest** as well, and it is of the greatest importance that every buyer of a separator should know this.

Moreover, the **best** is of more importance in the case of the Cream Separator than in anything else, since it means a saving or a waste **twice a day every day in the year** for many years.

It is true that DE LAVAL Separators cost a little more in first price than some inferior separators, but that counts for nothing against the fact that they **save their cost every year over any other separator,** while they last an average twenty years as compared with an average two years in the case of other separators.

And if first cost is a serious consideration a DE LAVAL machine may be bought on such liberal terms that it will actually **save and pay for itself.**

These are all-important facts which every buyer of a Cream Separator should understand and which every local DE LAVAL agent is glad to explain and demonstrate to the satisfaction of the intending buyer.

If you don't know the nearest DE LAVAL agent simply address the nearest of our main offices as below.

DE LAVAL DAIRY SUPPLY CO., LIMITED

Montreal Peterboro Winnipeg Vancouver

Wood or Concrete Silos, which are best?

Over in the U. S. many experiments made by the various agricultural experiment stations have conclusively shown that **silage does not keep as well in cement, stone or brick silos as in silos constructed of wood.**

Furthermore, the advantage of the wood silo over cement, stone or brick is greatest in a cold climate.

The vital question is "Which silo will keep the silage in the best condition"

If you are interested in reading the unbiased opinion of scientific investigators who have given this question careful investigation we shall be glad to send you, upon request, reprints of some of the experiment station bulletins giving in detail the reasons why wood silos make the best silage and keep it in the best condition.

We shall also be pleased to send you our silo catalog and give you any other silo information desired.

We are exclusive distributors in Canada of the World's Standard De Laval Cream Separators, and also carry a complete line of creamery and dairy machinery and supplies. If interested write for separate catalogs.

DE LAVAL DAIRY SUPPLY CO., LIMITED

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA

Monreal Peterboro Winnipeg Vancouver

Canada's Leading Stock Men Strongly Recommend The Use Of

Dr. WILSON'S DERBY CONDITION POWDERS

for Horses, Cattle, Sheep and Pigs

The names of the successful Stock Breeders whose testimonials appear in this advertisement, are household words in the Maritime Provinces. They are some of the leaders who are setting the ideal to which progressive fellow farmers aspire. They are authorities on the care and management of Live Stock.

Read what they say about Dr. Wilson's Derby Condition Powders, the best Live stock conditioner on the market as it purifies the blood and improves the general appearance of every animal to which it is administered.

Amherst, N. S., July 10, 1910
The Brayley Drug Co., Ltd.,
St. John, N. B.

Gentlemen,—It affords us great pleasure to let you know of the great success we have attained by the use of your Condition Powders. We have been feeding them for some time back and are satisfied that they are as good as you claim them to be and in our estimation there is no better in these parts.

Wishing you continued success, we are,
Yours truly, LOGAN BROS.
Breeders Holstein Cattle and Clydesdale Horses.

Truro, N. S., Jan. 12, 1910
The Brayley Drug Co., Ltd.,
St. John, N. B.

Gentlemen,—It affords us great pleasure to recommend Dr. Wilson's Derby Condition Powders to anyone looking for genuine Powders. We think they are a very good medium for fattening cattle and improving their appearance. We would not be without them as their cost is not to be considered with the vast amount of good they do. Yours truly,
RETSON BROS.

Buctouche, N. B., June 10, 1910
The Brayley Drug Co., Ltd.,
St. John, N. B.

Gentlemen,—I believe I have been using Dr. Wilson's Derby Condition Powders since they were first introduced in New Brunswick. I am well satisfied that they have done my cattle a power of good. I have used no other in four years despite many inducements offered.
Yours truly,
J. D. IRVING, Seaview Farm.
Breeder Holstein Cattle and Clydesdale Horses.

Truro, N. S., April 19, 1910
The Brayley Drug Co., Ltd.,
St. John, N. B.

Dear Sirs,—I will be needing some more of your Condition Powders pretty soon. When will your agent be in Truro?

I might take this means of congratulating you on your manufacturing such an excellent powder. I have recommended Dr. Wilson's to many of my friends who breed cattle as I feel sure they will be as well salisfied as I am. Yours very truly,
C. A. ARCHIBALD.

Silver Falls, St. John Co., N. B., Sept. 10, 1909
The Brayley Drug Co., Ltd.,
St. John. N. B.

Dear Sirs,—Dr. Wilson's Derby Condition Powders were recommended to us and we decided to give them a trial. We feel sure they have proved their worth to us in many ways. We feed them regularly and we feel safe in proclaiming them the best Condition Powders we have ever used. Yours truly,
JOSELYN & YOUNG.

Burnside Farm, Howick, P. Q., March 21, 1910
The Brayley Drug Co., Ltd.,
P. O. Box 301, St. John, N. B.

Gentlemen,—You will no douot be pleased to hear what I have to say. I want to say a word in favor of your Dr. Wilson's Condition Powders. They were recommended to me at a Dominion Exhibition in Halifax, N. S., and I decided to try them. I have used many Condition Powcers before but never with such remarked success as with yours. I think I have as nice a stock of Ayrshire cattle as can be found anywhere and can give your Dr. Wilson's Condition Powders a share of the credit. Ever wishing you success, believe me.
Dear Sirs, yours very truly, R R. NESS.

Dr. Wilson's Derby Condition Powders may be purchased in every town in the Maritime Provinces and is manufactured by the

BRAYLEY DRUG COMPANY, LIMITED ST. JOHN, New Brunswick

THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 18. **SUSSEX, NEW BRUNSWICK, APRIL 15, 1913.** **Number 13.**

Demonstration Orchard Work in New Brunswick

THE three demonstration orchards taken over by the Department of Agriculture last year in Sunbury, York and Albert Counties, were conducted again this year under my direction together with the orchard of C. R. McKenzie, at Lingley, Kings County. These orchards are serving their purpose of affording a good demonstration not only of the renovation of neglected trees, but of the advantages resulting from proper pruning, spraying, cultivation and fertilizing. The returns from there orchards for the present year, with the exception of the one at Lingley, show very satisfactoev profits and the trees without exception have responded well to the treatment. Full particulars as to the care and treatment of these orchards, together with the results of last vear's work will be found in the Report of Horticulture for 1911.

SUMMARY

ALBERT COUNTY ORCHARD

Net profit per acre in 1911..... ....$181 70
Net profit per acre in 1912..... .... 79 49

Average annual profit per acre for two years $130.58, which on a valuation of $500 per acre is a return of 26 per cent.

SUNBURY COUNTY ORCHARD

Net profit per acre in 1911..... ....$ 55 89
Net profit per acre in 1912..... .... 206 91

Average annual profit per acre for two years is $131.40, which on a valuation of $400 per acre is a return of almost 33 per cent.

YORK COUNTY ORCHARD

Net profit per acre in 1911..... ....$ 88 56
Net profit per acre in 1912..... .... 341 74

Average annual profit per acre for two years is $215.15, which on a valuation of $300 per acre is a return of over 72 per cent.

THE ALBERT COUNTY ORCHARD.

This orchard is situated at Lower Coverdale, on the Petitcodiac River, six miles below Moncton. The soil is a stony loam with a gravelly subsoil. The site has a northeastern exposure to the river and is well windbreaked with spruce. There are about 625 bearing trees about thirty-five years old. 21 by 26 feet apart, mostly of the Winter Bough variety.

Eight rows were taken over by the Department in the spring of 1911, in which were the following trees; 65 Winter Bough, 44 Alexander, 39 Bishop Pippin, 26 Red Streak, 17 Ribston Pippin, 7 Manx Codling, 5 Belliveau, 2 Northern Spy, 1 Greening, 1 Fameuse, 1 Gravenstein and nine others, various varieties, names not known. The Winter Bough, Red Streak, and Manx Codling were about all large trees, but many of the Alexander were badly cut up and had had their bearing surface much reduced through black rot canker on the limbs. The other trees were of medium size. The many numerous large canker and other wounds, together with the somewhat neglected state of the orchard, made the scraping, painting and general spring work very expensive in 1911, but the expense of such work was considerably reduced in 1912.

EXPENDITURE OF SPRING OPERATIONS.

Pruning 2¾ days at $2.00	$ 5.00
10 bbls. Winter Spray at $1.54	15.40
14 bbls. Summer Spray at $1.12	16.68
Hauling Brush. 2 men and 1 Horse, ½ day	2.25
Plowing, 1½ days at $3.50	5.25
Harrowing, 1 day at $3.50	3.50
36 two-horse loads of manure applied in 1911. $54. half chargeable to 1912	27.00
1000 lbs. Basic Slag and 900 lbs. Sulphate of Potash, applied in 1911, $33.45, half chargeable to 1912	17.73
Hauling fertilizer to orchard in 1911, $3.00, half cost charged to 1912	1.50
Cover Crop Seed	8.25
Sowing Seed	.75
Depreciation of Spray Pump	5.00
Total	$108.31

EXPENDITURE OF HARVESTING AND MARKETING.

280 bbls. delivered at .30	$84.00
Picking and packing 280 bbls at 25c	70.00
Hauling to Moncton 280 bbls. at 10	28.00
Market Fees, 280 bbls. at .05	14.60
10 p. c. Sales Commission on $703.70	70.37
	$266.97
Interest at 6 p. c. on $1,500.00 value placed on 3 acres of orchard by Mr. Steeves	90.00
Spring Expenditure	108.31
Total expenditure	$465.28

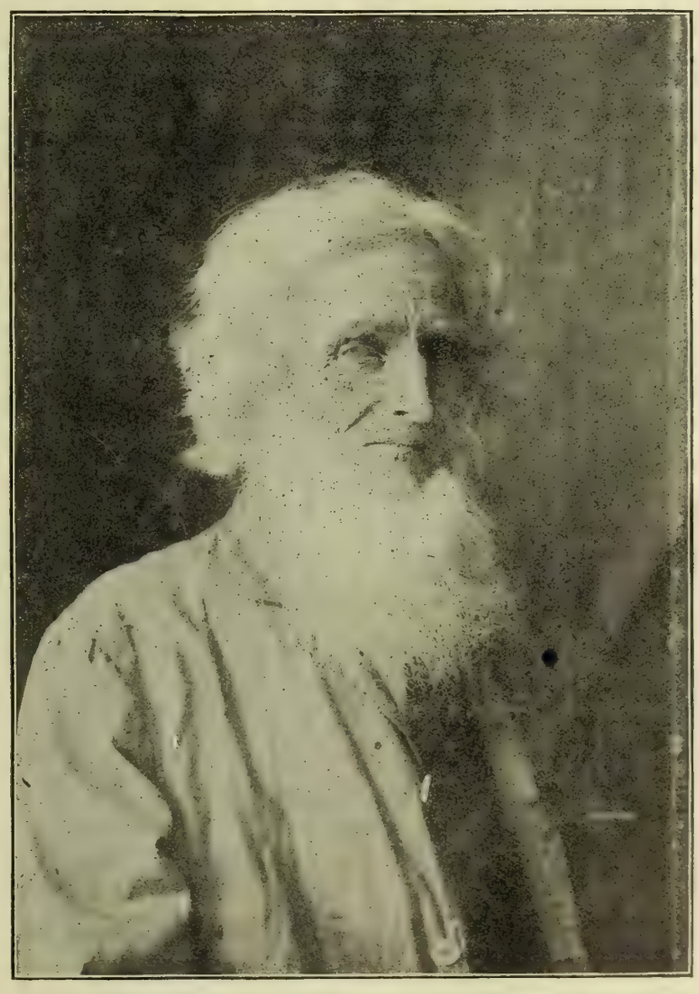
REVENUE.

16 bbls. No. 1 Winter Bough at $2.25	$36.00
4 bbls. No. 2 Winter Bough at $1.50	6.00
20 bbls. No. 1 Red Streak at $1.60	32.00
12 bbls. No. 1 Manx Codling at $2.10	25.20
3 bbls. No. 2 Manx Codling at $1.50	4.50
45 bbls. No. 1 Alexander at $2.25	101.25
20 bbls. No. 2 Alexander at $1.75	35.00
25 bbls. No. 1 Ribston at $3.50	87.50
10 bbls No. 2 Ribston at $2.25	22.50
80 bbls. No. 1 Bishop Pippin at $3.25	260.00
40 bbls. No. 2 Bishop Pippin at $2.00	80.00
2 bbls. No. 1 Belliveau at $2.00	4.00
3 bbls. No. 1 Fameuse at $3.25	9.75
Total Revenue	$703.70
Total expenditure	465.28
Net profit from 3 acres	$238.42

Net profit per acre $79.47, which on the valuation of $500 per acre is a return of almost 16 per cent.

The balance of the orchard, which under Mr. Steeves' own direction was partially pruned and sprayed in 1911, but not cultivated or fertilized, was

(Continued on page 462)



The Late Francis Peabody Sharp

New Brunswick's Pioneer Horticulturist. Born September 3rn, 1823, Died December 1903

LET US SPRAY---Three Great Essentials

Proper Material Systematically Applied at the Right Time

By M. K. Ells, Secretary N. S. F. G. A., Port Williams, N. S.

IT IS safe to say that interest in spraying was never so keen among fruit growers as it is this spring. At last it has become a live question and, 1912 with its thousands of barrels of spotted, wasted fruit, may be looked on in after years as giving us the most valuable lesson in our history.

Experience is a hard school master, and his educational fees are enormous. Some fruit growers last year with two or three thousand barrels of apples, paid their whole crop to find out what was made know twenty years ago by government experts who addressed agricultural meetings in the Valley at that time. In looking over some Reports of the Nova Scotia Fruit Growers' Association, I find that in 1893, Prof. John Craig speaking at Wolfville, gave an address on the "Black Spot." This address is so pertimate at the present time that I will copy part of it verbatim. He says:

"Now although we talk a great deal about the disease commonly called "Black Spot," I do not think any of us realize the vast amount of damage which is justly chargeable to it.

During the year 1890 the estimated injury resulting from "Black Spot" in the United States, and as close an estimate as possible was formed, amounted to sixteen million dollars to the apple industry alone and from this estimate we can very relatively judge what is our own relative position in regard to it.

In considering this disease there are a few foundation principles which we should take up first, and study, before we can get a clear understanding of the methods and reasons for treating it in certain ways.

In a broad way it is well to consider what most of you know, that fungi belongs to a flowerless class of plants and exist on dead or living plants—they are unable to take up the crude material from the soil as flowering plants do, but they maintain their existence by living on other plants which prepare food for them and give it to them in an assimilated form. They have no flowers or seeds, but their reproduction is effected by special organs which are called spores. There are two classes, one feeding on dead organic matter; the other on living plants. These latter twine around and take hold of the plant and draw the nourishment out of it—and this class which derive their nourishment from living plants are called Parasites. Smuts, Mildews and Rusts belong to the parasitic class, so that we see they have no power of assimilating food for themselves. It must be prepared and in an assimilated form. Another great difference between them and our ordinary plants is that they have no visible flowers—they are entirely flowerless. Their negative portion, or that which corresponds in flowering plants to leaves and buds, consists of slender thread-like tubes, collectively called mycelium.

These portions which correspond to seeds of the flowering plants are called spores. These spores are exceedingly minute and multiply with great rapidity, and by means of these the disease is carried over from one season to another. The parts of a fungus are microscopic objects not discernable by the naked eye, and can only be distinguished by means of a high power microscope. The number of injurious fungi probably surpasses that of the flowering plants.

We, of course, are all familiar with the well-known "Black Spot" of the apple, also the disease which causes the blighting of the pear and apple.

An Orchard Syraying Meeting Held at Chipmans Corner Kings Co., N. S., 1912

A Portion of R. S. Starr's Orchards, Starr's Point, N. S.

A familiar example is also found in the disease which causes the potato rot. These are all specific microscopic plants, and depend upon spores or seeds for reproduction in the same manner as flowering plants. Now, of course, one plant living upon another—storing up nourishment which is filched by the other must be injured to a serious extent.

There are several ways in which these parasites are injurious. They first deprive the host plant of its nourishment, and its food supply being weakened and reduced, its vitality is naturally lowered, and it is unable to properly perform its functions, it does not ripen up the wood made during the season, and it is unable to perfect its fruit; again, the growth of this unnatural state of affairs may be accelerated or retarded in an abnormal manner, and the general health of the tree much affected. In connection with "Black Spot" one of the principal features we observe at the North is that the plant is so much weakened that the growth of the season is not well ripened and the plants go into winter in bad condition and are injured by the cold, even although we may not have noticed the presence of the fungus on the foliage. We thus find that owing to the attack of the parasite that the tree does not ripen up its wood in the autumn, if then a severe winter follows we have what is commonly called winter killing, caused as I have said by insufficient nutrition due to supporting parasites. Among other effects noticeable in summer when the attack is severe are that the leaves and fruit fall and decay prematurely.

The disease to which I wish to direct your attention more particularly at this time is the "Apple Scab." I find some of the results of experiments which I have carried out in the treatment of this disease have already been incorporated in your report of last year and those who have read it will be able to listen to the present imperfect explanations at least with some degree of satisfaction. The Apple Spot is a product of the cool climates although it extends its attacks from Maine to California. It does not exist to any injurious extent in the extreme South. It depends more or less upon climatic conditions for a greater or less development—a cool and moist atmosphere being particularly favorable to the germination of the spores and spread of the malady, while a dry, hot condition has the opposite effect. At first it was not understoad that the disease attacks both the leaves and the fruit. The pressure of the enemy is first brought to our notice by small black spots on the fruit, which are now looked upon as only one form of the trouble. When investigators began to examine it closely they found another form on the leaves, causing peculiar blotches or smoky colored spots—this was proved to be the same thing. It thus occurs that sometimes we may find the fungus affecting the leaf very badly, and on the same tree the fruit might be comparatively free, and right here is a point of considerable importance; in such cases, when the fruit is not affected much, fruit growers frequently do not think it necessary to spray their orchards, but it is important to treat the tree whether the fruit is attacked or not. I have already shown that the growth is greatly retarded and the health of the tree much impaired by the fungus growing on the leaves. The spores or reproductive organs are carried over winter by living on fruit in the barrels, also on dead leaves, and so we have many ways and means for it to be carried through from one season to another. Now, you will then see the ill effect of putting in barrels fruit which is affected with the scab, as the closed and damp atmosphere of the barrel will certainly favor the growth of the fungus."

He then went on to describe how to make and apply Bordeaux mixture and the results that could be expected, closing his address with these remarks: "The main points to be remembered in connection with this malady are that it is caused by a minute parasitic fungus, a low form of plant life, which, by living on the leaves and fruit of the apple, prevents assimilation in the former, and the development of the latter. It is not so generally known that the same fungus attacks both the leaves and the fruit. A few facts to be remembered in connection with successful treatment are: 1. That it is perpetuated by spores that take the place of seeds. 2. That these spores formed in the autumn, live over winter upon the dead leaves. 3. That these germinate in the spring as soon as conditions are favorable, which is usually about the time the young foliage developing. The efficacy of the copper salt remedies have now come to be generally recognized and the fruit grower who does not use these remedies is neglecting a simple precaution in direct opposition to his best interests."

Although twenty years have passed since that address was given, very little could be added at this date that would increase our knowledge on the question, except that we now have lime-sulphur and power sprayers with which to apply it in thorough manner; and yet it has taken twenty years to assimilate the knowledge given us by Prof. Craig and many others since that time of what caused Black Spot and how it could be controlled.

In this enlightened age there should be no mystery about a subject discussed so often and for so many years in the agricultural press and on the platform by institute speakers and wher-

ever fruit growers meet, from the blacksmith shop to the prayer meeting. Everyone understands what a potato bug is, and no questions but what Paris Green will kill him if it is applied where he will eat it. We can see all this with the naked eye, and "seeing is believing." Because we cannot see the spores of the "Black Spot" is no reason why we should not believe that it exists and is capable of doing quite as much damage in its line as a potato bug, and also that there are poisons that will control it the same as Paris green will control the potato bug: and to follow out the illustration, just as there is a certain time when the poison must be applied if we wish to protect our potatoes, so there is a right time that we must spray to kill the spore of the Black Spot or our work is labor in vain. This question of time does not seem to be generally understood. To raise a crop of clean apples in a year like 1912 is no hit or miss affair, it means careful planning and then sticking right to it through the season. Here knowledge is strength, for a man who does not know what he is fighting, or understand how it developes is in a hopeless position. If he succeeds, it will be by chance not by knowledge.

In writing for this magazine last August I said there were three essentials if we would be sure of clean fruit, I want to emphasize them here. They are a correct spraying mixture, applied at the right time and in the proper manner. It is useless to look for success if any of these three are neglected. Either lime-sulphur or Bordeaux will fill the bill, and can be prepared with very little trouble. With commercial lime-sulphur everything is done for us except putting it in the spray tank and when the other two essentials are carried out it has given splendid satisfaction.

The correct time to apply seems to bother a good many people; the books say to spray just before the blossoms open, immediately after the petals have fallen and again ten days or two weeks after that. This looks simple enough on paper but in practice how many fall down?

The first spraying is frequently missed altogether or a bright day opens the blossoms quickly before the work is completed. Rain may cause the loss of two or three days just as the trees go out of bloom and by the time the pump is well started the little apples are as large as the end of your finger.

Still others spray at no definite time, but put it on whenever they can make it fit in with other farm work. The third spraying is a sort of retoucher to catch any places we may have missed the second time, and also to protect the new surfaces exposed by the rapidly growing leaves and fruit.

We have the evidence of dozens of practical men in the Annapolis Valley that these three sprayings with either Bordeaux or lime-sulphur and applied as they should be will insure any fruit grower of ninty per cent. of clean apples and in addition to this if some arsenical poison is used, will absolutely control all canker worms, cateterpillars, green fruit worms, bud moth, and the Coddling moth. A fourth spray without poisons must be used a wet season like 1912 about the twentieth of July to prevent a late infection of the "Black Spot" and the "Fly Spec Spot." This latter fungus does not show until after the apples are picked and have been stored for some time. It caused a lot of injury this past year, but was not found on fruit sprayed the later part of July.

It can be completely controlled by this late spraying. Now we may put our spray on at the right time, and use what science tells us is the very best fungicide and still get poor results unless the work of applying is done carefully and thoroughly. Every leaf as far as it is possible should be covered. With lime-sulphur it is safe to give the tree a good wetting down, indeed this is necessary if a thorough job is to be done. Use an angle nozzle and have one man on a tower six or eight feet above the ground; this man should carry a fourteen foot rod so he can reach easily to the centre of the trees on either side of him. The best work cannot be done if both men remain on the ground.

Anyone who raises one thousand barrels of apples cannot afford to do without a power sprayer; the initial outlay is high, but if the right machine is bought, one that will do the work with few costly breakdowns, they will soon pay for themselves many times over.

In the spring of 1911 about 150 power outfits were sold in the Valley at an average price of two hundred dollars apiece.

As many more have been bought since, so it is safe to say that $60.-000 has been expended the last three years for power sprayers. I believe we could also safely say that $30,000 of this has been utterly thrown away as far as any good it did the farmers was was concerned. Ten different makes have been sold by as many different firms and they all look alike when the agent is showing them off to the man who is not a born mechanic. Some,perhaps the majority are giving splendid satisfaction, while others are utterly worthless for the purpose for which they are intended. A leaky pump that won't hold her pressure or an engine that won't go, standing in an orchard on a fine day when work is pressing will lead to more bad language than a balky horse. In buying an outfit one should look to several important points. First, there must be some system of mechanical agitation; we all know how Bordeaux and Paris Green settles to the bottom of the tank, Lime Sulphur and Arsenate of Lead also settle in a lesser degree, and the old fashioned return hose will not give power enough to keep any mixture stirred up. The engine should be compact, light enough to haul over soft ground and as simple as possible. In fact, it should be pretty nearly fool proof. Personally, I believe the jump spark system will give the fewest ignition troubles.

With the experience we have had so far, the open cylinder, single acting pump seems to give the best satisfaction. On the double acting pump the stuffing box, as soon an a little wear takes place, is likely to give trouble. Experience has shown that it is almost impossible to keep it tight after the first season. The by-pass valve or safety valve that allows the liquid to pass back to the tank when the spray is cut off is another important point to look to. Spray materials are very corrosive stuff and will cause some valves to wear or stick so that they are soon of little use. If they do not work something is likely to break.

So with all these pitfalls to look out for it is well to buy only from a firm whose machines have given good satisfaction in active service. No one can judge a sprayer on the show room floor. It is not always safe either to take the word of a fellow fruit grower as to the satisfaction his machine is giving. We all hate to acknowledge that we have been taken in, and frequently the man who swears by his machine in your hearing will be swearing at it as soon as you are out of sight.

For the man depending on his orchard for his living this question of better fruit is all important. If we have over production in the future it will be of No. twos and No. three, never of No. ones and fancys. Spraying, thinning, prunning, cultivating, fertilizing, all are necessary and of all these spraying is not the least important.—M. K. E.

Blossom Time in a Portion of A. C. Starr's Orchards, Starrs Point, N. S.

In Strawberry Time on Manning K. Ells Farm, Port Williams, N. S.

Need of Lime in Garden.

Lime should be applied to vegetable soils every four or five years, half a ton to two ton an acre. It frees plant food, improves the physical character of the soil, neutralizes acids, is unfavorable to certain diseases, and is of especial value in the improvement of refractory soils, such as the city home garden must often use or do without a garden. Any of the three ordinary forms are satisfactory, but the gardener must be sure the price is in proper proportion. Ratios of value are: Fifty-six pounds quicklime are equivalent to 74 pounds water-slaked or hydrated lime, and to 100 pounds limestone rock or air-slaked lime. Good physical condition for distribution is very important. This material is best applied broadcast in the spring after plowing. It should not be used in advance of potatoes, as it favors scab. No increase in single element of soil treatment will bring the highest returns unless all other essentials are present in proper proportions. No amount of nitrogen will bring a good crop if the soil is in bad physical condition, or if the mineral elements are lacking.—Prof. Paul Work, New York State College of Agriculture.

Use For Tin Cans.

If the roots of such vegetables as cucumbers, melons, eggplant, peppers and sweet corn are disturbed, though the disturbance is ever so slight, they are impatient of transplanting. Lima beans and tomatoes especially are put back by transplanting in the usual way.

A good method in such cases is to take a lot of old tin cans and place them in a bonfire in the garden. A stove could be used if more desirable. Leave the cans in the fire until the solder is all melted off and the cans fall apart. The cylinder that forms the sides should then be tied with a string. Place the bottomless can on a board, if the plants are to grow in a window, or they may be put at once in a hotbed or cold frame.

Fill the cans with rich earth and sow a little seed in each. Keep in a shady place and water frequently till sprouts appear. They should be thinned after the first pair of true leaves have formed. Leave just the proper number of plants for a hill. In the case of tomatoes, peppers and eggplant only one plant should be left.

When ready to plant in the garden they should be watered, then the string cut. The can will slip from the compact ball of earth, and it may be set in the hole without disturbing a single root. Flower pots may be used, but they are expensive. Tin cans are always at hand and easily prepared.

Demonstration Orchard Work in New Brunswick

(Continued from page 459)

this year sprayed, plowed, harrowed and seeded to clover, but not manured or fertilized. Both sections of the orchard bore very heavily indeed in 1911, but the recuperative power of the trees well pruned, sprayed, cultivated and thoroughly fertilized over those not fertilized and cultivated, and only partially pruned and sprayed, is well shown in the 280 barrels of fruit obtained from the 210 trees in the demonstration orchard as against the 225 barrels obtained from the 410 trees in the home orchard. The expenditure and receipts for the home orchard are as follows:

EXPENDITURE OF SPRING OPERATIONS.

13 bbls. Winter Spray applied at $1.54	$20.02
10 bbls. Summer Spray applied at $1.12	11.20
Plowing, 4 days at $3.50	14.00
Harrowing, 2 days at $3.50	7.00
Clover Seed, 70 lbs at .26	18.20
Sowing Clover Seed	.75
Deprecation of Spraying outfit	2.50
Total	$73.67

EXPEEDITURE OF HARVESTING AND MARKETING.

225 bbls. delivered at .30	$67.50
Picking and packing 225 bbls. at .25	56.25
Hauling to market 225 bbls at .10	22.50
Market Fees, 225 bbls at .05	11.25
10 p. c. Sale Commission on $562.50	56.25
Total	$213.75
Interest at 6 p. c. on $2,500 value placed on the 5 acres by Mr. Steeves	150.00
Spring Expenditure	73.67
Total Expenditure	$337.42

REVENUE.

225 bbls. at $2.50	$562.50
Total Expenditure	437.42
Net profit on 5 acres	$125.08

Net profit per acre $25.01 which on the valuation of $500 per acre is a return of 5 per cent.

THE SUNBURY COUNTY ORCHARD

This orchard is situated on the eastern bank of the St. John River at Maugerville, on high intervale land. The soil is a dark loam several feet deep and is exceedingly fertile, being part of the old river bed. The orchard is in sod and never cultivated, the ground being moist and rich enough to produce good hay crops, and at the same time to keep the trees growing thriftily and producing well. There are about five hundred bearing apple trees, eighteen years old, 20x20, nearly all of the Wealthy and Duchess variety. The Duchess trees have far outgrown the Wealthy, and have twice the bearing surface of the latter. One block of sixty Duchess and another block of 100 Wealthy, covering in all about one and two-thirds acres, were taken under control by the Department.

EXPEEDITURE OF SPRING OPERATIONS. 1

6 days pruning at $2.00	12.00
1 days scraping and painting at $1.50	1.50
1 gal. paint, at $2.25	2.25
1 day hauling brush at 3.50	3.50
12 loads manure applied one half chargeable to 1913, at $1.50	9.00
8 bbls. Winter Spray at $1.54	12.32

Portion of Crimson Beauty Orchard. Rows 24 feet apart; Trees 8 feet apart in the rom. Planted by Franklin Sharp in 1887.

4 bbls. Summer Spray at $1.12	4.48
Depreciation of spraying outfit	5.00
Total	$49.05

EXPENDITURE OF HARVESTING AND MARKETING.

358 bbls at .25	$89.50
Picking and Packing 140 bbls. Wealthies at .18	25.20
Picking and packing 200 bbls. Duchess at .13	26.00
Picking and packing 18 bbls. Ben Davis at .18	3.24
Hauling to wharf 358 bbls. at .02	7.16
	$151.10
Intecest at 6. p. c. on $660.00 value placed on the 1 2-3 acres of orchard by Mr Clark	40.00
Spring expenditure	49.05
Total expenditure	$240.15

REVENUE.

84 bbls. No. 1 Wealthy at $1.75	$147.00
56 bbls. No. 2 Wealthy at $1.25	70.00
160 bbls. No. 1 Duchess at $1.75	280.00
40 bbls. No. 2 Duchess at $1.25	50.00
13 bbls. No. 1 Ben Davis at $2.25	29.25
5 bbls. No. 2 Ben Davis at $1.75	8.75
Total Revenue	$585.00
Total expenditures	240.15
Net profit on 1 2-3 acres	$344.85

Net profit per acre $206.91, which on a valuation of $400 is a return of almost 52 per cent.

THE YORK COUNTY ORCHARD

This orchard is situated at Douglas, on a strong southern exposure to the St. John River, and contains about 130 trees of various ages and sizes, planted different distances apart, most of them about fifteen-by-twenty feet. This orchard has not been plowed for fifteen years, and when taken hold of there was much dead wood in the young growth and almost every tree had developed large trunk wounds from sun-scalds, and were more or less affected with black rot canker. The soil is a medium red loam with gravelly sub-soil. The varieties were as follows: Duchess, Alexander, Wolfe River, Fameuse, Wealthy, McIntosh Red, Montreal Peach, Switzer, Bishop Pippin, Bethel, Eccles Pippin, Gano and others. The owner placed a valuation on this orchard of $150 per acre in 1911, but has now doubled that valuation.

EXPENDITURE OF SPRING OPERATIONS.

2 days pruning at $2.00	$ 4.00
½ day hauling brush, 2 men and team	2.50
1000 lbs. basic slag, 900 lbs sulphate of potash and 430 lbs. nitrate of soda, applied in 1911, $46.98, one half charged to 1912	23.49
Freight on fertilizer and hauling same to orchard $3.00 half charged to 1912	1.50
6 bbls. winter spray applied at $1.54	9.24
8 bbls. summer spray applied at $1.12	8.96
Depreciation of spraying outfit	5.00
	$54.69

EXPENDITURE OF HARVESTING AND MARKETING.

Picking and packing 290 bbls at .20	$58.00
Hauling to market and selling including depreciation in value of barrels, 290 bbls. at .30	87.00
Total	$145.00
6 p. c. interest on $450. the value placed on the 1½ acres of orchard by Mr. Hawkins	27.00
Spring Expenditure	54.69
Total expenditure	$226.69

REVENUE.

10 bbls for home use at $2.50	$25.00
21 bbls. Duchess at $1.54	32.38
10 bbls. Red Astrachans at 1.42	14.20
3½ bbls. Switzer at $2.32	8.10
49 bbls. Wealthy at $1.64	80.36
3½ bbls. Irish Peach at $2.03	7.10
2½ bbls. Dudley Winter at $1.30	3.25
3 bbls. Gideon at $1.57	4.71
21 bbls. Alexanders at $1.56	32.76
1 bbl. Wolf River at $2.50	2.50
2½ bbls Haas at $1.60	4.00
6 bbls. Scott Winter at $3.00	18.00
1 bbl. Twenty Ounce at $2.50	2.50
2½ bbls. Peewaukee at $2.50	6.25
1½ bbls. Bishop Pippin at $3.00	4.50
8 bbls. Milding at $3.50	20.00
5 bbls. Eccles at $3.00	15.00
1 bbl. Gano at $2.25	2.25
32½ bbls Fameuse at $2.84	92.30
68½ McIntosh at $3.25	222.62
25½ bbls. Bethel at $3.00	76.50
11½ bbls. Sudbury's and various others at $1.92	22.07
43 boxes Exhibition Fruit at $1.00 (clear)	43.00
Total	$739.31
	226.69
Net profit on 1½ acres	512.62

Net profit per acre $341.74, which on the valuation of the owner of $300 per acre is a return of almost 114 per cent.

NOTE.—It should be mentioned that the majority of the trees in this orchard are quite small, there being only about ten large trees and twenty-five of medium size.

COMMENTS.

The apples in the Demonstration Orchards were not generally so clean and free from diseases this season as last. In the Douglas orchard the McIntosh and Fameuse were attacked by a late outbreak of apple scab appearing in August. The same was true in the orchard at Lingley, most of the fruit in that orchard being infected when about half grown. A period of moist warm weather at that time favored the spread of the disease and wherever spores fell upon susceptible varieties scab spots appeared. In the Coverdale orchard, scab developed to a considerable extent early in the season and was probabl- due to neglect of thoroughness in spraying. In the Maugerville orchard the fruit was uniformly clean this season.

The Douglas orchard was not cultivated this year, but the roots of last season's crop sent up a strong thick growth, which was cut in June, when about twenty inches high. A thick second growth came up in the fall and went into winter in good condition. Owing perhaps to the wet season the cover crops sown in the Coverdale orchard only made a fair amount of growth this year. Summer vetches grew about six inches high and mammoth clover and winter vetches about five inches. Crimson clover made but slight growth. In the Lingley orchard summer vetches formed a good thick coating over the ground while mammoth clover and winter vetches only grew about four or five inches. Crimson clover was so infested with weeds that little or no growth was made.

The Friendly Garden.

A garden seems like some good friend,
Long known, long loved of old,
With whom hours joyous have been passed
And mirthful stories told.

The paths familiar to the feet,
Each bed, each box, each row—
Each has a greeting like a friend
Of happy long ago.

The days we spend in labor there
But make us better friends,
And for reward the garden gives
Rich hoard of dividends.

It is a friend who never speaks
A harsh or bitter word;
It is beloved of wind and sun,
Of bee and humming bird.

It waits with welcome ever kind
To those who gladly come:
Blessed is the heart who has and loves
A smiling garden chum!

—A. R. W. in New England Homestead.

The Culture of Cranberries a Profitable Business

Gleaning a Revenue From Boggy Land

By C. N. Vroom, St. Stephen, N. B.

NEW BRUNSWICK abounds in tracts of land, varying in area, now considered as waste, but which might be made among the most profitable parts of the farm. Wet, peaty soils, of little use for other purposes, are eminently suitable for the culture of cranberries, and the expense of preparing and planting is not excessive, when the length of life of the bed is considered.

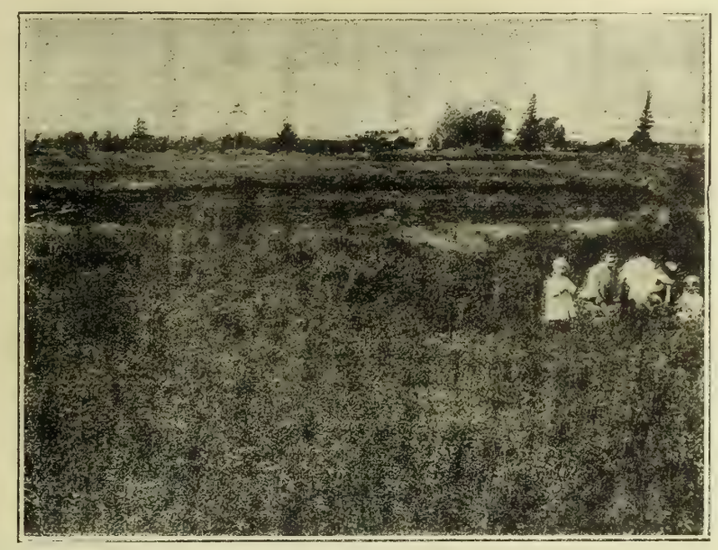
The proper soil for the culture of this berry, is a peaty, alluvial soil. A peat bog, if not too deep, or any black land on which wild bog cranberries now grow, will present a suitable home for the cultivated berry. Beds are sometimes made on an ordinary very sandy loam, but such soil requires the annual application of commercial fertilizers, which are not required on black soil, and it runs more to weeds than a peat soil does. A wet soil with the water table near the surface, is the best, and this should be ditched and drained until the water recedes to within 10 or 12 inches of the surface. The first operation in preparing a bed, is to strip the sod or turf from the surface sufficiently deep to prevent the growth of bushes, grass or weeds from the roots. This will be a hand job generally, as the ground is often too soft for horse work and is apt to contain many sticks and logs with which it is hard to deal except by hand. After the ground is cleared and levelled, it should be covered to a depth of three or four inches with sand, free from loam or weeds. A coarse sand, in which is some gravel, is suitable. Many shallow peat bogs have a deposit of sand underneath, and where this is the case, the sand can be conveniently and cheaply obtained from the bottom of the ditches. After the sand is spread, the rows should be marked out 18 inches apart, which may be done by drawing over the bed an instrument made like a hand sled, with two or more runners the proper distance apart.

The bed is now ready for planting, which should be done in the latter half of May. For this purpose, cut vines are used, being the upright parts of the vine, mowed from a bearing bed. These may be obtained from some reliable dealer, who makes a business of supplying them, care being taken to get good varieties. These are put up in sacks or barrels, about eight barrels being necessary for planting an acre. These vines will be six or eight inches long, and the process of planting is very simple. One hand drops the cuttings in the marked rows, about 15 inches apart, and another follows and presses a part of the cutting into the soil with a stick notched on the end. A pressing of the sand about the cutting with the foot completes the operation.

In the after treatment of the bed, the most important thing is weeding. If the ground has been well stripped and the sand is clean, this will not be a very difficult operation, but it is important to keep down the weeds and give the vines a chance to grow. If this is faithfully done for three years, by the fourth year the vines will take charge, completely covering the ground, and reducing the task of weeding, almost to a vanishing point. By this time also the bed will be yielding profitable crops. No cultivation is required, and in fact it is desirable in weeding to mix the sand with the soil as little as possible. Properly brought to this point, the bed is in shape for many years to come, and requires little attention but picking.

There is a very general impression that cranberries cannot be raised without provision being made for flooding them, but while such an arrangement is desirable, it is not a sine qua non. Cranberries are grown quite extensively through the Annapolis Valley, and in many cases there is no provision for flooding. The owners of these beds figure that they may lose their crops by frost once in four or five years, but even thenthey consider the business profitable. Where the bed can be located on a small stream however, so much the better. A dam may then be built so that the bed may be flooded to a depth of 18 inches or two feet, with a gate that may be easily opened and closed. Water should be turned on in the spring and allowed to remain until about the 20th of May, so that the period of blossoming may be retarded to escape the June frost. Again in the autumn, if heavy frost is imminent before the berries are picked, the gates may be closed in the afternoon and the bed flooded for the night. A clean sanded bed, however, will not catch the frost so quickly as a bed full of weeds and grass.

The above is a brief outline of the process of cranberry growing, and only calculated to call the attention of farmers to this industry which has received little attention in New Brunswick, and to which the province is specially adapted. The cranberry is a cold climate plant and will grow to perfection here. We have not the same insect enemies to contend with that are prevalent in some parts of the United States, while our prices are better and the demand is practically unlimited. A well established bed will yield from 50 to 60 barrels to the acre, and the price seldom drops below $5 per barrel. This is good enough for land that is practically useless for other purposes. In starting a bed, not only is it desirable to get a variety of good quality and appearance, but they also should be prolific yielders. There is as much difference in the yield and quality of cranberries as of apples. Some of the wild varieties are good, but they should be tested before setting a bed of them. New varieties come from the seed as they do in apples and other fruits, and some of the best berries grown in Nova Scotia, are native varieties. The cranberry is the best keeping fruit that we have, in ordinary storage conditions, and in its culture is an opportunity to add greatly to our farm values and to the prosperity of the province.—C. W. Vroom, St. Stephen, N. B.



Cranberry Bogs in Rough State on the Farm of Rev. Wm. Ryan, Auburn. The centre portion Shows the Bog Scruffed and Ready for Sanding Preparatory to Setting Out the Plants.

Cranberry Picktng on the Farm or Rev. William Ryan, Auburn Kings Co., N. S.

How I Grow My Own Nursery Stock of Apple Trees.

Editor The Maritime Farmer:—

I am much interested in horticulture and, consequently, I am glad that the people of New Brunswick are waking up to the fact that as good fruit can be grown in their own province as anywhere.

It may be of interest to some of your readers to know my method of growing apple trees.

From a seedling or native apple tree I gather the apples after they are frozen. I extract the seeds and the following spring I plant these seeds in my garden, two feet apart, the soil having been put in good condition and free from weeds. After the little seedlings come up I keep the ground thoroughly cultivated and free from weeds.

The next spring, the little saplings are taken up as soon as the frost is out of the ground, and transplanted in rows two feet apart and five or six inches apart in the rows. These rows are kept well cultivated and the following spring, when the little trees are about two years old, they are ready for the process of grafting or budding.

I follow the system of root grafting with good success. I have no difficulty to get fully ninety per cent to grow.

In root grafting the trees are taken up and the roots are cut into three inch pieces which I graft by clefting. The scions should be cut just when the sap begins to circulate and before the buds swell. These may be buried in earth and kept in good condition for grafting for two or three weeks.

Root grafting has the advantage that if anything should happen the tree above ground and the root is not killed, it will sprout again from the graft and I think the trees are stronger as there is no old wood to grow over.

An interested fruit grower.
Queens Co., N. B.

Perfection.

Michael Angelo, the great Italian sculptor, was once showing a friend the various pieces of work in his studio. The friend pointed to one partly finished piece and remarked that the sculptor had done nothing at it since his last visit. "Oh, yes, I have," he replied. "I have softened the expression; touched up a part here and more fully developed a part there." "Oh!" said his friend, "Those are only trifles." "True," said Michael Angelo, "but trifles make perfection; and perfection is no trifle." The "Perfect" spray pumps, manufactured by R. B. Westhaver, Mahone Bay, N. S., has been improved in every detail, so that they now stand for perfection.

CLEAN CULTIVATION AND COVER CROPS

By Geo. L. Thompson, Berwick, N. S.

DURING a period of eight years we have been supplying our orchards with an annual application of 150 lbs. Muriate of Potash and from 300 to 500 pounds of Acid Phosphate or Basic Slag per acre. Weekly cultivation with spring tooth harrow from beginning of May or thereabouts to about the end of June, when cover crops, either tares or crimson clover, was sown. Orchards ploughed in the fall.

Thinking that the cover crops did not supply sufficient nitrogen, in the spring of last season, we applied about 200 pounds Nitrate of Soda per acre and discarded the potash and Phosphoric Acid. The foliage was very much benefited by this application of Soda, and the apples, especially Baldwins and Nonpareils seemed to be larger.

From 230 bearing trees we have obtained the following yield of apples:—

Year	Barrels tree run
1900	122
1901	168
1902	127
1903	301
1904	229
1905	283
1906	332
1907	594
1908	401
1909	681
1910	183*
1911	1000
1912	600

*Frost at blossoming time.

I imagine that these figures may be considered fairly satisfactory. Now, what I should like to see discussed is, whether or not a good average production can be maintained without the use of Potash and Phosphoric Acid, and depend simply on cover crops, supklemented when the cover crop is not good, by a small application of nitrogen fertilizer the following spring.

Some time ago when reading U. S. Farmers' Bulletin, No. 257, I came across the following remarks by Prof. Whitney:—

"In all soils there are rock particles or minerals containing phosphoric acid and potash, and in all the soil solutions that we have ever examined (and we have examined hundreds of them from all parts of the country) the composition and concentration of the soil moisture which is the nutrient solution spread throughout the surface soil of the earth for plants to grow in and to gather their food from, is sensibly the same. These minerals are difficultly soluble, but they are appreciably soluble. They are soluble enough to maintain a solution which is amply sufficient for the plants to gather their food from." Farther on in the bulletin he states that "The humus, apart from the physical effect it has in loosening up the soil and the absorbing effect it has in holding water, which may greatly increase the yield of crops, appears to be the form of sewage disposal for the crops."

Prof. M. Cumming, in an interesting article, (Report 1910) states that: "Humus is the principal source from which plants obtain nitrogen, it contains a considerable portion of the other elements essential to plant growth. It improves the texture of soils, and conserves the water supply, besides it is the medium in which countless species of microscopic life live, and, by their process, unlock the abundant treasures of fertility stored up in the inert rock mass-soil."

Prof. F. T. Shutt in a late Montreal paper states that "The important functions of humus—physical, chemical and biological, are only beginning to be realized by our farmers. As an outcome, however, of investigatory work there is one fact that must not be lightly passed over. It is that the percentage of nitrogen, under ordinary circumstances, is a direct index of a soil's fertility, that nitrogen is the most important, the dominant, the limiting factor determining crop production. This is not to be understood as minimizing the importance of the other elements of plant food furnished by the soil but rather as emphasizing the unique place which soil nitrogen holds and the necessity for its up-keep. In this connection there is the comforting fact that in rational, economic methods of enriching a soil in nitrogen we have the opportunity, constantly as it were, of keeping up a goodly supply of available phosphoric acid, potash and lime, and in preserving a favorable physical condition of the soil."

Clean Culture in J. Elliott Smith's Orchard, Wolfville, N. S.

Young Orchard Intercropped With Corn on the Farm of W. W. Pinneo, Watervill e, N. S.

From March 8th issue of the "Rural New Yorker" I notice the following:—

Prof. Paddock of the Ohio Agricultural College says: "Probably the best scheme ever devised for handling the majority of orchard soils, where the lay of the land will permit, is by combination of clean cultivation with cover crops. This method includes the plowing of the land as early in the season as the weather will permit. The plow is followed at intervals by the harrow in order that the surface of the soil may be kept mellow throughout the growing season. Usually in the latter part of July a crop of some kind is planted, and this is allowed to occupy the land until the next spring."

In recent issues of the "Country Gentleman" Wm. C. G. Hopkins places a good deal of stress on the value of using fine ground natural rock phosphate as one of the agents to produce increased crop yields.

In Dominion Experimental Report for 1910 under the head of 'Special Experiments with Fertilizers' the following occurs:—

"When these experiments were planned, the opinion was very generally held that untreated mineral phosphate, if very finely ground, was a valuable fertilizer which gradually gave up its phosphoric acid for the promotion of plant growth. Many years' experience has shown that mineral phosphate, untreated, is practically of no value as a fertilizer." Again, "after ten years' experience had demonstrated that finely ground, untreated mineral phosphate was of no value as a fertilizer, its use was discontinued in 1898."

At the present time I am inclined to think that if I can yearly plow in a good heavy crop of clover in my orchard, no other fertilizers will be neccessary. In the case, however, of a light catch of clover, a small application of nitrogen fertilizer may be advisable. On the other hand, would good heavy applications of Potash and Phosphoric Acid increase the yield of apples to such an extent as would over-balance the increased expenditure? My own experiments in this line on different rows of trees, did not seem to indicate that the extra fertilizer gave an increase of apples.

SPRAYING.

Although I obtained fairly satisfactory results last season from the use of Lime-Sulphur and Lead Arsenate, (54 per cent. No. 1 apples), I have an impression that it will pay me better to spray with Bordeaux when the buds are swelling and just before the blossoms open, subsequent sprayings with Lime-Sulphur. The 'Canadian Countryman' for Dec. 21st contains the summary of a New Hampshire Experiment Station bulletin. I quote as follows:—

"No fungicide has been found that holds disease in check as well as Bordeaux. When showers follow soon after an application of Bordeaux the leaves are likely to be spotted and the fruit russeted by the fungicide. The injury to the fruit is seldom great enough to be of importance when the apples are sold in barrels.

No commercial Bordeaux has been found that is as satisfactory as the home-made. A 3.3:50 Bordeaux (3.3.-40 Canadian measure) is the most desirable for use in the apple orchard. Lime-Sulphur has in most cases proven a satisfactory substitute for Bordeaux. It has caused little or no injury, and in some seasons has controlled the diseases as well as Bordeaux. The results of 1910 showed that two sprayings of lime-sulphur were entirely inadequate to hold scab in check.

When the diseases are serious and the season a rainy one, more application of lime-sulphur will be required than of Bordeaux. The number of sprayings required will vary greatly with the season, with the disease in question, and with the general care of the orchard. The application of a strong fungicide before the leaves are out, and of one of regular strength just before the flower buds open, will decrease the number of sprayings needed later."

By spraying with Bordeaux when buds are swelling, just before the blossoms open, and subsequently with lime-sulphur. Would russeting of fruit be liable to follow?

PRUNING.

Thinning out the branches to keep the tree open for admission of sunshine, or,

Clipping the ends of the twigs all over the tree, like a man having his hair cut.

Which is the best method so far as producing pleaty of well coloured fruit is concerned? I would like to know.

Boys Enjoy Grafting.

When only a little boy my grandfather taught me to graft. He had several trees, that produced inferior fruit and I was turned loose on these. The scions I used were all of valuable varieties, some of them imported from Europe. What joy I took in converting those trees to careers of usefulness only the boys or the girls who have had a similar play can know. As I now remember it, more than 90 per cent. grew and the trees all became useful citizens in the orchard.—M. G. Kains.

Agricultural Conditions in Kingston Parish, N. B.

One of the Best Market Garden Sections in the Province

By A. R. Wetmore, Sec. Agricultural Society, Clifton, N. B.

PROBABLY there are few agricultural sections in New Brunswick in which will be found such a combination of farm practices as in the parish of Kingston, Kings Co. This parish, situated between the St. John and Kennebecasis rivers, is naturally rough and hilly and possesses few farms which are adapted to exclusive dairying or would be suitable for mixed farming on the larger scale. However, these farms, small and hilly though they be, are very suitable for vegetable gardening, the raising of small fruits, poultry raising and dairying in a small way. It has been said that a farmer, taken from some one of the large, fertile and more easily worked tracts in another part of the province and placed upon one of these farms, would find it somewhat embarassing to carry out his farm practices under the different conditions. However, we, who have been brought up under these conditions, have adapted ourselves to them and have carried on the methods of farming which we believe to be most suitable.

The development of agriculture in this section may be practically traced back to the coming of the Loyalists. Some might wonder how those hardy forefathers found courage to carve out homes in this, as it must have been, a rough wilderness. Perhaps it was the natural beauty that attracted them and when this is considered the wonder grows less. However, man cannot live by scenery alone, and this must have been recognized by those men who first cleared the land and began tilling it. It is on these farms, started by those men in the past, that we are living and farming to-day.

AGRICULTURAL SOCIETY.

The Kingston Agricultural Society was one of the first started in the province and it has been one of the largest and perhaps one of the most successful. This society in the purchase of commercial fertilizers, good seed and pure-bred stock has done much to promote agricultural interests in this locality.

COMMERCIAL FERTILIZER

Owing to the fact that considerable work s done in vegetable gardening and comparatively little done in the keeping of live stock in this section, it has been necessary to maintain the fertility of the land. The Agricultural Society, for years past, has purchased the unmixed fertilizers and these materials have been sold to the members at cost price plus the cost of handling. The members are thus enabled to make a saving in the purchase price and also to know what they are getting. The following are the prices paid for the various fertilizers this year:

Sulphate of Potash, per ton, ... $51.90
Nitrate of Soda, per ton 58.00
Bone Black, per ton, ... 23.00
Acid Phosphate, per ton, ...lb 19.00
Muriate of Potash, per ton, ... 46.00
Sulphate of Ammonia, per ton, 73.00
Basic Slag, per ton 13.00

Another advantage of buying the unmixed fertilizers is that combinations suitable to the requirements of different crops may be made up. The following are combinations in use among the farmers in this section:

GRASS OR GRAIN MIXTURE.

Bone Black or Acid
Phosphate .... 50 lbs.
Sulphate of Ammonia ..... 15 lbs.
Muriate of Potash or Sulphate of Potash .... 12 lbs.

Iris Beds on the Experimental Farm Gardens, Charlottetown, P. E. I.

A Harvesting Scene on the Farm of W. W. Pinneo, Waterville, N S.

GRASS OR GRAIN MIXTURE.

Bone Black or Acid
Phosphate .... 45 lbs.
Nitrate of Soda .... 20 lbs.
Muriate of Potash .... 12 lbs.

FRUIT AND LIME MIXTURE.

Bone Black or Acid
Phosphate .... 50 lbs.
Muriate of Potaosh .... 20 lbs.
Nitrate of Soda .... 12 lbs.

These complete fertilizers are sold to the members of the Society:—
where Bone Black is used at $32.60 per ton.
where Acid Phosphate is used at $31.00 per ton.

During the past year the society handled 160 tons of commercial fertilizer.

DAIRYING.

Dairying is carried on on a small scale throughout the parish. The Agricultural Society has given encouragement to the improvement of the dairy cattle both by purchasing pure-bred animals and by giving a bonus to individuals purchasing such stock. This year our Society has purchased and sold at auction to the members seven pure-bred Jersey animals which we hope will make an impression on the stock. Our pastures are, for the most part, rough and hilly and we find the Ayrshire and Jersey breeds of cattle most suitable to our conditions.

We are, as a whole, in need of improvement in our methods of feeding the dairy cows. During this summer we would do well to supplement our pastures with soiling crops such as oats and peas, green corn and green clover, and during the winter we are in need of a balanced ration. It has been the general practice to feed during the winter: hay, middling and a few roots. This does not seem to meet all the requirements of the dairy cow and it would seem that the following rations would be an improvement.

Mixed hay .... 12 lbs.
Roots, Turnips and Mangels 20 lbs.
Grain, Bran-4; Corn Meal-3; Oil Cake -2; Cotton seed Meal-2; 8 to 10 lbs.

SMALL FRUITS.

In 1867 the industry of growing small fruits was started in Clifton by D. P. Wetmore; strawberries, raspberries, currants and gooseberries. Strawberries were cultivated more plentifully than any other of the fruits and were the first grown in the province as a business crop. Strawberry culture in Clifton has lately become somewhat less but it is a live and profitable business throughout the whole parish and elsewhere in the province. The general practice followed with this crop is to take two crops and then plough out. The net profit from an acre varies from $200 to $400.00.

VEGETABLE GARDENING

In the cultivation of early vegetables for the market in St. John we have perhaps our main source of livlihood. Rhubarb, early potatoes, turnips, peas, beans and in fact all kinds of vegetables are grown in this locality. There are perhaps few sections in the province as suitable for the growing of early produce as it is along the banks of the St. John and Kennebecasis in this parish. In summer, our shipping facilities are quite suitable for this work as we have the steamboats on both rivers which furnish a reasonable means of transportation.

POULTRY RAISING.

There is no one in the vicinity specializing in poultry raising but practically all do a little in that line. Generally speaking this branch is found to be profitable. Barred Plymouth Rocks and Rhode Island Reds are considered the most suitable breeds.

While we do not specialize in any one of these branches, we have, by the combination, our source of income. We do not perhaps handle as much money in a year as many farmers in other sections but it is quite probable that at the end of the year our profits are equal to the profits made by those other farmers.

Budded vs. Grafted Stock.

Editor Maritime Farmer:—

My orchard is in Westmorland Co., New Brunswick, near Port Elgin and was only set out last spring. I believe it is the first orchard ever set out on a commercial scale in that part of the country. So you see horticulture is something not far remote from new down here. If you can do some missionary work for the cause of horticulture down here through the medium of your Special Spring number your efforts will be highly appreciated. Many of my friends laugh at the idea of setting out an orchard down here on a commercial basis.

I had Mr. Turney, the Provincial Horticulturist down to examine this section for horticultural possibilities and his opinion was that we have a soil and climate equal, if not superior to that on the St. John river for fruit growing.

I planted 200 apple trees last spring and I intend to continue similar plantings for the next two or three years.

I may say that the trees have made an encouraging growth. I measured some of the season's growth in November and found new wood varying from eighteen to twenty-eight inches in length.

My business keeps me in Amherst most of the time so my orchard plantings at Port Elgin are only carried on as a side line. However, I expect to give the side line more time in the future than I have in the past. In my interest in horticulture, Mr. G. Sidale, of Port Elgin, is my only sympathizer in the district. He tells me that he intends to set out a large orchard. Nearly ever farmer in the district has a small orchard for home use and wherever the trees are proper-

(Continued on page 501)

The Use of Fertilization in Apple Orchards

An Address by Dr. Stewart, of the Pennsylvania State College, Before the Recent Nova Scotia Fruit Growers' Association.

THE proper fertilization of an orchard is largely a local problem. It is no less a problem, however, because it is local. The same is true to a marked extent, of many other orchard operations, not excepting cultural methods. It is true that of late it has become a fashion among horticulturists to assume that the whole truth is known about cultural methods, that there is but one proper method for orchards and that all growers who do not follow it are either shiftless or ignorant. But the fact is, that even with cultural methods, the practice found best for one particular soil or location, or for one age of orchard or fruit effect, is by no means certain to be best for all others or even best for the adjacent farm. In general, therefore, it appears that there are at the present time, comparatively few horticultural principles or practices which are really exact and general in their application. Most of them seem to be quite subject to important exceptions and hence they usually require some local modification or adjustment, if the best results are to be secured.

So it is with orchard fertilization. We know that it is likely to be important and we can now give approximate general directions for it. But when we come to the actual fertilization of a particular orchard, some local tests and adjustments are usually desirable.

Warehouses of United Fruit Companies, Berwick, N. S.

The First Carload of Box Apples Shipped From Kentville, N. S., by Hillcrest Orchards.

THE AMOUNTS OF PLANT FOOD ACTUALLY TAKEN UP BY A MATURE ORCHARD.

That there is an important need for fertility in any orchard that is actively producing and growing, there can be no reasonable doubt. The actual extent of this need can be approximated chemically by determining the average composition of apple wood, leaves and fruit, and applying these figures to what may be considered good annual amounts of these three products. This we have done both for apples and for a 25-bushel crop of wheat, with the results shown in Table 1. The annual weights for apples are based on a yearly production of 100 pounds each of wood and leaves and 14 bushels of apples per mature tree. All these amounts are distinctly less than those actually observed and reported, but inasmuch as they give an annual yield of 490 bushels per acre of 35 trees, they are considered sufficient for the present purpose.

TABLE I. RELATIVE PLANT FOOD DRAFT OF WHEAT AND APPLES.
(In lbs. per acre annually, based on American and German Averages.)

	Wheat Grain	Wheat Total	Wood Lb.	Leaves Lb.	Fruit Lb.	Apple Total Lbs.
Annual Weights	1500	4200	3500	3500	24500	31500
Nitrogen (N)	30.0	43.7	11.3	25.6	16.2	53.1
Phos. Acid (P_2O_5)	10.0	15.8	3.6	5.3	6.4	15.3
Potash (K_2O)	9.8	26.8	6.6	15.9	41.5	64.0
Lime (CaO)	0.84	8.0	29.1	29.5	3.0	61.6
Magnesia (MgO)	3.0	6.1	4.4	8.9	3.4	16.7
Iron (FeO)	....	....	0.5	1.5	0.8	2.8

In the first place it will be noted that in total food draft, the apples exceed the 25-bushel wheat crop in every constituent except phosphoric acid, and in it they fall behind only by half of a pound. Notwithstanding this fact the trees are usually able to maintain themselves much better and longer than wheat. This is probably largely due to their much longer season of root activity, their more natural demands, the annual return of most of the plant food in their leaves, and their ability to curtail production for one or more seasons when conditions become unfavorable. Without going into details, however, it is quite evident that very important amounts of plant food are annually removed by an apple orchard. Scarcely any soil can furnish all these materials indefinitely in the amounts and times required, and unless proper assistance is rendered, there must come a time when production is materially reduced and off-seasons occur.

It is also interesting to note the relatively large amounts of nitrogen, potash and lime, and the comparatively small amount of iron annually taken up by the apples. Nearly all the lime remains in the wood and leaves, while a large production of the potash is found in the fruit.

1. This is especially marked in the case of the fruit as compared with the demands of the grain in wheat. For further discussion see article by the writer in the Annual Report of the Pennsylvania State College for 1910-11, pages 447 to 449.

This large amount of lime seems to have some significance, so far as the wood is concerned, as shown later, in most of our experiments, its application has improved the growth. In view of the small amount of lime required by the fruit, however, its application should not be expected to materially affect the yields, and this corresponds with our field results. Moreover, the total effect of adding lime alone is surprisingly small, in comparison with the relatively large amounts that are taken up. Either these amounts are merely drawn in and deposited mechanically by the transpiration stream, and hence are largely without physiological significance, or else the average soil is still able to supply the lime needed.

With iron the case is very similar. This element is almost universally present in agricultural soils and the total amount required is so small that its addition can scarcely be expected to produce any important effect. This also is borne out by such experimental results as are now available.

From the large amount of potash carried by the fruit, one might suppose that its addition to the soil would be very important in improving yields, and this idea has been widely proclaimed, especially by those considering only the chemical composition of the fruit. As indicated later, however, it seems that most orchard soils are already sufficiently supplied with potash in available forms and that the chief shortages occur in the nitrogen and phosphates. This is the case notwithstanding the fact that the latter materials are actually required in considering smaller amounts.

From these facts it is evident that there is comparatively little relation between response and requirements in the case of plant food and that something more than a knowledge of the chemical composition of the fruit and wood is needed before one can properly fertilize an orchard. Even with the additional knowledge of the composition of the soil, the problem is not much simplified because it is impossible as yet to duplicate sufficiently the conditions existing in any soil.

A chemist may determine the total amounts of plant food present, but he can not yet determine their actual availability to the trees with sufficient accuracy to be of much value. The practical and proper fertilization of an orchard, therefore, becomes an experimental problem, and its solution is dependent primarily upon the pomologist or horticulturist. In other words, the question is not so much what amounts of plant food are annually taken up, nor what amounts are present, but rather it is what responses are made when certain kinds and quantities of plant food are actually added to an orchard soil.

It is to get light on the latter question in connection with ten different types of soil that we have been working at the Pennsylvania Station since 1907. Altogether, in the case of apples, we have ten experiments on bearing trees, and two on young trees involving a total of more than 2,800 trees, located in different parts of the state, all of which bear more or less directly upon the present question. For the present, however, we shall call special attention to but three of these experiments, since they bring out most clearly the principals points involved.

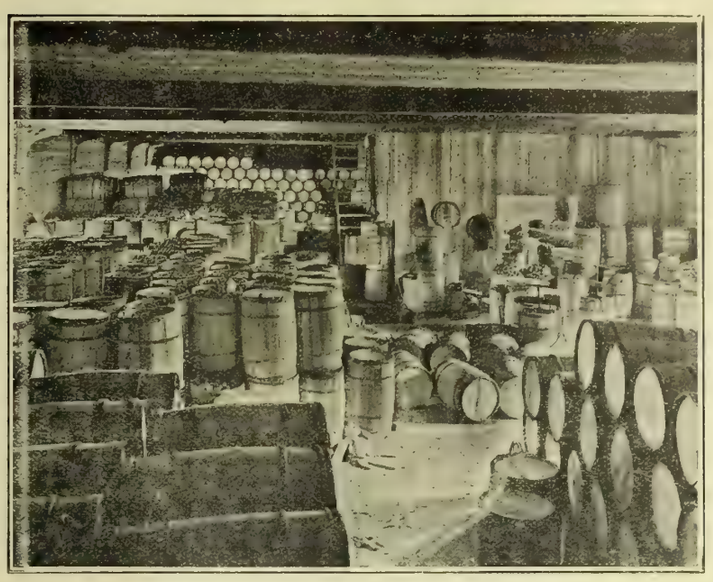
EFFECTS OF PLANT FOOD ADDITIONS TO ORCHARDS.

Some of the effects of adding plant food to orchards are shown in Table 11. This table gives the yield obtained during the past five years in a 10-plot experiment with Baldwins, now 24 years of age located on a Volusia silt loam in Lawrence County, notth of Pittsburg. In estimating the influence of the treatments, the yields of the first year are excluded because they can never be materially affected by the application of the first season. The yields are given in pounds, and also in bushels per acre annually for the last four years.

In the first place, it will be noted that the checks, or unfertilized plots, have run fairly uniform, producing an average annual yield of 174.2 bushels per acre during the last four years. Lime alone (at the rate of 1,000 lbs. per acre annually) has shown no improvement over the average check and as a matter of fact it has averaged 8.3 bushels per acre less, a deficit that

is doubtless largely or wholly due to incidental and natural fluctations. The phosphate and potash combination has affected the yield here rather distinctly. This may be at least partdue to a possible advantage in location, as indicated by the fact that its adjacent check is the highest producer among them and is averaging within 64 bushels of the phosphate-potash treatment. The growth on the latter plot, however, is nearly 35 less than the normal unfertilized plot and its general appearance is not appreciably superior to that of the checks. It is evident, therefore, that these trees are still vitally in need of something, although it should be noted that they are receiving the fertilization commonly advised or orchards,—largely on the basis of chemical analysis.

This need is being quite thoroughly met on the adjacent plot 6, which differs from number 5 only in the addition of nitrogen. The mere addition of nitrogen in this case has more than tripled the gain. Wherever nitrogen appears in the treatments very large yields are observed, and the foliage and growth of the trees are very satisfactory—the average gains



Packing Room, Port William's Fruit Company.

and the results of that season are excluded in the present table for reasons stated above. The results for the past five operative years are given in Table III.

In general we have the same type of results here as in the preceding experiment—large gains from nitrogen, phosphates and manure, with relatively small effects from potash, and again no advantage at all from lime. There are greater irregularities in this experiment, owing somewhat to its greater size, but chiefly due to the presence of a woods on the mountain side above the first check plot, from which the latter is separated by a single row of trees. The leachings from the floor of that woods have acted much like a nitrogenous fertilizer, and as a result, the trees nearest the woods, although of the same age as those farther down, are considerably larger, thus accounting for the greater yields of the first 2 or 3 plots. This influence practically disappears however, by the time the fourth plot is reached, as shown by its low yields—those of a typical check.

The difference observed in the last two columns are due partly to these

TABLE II. INFLUENCE OF FERTILIZATION ON YIELD (JOHNSTON ORCHARD.)
(Yields in pounds and bushels per acre; 1908-1912.)

Plot	1 Check	2 Nit.	3 Nit.	4 Check	5 Phos. & Potash.	6 Comp. Ftlzr.	7 Check	8 Manure	9 Lime	10 Check
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
1908	90	528	237	446	57½	759	211	278	558	106
1909	675	6618	5257	1932	3089	6621	2008	3531	1216	1266
1910	2575	3265	1822	3168	3552	2108	1629	6149	3185	3505
1911	283	7563	7816	617	1227	8209	1362	4874	388	106
1912	1024	1225	696	1382	1385	189	1226	6698	741	474
Total 4 years	4557	18071	15591	7099	9253	17127	6225	21252	5530	5351
Bush. per acre annually	136.7	542.1	467.7	213	277.6	513.8	186.7	637.5	165.9	160.5
Average grain over check bush. per acre		377.9	293.5		103.4	339.6		463.3	8.3	

The average check or unfertilized plot produced 174.2 bushels per acre annually during 1909-12.

TAALE III. INFLUENCE OF FERTILIZATION ON YIELD (BROWN ORCHARD.)
(Yield in pounds per plot, 1908—1912.

Pl't	Treatment	1908	1909	1910	1911	1912	Totals	Benefit over Normal	Av. Gain over Av. Check
1	Check	2402	25	4052	1588	453 (lb.)	8520 p. c.		Bu. per A.
2	Nitr. and Phos	4153	588	5920	2219	7281	20161	204.8	376.5
3	Nitr. and Potash	3079	78	3838	1567	5402	13964	196.6	259.2
4	Check	754	9	470	1260	309	2802		
5	Phos. and Mur	1014	2252	2381	1643	616	5906	79.9	75.2
6	Phos. and Sulf	292	266	1368	1299	356	3581	4.8	10.1
7	Check	254	192	1115	1568	1117	4246		
8	N. Ph. and Potash	1219	454	2436	3241	4931	12281	208.7	253.7
9	Nitrogen	863	1575	120	3082	1614	7254	96.0	113
10	Check	458	515	787	1448	222	3430		
11	Acid Phos	104	892	787	794	64	2641	25.9	16.2
12	Raw Phos	100	124	581	703	123	1631	55.9	35.5
13	Check	266	257	2096	498	727	3844		
14	Manure	621	1947	778	7334	1117	11797	273.9	240.2
15	Lime	152	160	1029	1060	288	2689	9.0	14.8
16	Check	246	36	943	387	166	1778		

The annual gains over their normal "production" are indicated in plots 2 and 3. Their annua yields were 564.5 and 391 bushels per acre respectively. The average check omitting No. 1 was 3200 lbs. per plot or 90.16 bu. per acre annually.

in trunk-girth ranging from 25 to 905

Plot 2, receiving nitrogen and phosphate only, at the present time shows a better gain than number 6, which received potash in addition. This is directly connected with the almost complete crop-failure that occurred on the latter plot this last season, and it is also doubtless partly attributable again to natural fluctuations in yield. It shows, however, that no additional potash is needed in this orchard, so far as yields are concerned.

Phosphates are next in importance to nitrogen here, as indicated by the 42 bushel average deficit that occurs on plot 3 as compared with number 6, when phosphorus is omitted in the former, and also by the high yields on number 2. Manure, as a result of the extra large crop of 1912, when most of the other plots were having an off-season, is now in the lead in this experiment with the tremendous average yield of 637 bushels per acre annually for the past four years. This gives an annual gain over the check of 463 bushels per acre, which is a very satisfactory exchange for 12 tons of manure. This benefit from manure is doubtless largely due to its nitrogen content, the proof of which becomes more evident later.

TIME REQUIRED FOR RESULTS TO APPEAR.—It is a common impression that long times are required to determine the value and kind of fertilizer needed for an orchard. It will be noted here and in the following experiment, however, that both these facts were thoroughly evident in the season immdeiately following the one in which the fertilizers were first applied. In other words, both the value of fertilization and the kind of fertilizer needed were clearly evident in these two cases within a single year after the first application, and the conclusions formulated then have not been materially changed by the results of the 4 or 5 additional years that we now have. In most cases, also, where these facts did not appear in the first two or three seasons of bearing they have not appeared in the five or six years now available. This is of special importance in connection with the local tests recommended later, though in them we advise at least 3 years of trial, for the sake of a wider margin of safety and greater stability in the resulting conclusions.

Packing Room at Hillcrest Orchards, Kentville, N. S.

RESULTS FROM THE BROWN ORCHARD.

This experiment is located in Bedford County on DeKalb stony loam, a residual foot-hill soil, chiefly of sandstone origin which is commonly used for orchard purposes. The trees in this case are York Imperial, now 24 years old. It involves the same treatments as these in the Johnston orchard and four others besides—those in plots 6, 9, 11 and 12— also was started a year earlier, in 1907,

irregularities, partly to a certain amount of leaching and cross feeding on the part of some of the checks in spite of separation rows below each treated plot, and partly to a different method of calculation. In one column the benefit is figured on the basis of the normal production of the immediate plot concerned, which method is supposed to eliminate soil irregularities to the greatest possible extent. When the adjacent checks are being benefited by leachings or cross-feeding, however, this method fails to show the full benefit due to the treatment. This failure is especially evident in plot 6 which shows an apparent negative influence in the "normal" column and a positive influence of ten bushels per acre annually in the column based on the average check. The apparent negative influence is due directly to extra yields in the adjacent check plot 7 which is apparently receiving some benefit from plot 8 as a result of cross-feeding. The same thing appears in the negative figures shown by plots 11 and 12 though they are not entirely eliminated by using the average check as the average check as the basis. The average check, however, is not entirely free from the cross-feeding influences, since it only distributes the extra yields and hence it is probable that the negative figures on plots 11, 12 and 15 of the last column merely indicate that these materials have no definite influence when applied by themselves, and the further deficits are attributable simply to natural fluctuations.

Returning now to the results themselves, and especially to those treatments not included in the preceding experiments, we may note first that

the muriate of potash in plot 5 has given much better gains than the sulphate in the adjacent plot. This is contrary to the results of the Massachusetts Experiment, but similar results are now being shown in all of our experiments wherever this comparison occurs. Hence the differences in the Massachusetts experiment would seem to be due to something other than the difference in potash carriers. At present, therefore, we believe that the muriate is at least as efficient as the sulphate and in view of the facts that it is cheaper, more soluble, and much less subject to "caking" in the mixtures, we are using and recommending it for apples.

In plots 11 and 12, and other similarly treated plots in our experiments we see the apparent futility of attempting to materially improve yields by applying phosphates alone. This is not due to the fact that phosphates are not needed, nor can it be largely attributable to the absence of cultivation as may be seen by comparing the results in plots 9 and 2. Nitrogen, by itself in No. 9, shows an annual gain of 96 per cent. or 113 bushels per acre, but when Phosphorus is added in plot 2, these benefits are more than doubled.

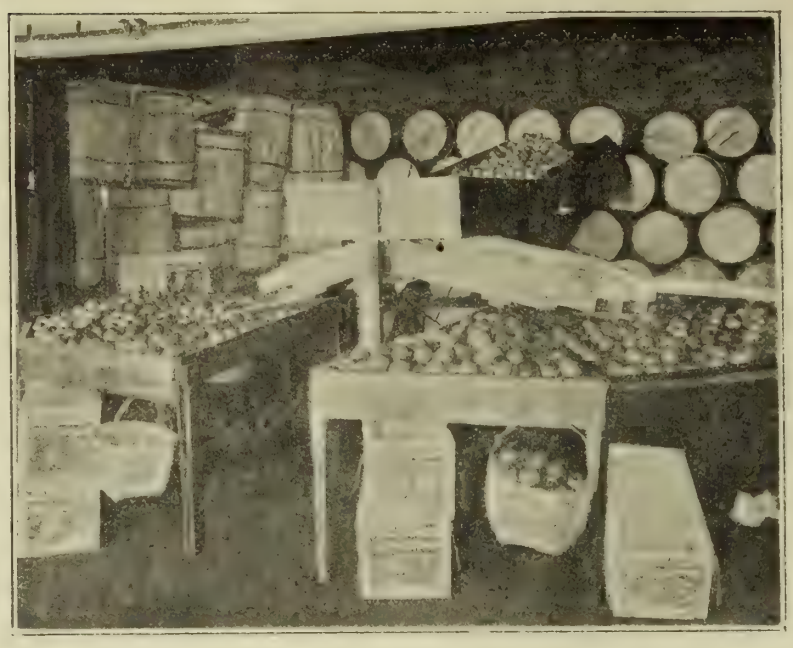
Phosphorus, as usual, therefore, appears to be next in importance after nitrogen in improving yields.

THE PERMANENCE OF FERTILIZER INFLUENCE.—It is another fairly common impression that the influence of fertilizers is transient and that, even where their effect is favorable at first, this effect soon wears out and may leave the soil worse than before. This evidently depends very largely on the character of the fertilization, and in this respect apples are not different from other crops. If the gains are induced by some caustic action of such materials as gypsum or lime when used alone, this may actually be the final result.

On the other hand it should be noted here that in plots 2, 3 and 8 where definite plant foods are being supplied, the effects of fertilization were greater than ever before in 1912, the sixth year of the experiment. The steadiness and regularity of the increases, also, are especially notable in plot 8, which shows a distinct gain in every year except 1909, and in that year the yield would have been fully 1000 lbs. greater had there been sufficient moisture available to properly mature the fruits that were actually present.

In plots 2 and 3, the fertilization has not been complete and also the yields have been so large in the even-numbered years that it was impossible to prevent some alternation with lighter crops in the odd years. This same general condition is evident to a considerable extent in the Johnston orchard. In other experiments, however, and especially in one primarily on cultural methods in the Fassett orchard, with proper fertilization and with crops ranging between 300 and 600 bushels per acre, we have had steady increases on Baldwins and Spies similar to those in plot 8, which extended over a period of five years before any decrease appeared.

The unusual size of the 1912 crops on plots 2 and 3 in the Brown experiments should also be noted. While their adjacent checks 1 and 4, were showing an average yield of 73.2 bushels per acre, plots 2 and 3 were producing the tremendous average of 1217.5 bushels per acre, and 1006 bushels of this were picked fruit. The terminal twig-growth of the checks, also, would scarcely average half an inch for the season, while that of the fertilized plots in spite of their enormous crops, averaged from 6 to 8 inches with frequent terminals running up to 2 feet. And all these differences were brought about solely as a result of differences in fertilization.



Apple Grading Machine in the Waterville Fruit Company's Warehouse, Waterville, N. S. The Only Machine of its Kind in the Province.

Cherry-Picking in Hillcrest Orchards, Kentville, N. S.

The spraying, pruning, soil management, variety and age of trees, and all other visible features were just the same on the checks as on the fertilized plots.

RESULTS IN THE TYSON ORCHARD.

In the two preceding experiments, we have seen very large annual gains resulting from certain fertilization, particularly that rich in nitrogen and phosphorus, regardless of whether these elements were carried in manure or in commercial forms. In these cases, also, the gains from potash were relatively small or entirely absent. Thus far in the Pyson experiment, so far as yields are concerned, we have practically the reverse conditions.

The trees in the latter experiment are much younger, being now but 14 years of age, The varieties are York Imperial and Stayman Winesap, the latter having been top-worked on certain York rows about 6 years after planting. The soil is a relatively heavy, silt loam, and tillage and annual cover crops have been maintained near the trees practically uniformly since the orchard was started. The annual growth and general appearance of all the trees in this experiment are much better than those of the average check trees in the two preceding experiments, practically no fruit had been borne by these trees, when our experiment was started in 1907, and there has been but one fairly full crop since then—that of 1911. The treatments are the same as in the Brown Experiment and the results are shown in Table IV.

As already indicated, the relative youth of these trees make both their yields and differences much less than those in the preceding experiments. With increasing age, it is probable that some of the results may be different especially in view of the relative growth that is now being made under the different treatments. At present, however, certain facts are of interest.

In the first place, the practical failure here of both manure and nitrogen is quite remarkable. The regular annual application of 12 tons of stable manure, in this case, has resulted in an annual gain of less than 4 bushels of apples per acre. During the same time, nitrogen alone has shown no gain at all, and nitrogen and phosphates, which were so effective in the preceding experiments, here show an annual gain of only 12 bushels per acre—not enought to pay for the treatment.

Potash on the other hand, in direct contrast to its effect in the experiments above, here shows a distinct gain in yield wherever it is applied. The best of these gains—in combination with nitrogen, is only 43 bushels per acre annually, but this is more than a 50 per cent. increase over the normal yield, and it shows a fair profit over the cost of treatment, besides giving over 17 per cent. of an increase in growth. Potash applications therefore, have evidently been of value in this orchard, even when those of manure and nitrogen and phosphates were largely failing.

THE ACTION OF MANURE VS. THAT OF COMMERCIAL FERTILIZERS.—The above facts, taken in connection with those shown in the two earlier experiments, indicate that the plant food action of manure is practically identical with that of a commercial fertilizer rich in nitrogen and phosphates. It also apparently indicates that the potash in the manure may be less readily available than that carried in commercial form. The old controversy over the relative value of manure and commercial fertilizers, therefore, is without any particular significance so far as plant food is concerned. Either type of fertilizer may be successful or either may be a failure depending upon the particular conditions involved.

The manure, however, often has some additional value, due to its mulching effect. This, of course, cannot be duplicated by commercial fertilizers alone, though it may be duplicated by any kind of a mulch, as has been shown, especially in our experiment 339, in Bradford County. The matter of availability also must be often considered and it is for this reason that the relation between manure and nitrigenous fertilizers should be well understood. Besides this, it sometimes happens that large and regular applications of manure result in a distinct increase in the amount of blight, and also in an undue increase in the size of the fruit and in the amount of punky pitting in the latter. In such cases, a reduction in the applications or the partial or complete substitution of a proper commercial fertilizer is desirable.

TABLE IV. INFLUENCE OF FERTILIZATION ON YIELD AND GROWTH IN EXPERIMENT 215 (TYSON ORCHARD.)

(Yields in pounds per plot 1908–1912.)

Plot	Treatment	1908	1909	1910	1911	1912	Totals	Benefit over Normal	3 year Av. Gain over Av. Check	Growth Gain over Normal 6 years
1	Check	14	95	346	2053	549	3057	P. Cent.	Bu. per A.	Per Cent.
2	Nitr. and Phos	26	73	301	2277	464	3141	8.0	12.2	7.4
3	Nitr. and Potash	43	115	418	3043	542	4161	50.9	43.0	17.7
4	Check	21	54	260	1555	719	2609			
5	Phos. and Mur	26	146	476	2828	495	3971	46.1	36.5	8.1
6	Phos. and Sulf	61	179	483	2352	975	4051	43.2	36.8	2.3
7	Check	18	45	335	1777	862	2937			
8	Comp. Ftlzr	21	74	300	2885	190	3470	26.7	22.9	12.7
9	Nitrogen	17	83	229	1746	551	2626	3.5	4.7	7.9
10	Check	17	89	150	1579	504	2339			
11	Acid Phos	3	43	153	1359	655	2213	9.8	15.8	4.4
12	Raw Acid	4	62	164	2010	842	3082	20.0	11.4	0.8
13	Check	31	46	103	1886	615	2681			
14	Manure	15	52	190	2333	262	2852	4.1	4.0	14.6
15	Lime and Ftlzr	27	86	186	1765	113	3177	13.4	13.1	1.6
16	Check	10	76	115	1922	739	2862			

A SUMMARY OF FERTILIZER INFLUENCES ON APPLES.

It is impossible in the present space to consider all our experiments singly, to the extent done with the three just considered. Before passing to the last stage of our discussion, however it seems desirable to present a very brief summary of the fertilizer in-

fluences shown in six of our experiments, including the three just considered. This summary shows the calculated influences of the various fertilizer elements on the four important characteristics of apples, viz. their yield, color, average size and the amount of wood-growth. The relative values of the different elements during a five-year period in terms of per cents of benefit over the normal results obtained without fertilization, are shown in Table V.

Without going into details it may be noted that in general the same influences that have materially increased the yields have also increased the growth. In other words our best growing plots have as a rule been our best fruiting plots. On sound healthy trees this will generally be the case unless either occurs to an abnormal extent, in which case the other may be somewhat reduced. Mild injuries may also stimulate the yields at the expense of growth.

In Table V. the most marked exception to our rule above appears in the case of the phosphates, especially in the lower section of the table. This may be connected with the fact that the old wood especially is very low in phosphoric acid as shown in Table I, and our present definite growth determinations are based upon increase in trunk-girth alone. On twig-growth however, our observations indicate that phosphate additions have been very helpful, particularly in the Brown orchard. This also tends to bring it in line with our rule above.

THE CONTROL OF AVERAGE SIZE.—So far as fertilization is concerned, manure and potash are the or materials that have consistently benefited size. The manure influence is doubtless very largely due to its mulching or moisture conserving effect, since moisture make up about 84.6 per cent. of this fruit, on th average. The potash influence also, so far as it is a definite benefit, is probably brought about through the same medium, inasmuch as potash is credited with some ability to increase the osmotic power of the cells, thus enabling them to compete more successfully for whatever water is present.

There is also a distinct possibility that the apparent benefit of potash on size may be largely due to the fact that it is associated with much lower yields than the other materials, especially nitrogen. Conversely, the failures to increase size may likewise be due to their association with markedly increased yields.

This brings out the general proposition to which we have called definite attention elsewhere, that with a normal moisture supply the dominant influence controlling size in apples is the number of fruits on the tree, after this number has passed a certain optimum or "critical point." This point, however, is relatively high, our data showing that even on trees up to 15 years of age, little or no correlation appeared until the number of fruit reached 1400 or more per tree. Above this point, proper thinning is the most important means of increasing the size of the fruit. Below it, the size can usually be markedly affected by moisture supply, cultural methods, manure and possibly by fertilizers—especially by those rich in potash. The latter factors may also co-operate in such a way as to materially raise the critical point. In general, however, proper thinning and moisture conservation are the most important means of improving fruit size.

THE CONTROL OF FRUIT COLOR —In Table V. it will be observed that none of the fertilizer treatments has resulted in any marked improvement in color. Slight and irregular benefits are shown by potash and some of the phosphate applications but nothing of any importance. The same is true of iron applications so far as experimental evidence is concerned.

Ontario's in Capt. C. O. Allan's Farm, near Kentville, N. S.

Tile-Draining an Apple Orchard

2. See Table XVIII. in the writer's article in the Annual Report of the Pennsylvania State College for 1910-11, page 435.

3. See article referred to in foot note 2, pages 500-503.

These facts again lead up to the general propositions that color in apples cannot be materially increased by fertilizer applications, and that the red colors of apples are essentially dependent upon maturity and sunlight. Conditions that tend to increase one or both of the latter factors, such as late picking, open prunning, light soils, and sod culture tend to increase the red color. Opposite conditions decrease it.

These propositions make it clear why the nitrates and manure apparantly injure color. It is simply done by retarding maturity and diminishing the available sunlight as a result of the increased density of foliage. To determine the truth of this, in 1911 we left the fruit on the nitrate plots in the Johnston orchard until it had reached approximately the same degree of maturity as that attained by the checks when their fruit had to be picked on account of dropping. The delay required was fully three weeks—from September 29th to October 19, and even then the latter fruit picked much harder than that on the checks, besides showing a much lower percentage of drops. The amount of color on the nitrate plots at the later date was also actually greater by 10 per cent than that shown on the checks at their picking time.

The occasional marked increase on color as a result of spraying is largelainable on similar grounds. The sprays reduce the worminess and thus enable the fruit to remain longer on the tree. It also may reduce somewhat the amount of foliage as a result of spraying injury thus permitting more light to reach the fruit. In general, however, in improving color, chief reliance must be placed on those methods that tend definitely to secure fuller maturity on the tree and to get the maximum amounts of light to the fruit.

TABLE V. INFLUENCE OF FERTILIZER ELEMENTS ON APPLES.
(Average benefits over normals, 1908 to 1912.)

(a) Expts. 215, 216, 7 220	Yield P.Cent	Color P.Cent.	Size P.Cent.	Growth 1907—12 P.Cent.
Nitrates in Combination	62.7	—11.0	—0.7	10.43
" alone	32.5	—12.7	—4.3	15.51
Phos. in Combination	20.2	—2.1	0.3	2.28
" alone	—10.7	2.7	—0.6	2.45
Potash in Combin	15.1	2.7	5.8	3.67
Complete Fertilizer	78.3	—15.4	5.2	17.67
Manure	75.9	—11.4	5.8	29.07
Lime Alone	—8.24	—0.3	—2.0	6.31
(b) Expts. 336, 338 and 339.	1908—12	1909—12	1909—12	1908—12
Nitrates in Combination	74.5	—12.7	—0.4	27.00
Phosphates in Combination	33.5	—2.8	4.9	—0.23
Potash in Combination	—3.6	1.4	7.1	2.79
Complete Fertilizer	80.5	—15.6	5.2	29.63
Manure	168.8	—15.9	25.2	37.34
Lime Alone	29.8	—5.4	15.9	15.48

APPLYIMG PRESENT DATA TO INDIVIDUAL ORCHARDS.

In the three experiments discussed separately above, it was noted that the materials found most valuable in the first two were practical failures in the 3rd and vice versa. In still others we might show cases where no form af fertilization has yet shown a profit. These and other cases prove conclusively the local nature of the problem. Hence not even the experiments of others can offer more than general advice on the fertilization of a particular orchard.

This advice can doubtless be made more exact after a personal examination of the orchard concerned, by one who is familiar with orchard fertilization work, or it may be done with a greater certainty if the owner will give attention to some of the more important characteristics of orchards needing fertilization. These are best observed in late summer and fall.

In general the characteristics of the orchard that is certainly in need of a fertilizer are those of starvation. They are usually sufficiently familiar to need no extended description. They are found most commonly in the older orchards that have once borne well but no longer are doing so, though still fairly free from important disease or improper drainage. The foliage is sparce and pale in such orchards and the annual twig-growth [illegible] and averages short, often no more than half an inch, and from this it may range up to 2 or 3 inches. In such cases, one can usually apply fertilizers fairly liberally with practical confidence of profits, providing the varieties and other handling are right. Even in such an orchard, however, it is advisable to leave a small typical portion unfertilized to really determine the value of the treatment.

Under opposite conditions, such as obtain in most young orchards or in any orchard that is still growing and fruiting well and retaining green and healthy leaves until late in the season, fertilization is much less likely to show a profit. Even in such cases, however, there is often enough probability of benefit to warrant some trial of fertilization, but only over a relatively small area, and with most of the orchard left unfertilized as a check.

These trials are especially necessary in the intermediate orchards— those on the zone lying between the two extreme types just described. Occasionally this intermediate type of orchard will respond very strongly to fertilization, without necessarily showing the characteristic marks, as is essentially illustrated in the Johnston orchard.

A GENERAL FERTILIZER RECOMMENDED FOR APPLES.

For preliminary use in such cases, and for permanent use on the part of those who are unable to carr- out

(Continued on page 471)

Flowers in the Experimental Gardens Charlottetown

Floral Society Organized

By J. A. Clarke, B. S. A., Supt. P. E. I. Experimental Station

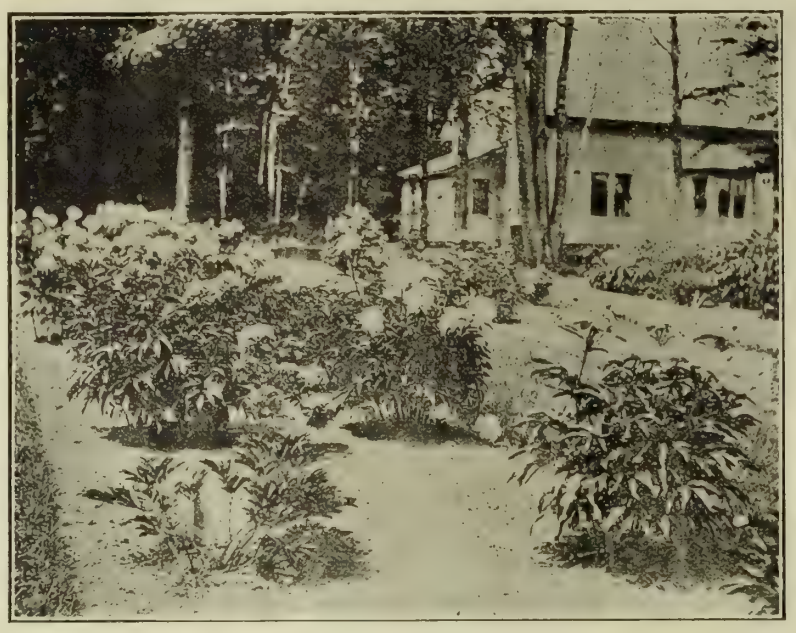
THE Snowdrops and Crocusus unfolded their beautiful buds the last week in April and remained open until the main body of the Tulips and Narcissi were in full bloom. Those bulbs were planted the 13th of October the previous autumn and covered for the winter with a dressing of strawy manure. They brightened the lawns and borders with their brilliant show colours all through May and until the 21st of June.

The perennial Iris, shown in the accompanying illustration came into bloom about the middle of June and were the centre of attraction until the first week in July, when the Paeonies spread their abundant and varied blooms. The latter are shown in the second illustration, and though their stay was comparatively brief, they overshadowed all other flowers for the time being.

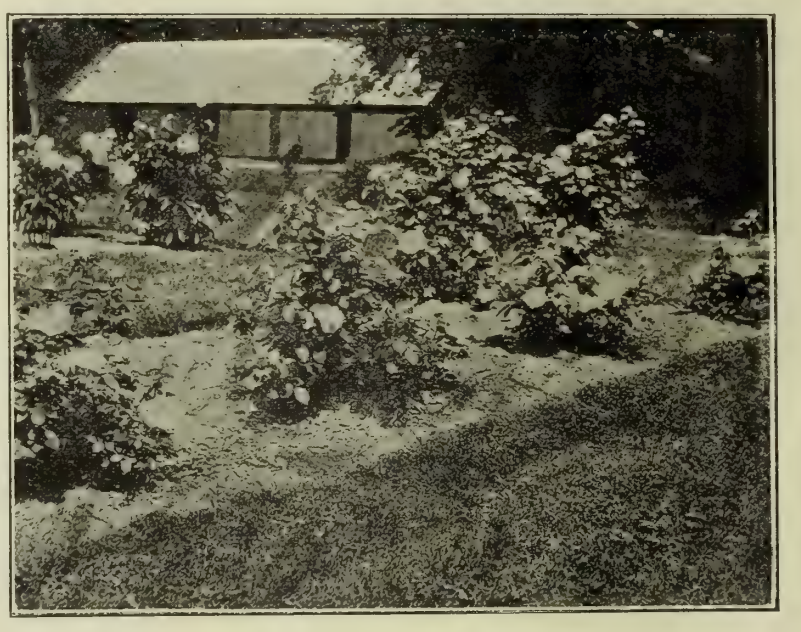
A superb showing of perpetual roses, with but a brief intermission in August, bloomed from July until the 10th of October. The perennials mentioned above were all planted in the Spring of 1910; large forest trees were removed to prepare the soil for them, which was not naturally rich. A very moderate amount of manure was applied each year as a top dressing and as a protection to the Tulip bulbs, etc., that were planted in the sgme beds for the winter. CULTIVATION is our watchword for success.

The next illustration shows water Lilies growing in the pond at the Experimental Station. A few roots of five varieties of these plants were obtained from Kentucky in 1910 and were planted in good soil in open baskets; these were sunk with stones in groups in the pond. The Caddice-worm, or May-fly larvae, proved very injurious the first season and the lilies all had to be removed to another pond until late in July when the May fly larvae had hatched out. A long continued drought in 1910 lowered the water much lower than it had been for many years, which, apparently has killed off this pest. The photos shown were taken in June 1912, and show a few of the groups of these beautiful flowers which continued blooming until killed by the frost. Seedling plants came up all over the pond in September 1912, and in a short time the whole surface will probably be covered with pink and yellow and white blooms, as large as Paeonies.

The Sweet Peas made a grand showing among the annual flowers. They began blooming July 7th, and though it was an off-year with many Sweet Pea growers, they bloomed profusely until the fourth of November when hard frost set in. Sweet Peas should be planted early and will withstand ordinary frost. We had the land ridged up the previous fall, and during a mild time about the middle of April, or as soon as the frost came out three or four inches, we stirred the surface with a garden rake one afternoon about 2 o'clock, P. M. when the surface was dry enough to form a mulch. Two days afterwards, while the frost was within five inches of the surface and the soil mucky elsewhere, we harrowed the treated part with the spring-tooth harrow and it worked well; the mulched surface holding the heat so that the frost was out as deep as we had occasion to dig our trenches for manure. Well rotted manure was used and the seed sown in double shallow trenches six inches apart on the top of three long drills. On the 17 of April the seed was sown and, as the plants came up the trenches were filled in, giving the plants a deep-root system. The paths between drills were six feet wide, and we will make them wider yet this year. The illustration shows the vines on wire netting. We put up a web four feet high as soon as the plants were well above ground. As soon as they reached the top of this, another web four feet wide was added to it, and many of the eighty varieties may be seen above the top of the wire. Sweet Pea blooms should be cut continually for the more you give away the more you have.—J. S. Clark, Superintendent.



Paeonies in the Experimental Farm Gardens, Charlotteiown, P. E. I.



Roses in the Experimental Farm Gardens, Charlottetown, P. E. I.

Sweet Peas in the Experimental Farm Gardens, Charlottetown, P. E. I.

FLORAL SOCIETY ORGANIZED

"The meeting held on a recent evening in the office of Mr. C. Williams for the purpose of organizing a floral society was well attended.

"Mr. J. A. Clark, Superintendent of the Experimental Station, was called to the chair and Mr. C. Williams was appointed Secretary. The minutes of a meeting held a few evenings previously were read and approved.

"The chairman in explaining the object af the meeting emphasized the importance of such an organization as was proposed, both to the members and to the province, indicating a number of directions in which the activities of such a society might lead, such as beautifying the city, town or rural community, inculcating a love of nature study, teaching the best methods of growing flowers and plants, etc. He also suggested, and the suggestion was deservedly applauded, that through the influence of such a society, the official keepers of the parks and streets of the city might be induced to label the trees so that the children would become familiar with their names and varieties.

The chairman also read a letter from Mr. James D. Stewart, Georgetown, regretting his inability to be present at the meeting and offering to give the organization about to be formed his hearty support and sympathy.

"A wire from Mr. W. S. Louson, who was out of town, also expressed regret at being inavoidably absent and offering to donate a trophy to be awarded as a prize for the best kept garden in Charlottetown, the winner for two seasons to be the owner.

A number of gentlemen spoke including Mr. Walter Jones, Hon. M. McKinnon, Commissioner of Agriculture, Messrs. Alley, Wannacot, Williams, Dr. Pethick and ex-Governor McKinnon.

"On motion it was decided to name the organization "The Floral Association of Prince Edward Island," and the following officers were appointed:—

Hon. President, Hon. Mr. McKinnon; President, Mr. J. A. Clark; Sec.—Treas., Mr. O. Williams; Vice-Pres., Queens, Miss Pearl Taylor; Vice-Pres., Kings, Mrs. D. J. Stewart, Lower Montague; Vice-Pres., Prince, Mrs. R. T. Holman, Summerside; Executive Committee, Messrs. J. D. Stewart, Georgetown; A. Alley, L. A. Haszard, Mrs. C. R. Smallwood, Mrs. J. A. Clark, Mrs. R. Grant, Charlottetown; Mrs. J. E. Wyatt, Summerside; Mrs. John McLean, Souris; Rev. Dr. Gauthier, Palmer Road, Prince County.

"The membership fee was placed at fifty cents and it was decided to hold a floral show during the later part of August: Time and place to be arranged for by the Executive Committee.

"A unanimous vote of thanks was tendered to Mr. W. S. Louson for his generous guft; and the meeting adjourned to meet again at the call of the President."

The Use of Fertilization in Apple Orchards

(Continued from page 469)

such a local test as is shown later, we are now recommending the general fertilizer indicated in Table VI. The fertilizers are stated in amounts per acre rather than in amounts per tree, because of the varying numbers of trees that are planted on an acre. The amount per tree for any particular case are readily obtainable, however, by dividing the present amounts by the given number of trees per acre. With young trees, the amounts may be reduced approximately in proportion to the area covered, making this area correspond with that of the roots so far as possible.

FOR YOUNG ORCHARDS, reduce these amounts in proportion to area covered.

This table means that a fertilizer carrying about 30 lbs. of actual nitrogen, 50 lbs. of actual phosphoric acid (P_2O_5) and 25 to 50 lbs. of actual Potash (K_2O) should be applied on an acre of bearing trees. Where potash is not known to be lacking the smaller amount may be used, or after a little testing it may even be omitted entirely. With the smaller amount of potash the essentials of the present combination are carried in 500 lbs. of a 6-10-5 fertilizer, and with the larger amount they are carried in the same weight of a 6-10-10 fertilizer or its equivalent. In the usual ready mixed fertilizers, the nitrogen is likely to be carried in Ammonium Sulphate with which some liming may be necessary if many applications are made, and especially if leguminous cover crops or permanent covers are desired. In special or in home-made mixtures, the various elements may be carried in any of the materials indicated in the table.

TABLE VI. A GENERAL FERTILIZER FOR APPLE ORCHARDS.
(Amounts per acre for bearing trees.)

Nitrogen 30 lb. (N)	Phosphor. Acid 50 lb. (P_2O_5)	Potash 25 to 50 lbs. (K_2O)
Carried in: 100 lb. Nitrate & 150 lb. d. Blood or in 150 lb. Ammon. Sulphate	Carried in: 350 lb. Acid Pho or in 200 lb. B. Meal or in 300 lb. B. Slag	Carried in: 50 to 100 lbs. Mur. or in 100 to 200 lb. low-grade Sul.

In our work the nitrogen is carried in the combination of nitrate of soda and dried blood indicated in the table. This combination carries about equal amounts of nitrogen in each material, and it thus gives a quick action as well as one that is prolonged well through the season. The nitrogen being the costliest and most active ingredient, requires close watching and possible variations in amount, in order to get the most out of it. It may also be secured, wholly or in part, by the use of stable manure or leguminous plants where carriers indicated in the table we they are available. With the other have very little evidence on their relative value as yet and hence those that are actually least expensive or most convenient should be chosen. All applications should be made annually, subject to the variations indicated below.

TIME AND METHOD OF APPLICATION.

The time of application we believe to be of distinct importance, especially in the case of nitrates. While our evidence on this is by no means complete, yet there are good indications that nitrates can easily be supplied too early in the season and thus be wholly lost to the trees. Other evidence leads to the opinion that distinct harm may result from their application about fruit-setting time, especially in the case of the peach. We feel, therefore, that the nitrates should be applied not earlier than petal-fall in apples, and probably not later than the middle of July. In general about the middle of this period should be very good, though some of our best results have come from applications made as late as the 8th of July.

With the peach in Missouri, Dr. Whitten reports that the time of application is very important and that very large increases in yield have been obtained from moderate quantities of nitrate of soda alone when "applied at the right time." This is considered to be "after the main length growth has taken place in the early summer." Such applications kept the trees from going into the rest period too early, and maintained a green and healthy condition throughout late summer and autumn without renewing the growth in twig-length. It may also be noted that in the English work at the Woburn Experimental Fruit Farm, July applications proved beneficial, while those made in February were of no avail.

An incidental advantage of the delayed application appears in the fact that it gives an opportunity to vary its rate somewhat in accord with the size of the crop set on the trees. When the crop is light, much smaller applications are required, because of the natural tendency of the trees to develop a sufficient number of fruit buds in the off season. Proper utilization of this fact should save much in a series of years, and also enable one to secure the maximum return for the fertilization applied.

In the case of the mineral ingredients, with their lower solubility and slower action, the time of application is less important. Some of the most careful observers in commercial work regularly apply their phosphates and potash in the fall on their peach orchards, and believe that this gives best results. Thus far, however, we have felt that the time of application for the minerals is of relatively little importance, since they are rather quickly fixed in the soil, in any case and they do not leach readily. We, therefore, apply them along with the nitrogen at the time that we consider best for it.

The method of application that we have followed is merely to scatter the fertilizer or manure broadcast over the surface of the ground, taking care not to get it too close to the tree trunk where there are few absorbent roots, and extending the applications well out beyond the spread of the branches. To conform more closely with the distribution of feeding roots, the rate of application is made heaviest in the central part of this area, or in general it is applied heaviest under the outer two-thirds of the spread of the branches. This fertilization may either be left on the surface to be washed in by the rains or it may be harrowed or lightly plowed into the soil. With all this done, it should be remembered that the fertilizer applied in any given season can hardly materially affect the yield of that year, since the fruit buds are formed in the latter part of the preceding season. Important results, therefore, should not be expected before the following season, at the earliest, and as indicated in some of our experiments, they may not appear until considerably later and still prove of value.

4. See proceedings of the Society for Horticultural Science 1911, p. 37.

APPLES NOT GRAPES
Coming Annapolis County Fruit Growers

Sweet Peas in the Experimental Farm Gardens, Charlottetown, P. E. I.

DETERMINING THE ACTUAL NEEDS OF AN ORCHARD.

The general fertilizer formula indicated above is for use only until the exact needs of the particular orchard can be determined. In other words, it is intended to meet only immediate demands. If in the meantime, one wishes really to answer the question of how to fertilize his own orchard, he can do so by following the plan outlined in Table VII. This plan is especially adapted to the needs of commercial orchardists and to "community" tests on the part of the smaller growers.

TABLE VII.

PLAN FOR LOCAL ORCHARD FERTILIZER TEST.

Pounds for a mature tree in bearing.

1. Check untreated.
2. Niter, 2½ lb.; D. Blood, 3½ lb.; Ac. Phos. 10 lb.
3. Niter, 2½ lb.; D. Blood, 3½ lb.; Potash, 2 lb.
4. Acid Phos. 10 lb.; Potash, 2 lb.
5. Check.
6. Niter 2½ lb. D. Blood, 3½ lb.; Ac. Phos. 10 lb.; Potash 2 lb.
7. Same as VI. plus Lime 12 to 25 lbs.
8. Manure 400 lbs.
9. Check.

This test should be located in a typical part of the orchard, and should include not less than 5 average trees of the same variety and age, in each plot. All the trees should be labeled and carefully measured at a fixed point on the trunk, and definite records of their growth and yields should be kept for at least 3 years. Frequently good indications of the orchard's needs may be obtained in less time than this, as shown above in the Johnston and Brown orchards but at least this amount of time should be allowed and more should be used when necessary.

The same time and methods of application and other precautions should be followed as described above. The materials are indicated here in amount per bearing tree instead of per acre as above and the same reductions should be made for younger trees. In other words if only a third of the ground is to be covered, then only about a third of these amounts should be used, if the rate of application is to be kept within proper bounds.

These general precautions, together with the exercise of proper judgment on the part of the grower, are entirely sufficient to carry this plan to a successful conclusion and definitely settle the fertilizer needs of any ordinary orchard within a few years. If additional rules and precautions are desired, however, they can be found in the Annual Report of the Pennsylvania State College for 1910-11, pages 409-11. In addition, it should be remembered that an orchard may not show the need of a fertilizer when young, but may develop this need later, especially when heavy bearing is reached. This means that the cases that appear negative at one time may often need further tests and observations later.

(Continued on page 499)

Progressive Fruit Growers in Carleton County, N. B.

By Tappan Adney, Woodstock, N. B.

C. L. SMITH

NO ONE has been more prominently identified with the varied farming interests of Carleton County than C. L. Smith, Esq., of Woodstock. He was for a number of years President of the Carleton Agricultural Society. He has been a breeder of pure bred stock and like all our advanced farmers he has taken a great interest in orchard matters, but more especially is this true of Mr. Smith. A nephew of of the late F. P. Sharp, almost his first independent work was in the nursery business for Mr. Sharp. In an interview with the farmer representative he stated that Mr. Sharp first aroused his interest in orchards, gave him seeds tp plant, showed him how to graft and made a nursery and with this nursery planted an orchard which he now has. Mr. Smith now owns in all about eleven acres of apple orchard. One of these orchards, at the rear of his farm, has an interesting history. It was planted upwards of a hundred years ago by a great uncle. All orchards were then seedlings. Some of these seedlings bore and still bear very good fruit. Your representative was shown a plate full on the table from one of the old trees, resembling a Wealthy in appearance and not at all an inferior fruit. This was in March. Later on Fameuse were planted.

Of upwards of one hundred trees in this old orchard not one is dead from natural causes, which might be considered the more singular, as Mr. Smith pointed out, as the slope is a southern exposure which some regard as the one position to be avoided in cold countries. Another noteworthy fact is that it stands on ground of the shallowest description.

Two years ago several of the old trees were cut down and dug up when it was found that the soil in many places was only fourteen inches deep, the rocky ledge coming almost to the surface. From this course, however, the trees secured the warmth so necessary in our climate, the roots were thus prevented extending downwards as their nature is to do, and thus long life, vigor and productiveness was assured and maintained.

This goes to show each country must by its own experience discover the modes of culture best adapted to it, no matter whether they conflict with theories and experience acceptable elsewhere.

Mr. Smith has had a prominent part in public affairs, having served for the county in the local assembly, as postmaster at Woodstock and was an unsuccessful candidate of his party for the local house at the last election. His farm was the one selected by the Federal authorities as the Experimental Farm had that farm been located in this section of the Province as many hoped it would.

C. L. Smith.

The Fisher Orchard, Woodstock, N. B., Second Oldest Commercial Orchard in the Province.

Young Wealthy Orchard Showing Summer Cultivation and Mulch in Geo. DeWitt's Orchard, Upper Woodstock, N. B,

C. L. S. AND A. J. RAYMOND

The Raymond brothers whose well kept dairy and fruit farm lies on the River Road two miles below Woodstock, have been distinctly and prominently identified with horticultural work for many years. Sons of the late Col. Raymond and brothers of Rev. W. O. Raymond, the New Brunswick historian, they reside on the old Raymond farm where Mr. C. L. S. Raymond has more especially carried on the horticultural work. His three acre orchard of New Brunswickers, close planted (16x16 ft.) has been a large and profitable producer, from 300 to 600 barrels annually, while an extensive market garden of vegetables and small fruits as strawberries, currents and gooseberries furnished a large share of what is used in Woodstock.

The ideas of these gentlemen have recently been expressed by Mr. Lee Raymond' "We have realized the necessity of care and thoroughness in all departments of the work. Fruit growing is one of the most interesting branches of farm work in spite of the uncertainties connected with doing a certain amount of experimental work. In regard to our experiences with varieties, we have not had success with the Japanese plums and some of the best blackberries, or pears, or cherries. Strawberries do well. Raspberries such as Cuthbert, Golden Queen, and even the Marlboro will stand our average winter if the canes are bent to the ground. Gooseberries are a fairly sure crop, all things considered we find the Downing about the most satisfactory.

Fifteen years ago we had an orchard of five or six hundred trees the greater part Mooer's Arctic, a considerable number of Imperial Gage and a few Lombards, Coe's Golden Drop Saunders and other varieties. We followed the method of cultivation devised and recommended by our great pioneer fruit grower the late F. P. Sharp, setting the trees in a deep furrow the main roots running in two directions and every fall bending them down to the ground by shovelling away a little earth at one side and staking them down so as to be covered and protected by the snow. When the frost was sufficiently gone out of the ground in spring the trees were raised and held upright by a stake. This process is undoubtedly very conducive to fruit formation, the tree appears to know by instinct that its hold upon the soil is insecure and expends its strength in production of fruit. Under this method the bearing life of the tree is relatively short but for a number of years we had large crops of plums.

Mr. S. L. Peters visited this orchard one season and declared it was the finest plum orchard he had yet seen. The Saunders, a yellow plum, seemed one of the most hardy, very early and a fine preserving fruit, so thinking it would stand without the work of laying down we got a dozen to try. These trees are nearly all alive today, stand the winters well, but for a number of years have borne no fruit although they have blossomed out. They are now too large to lay down and we would like to know what will make then bear.

The method of plum culture referred to by Mr. Raymond was discovered by Mr. Sharp more than thirty years ago, fully described by him in 1882 with the scientific reasons for extraordinary fruitfulness induced, and was justly regarded by him as one of the most important discoveries in horticulture. His own orchard of about five acres produced annually 3000 to 6000 peck boxes of plums and wherever this method has been followed in the Province plums have borne crops surpassing belief, the limbs requiring to be staked up to prevent breaking down under the weight of fruit. So much of the tree's vitality going into fruit year after year instead of trunk shortened the life of the tree limiting its most productive period to eleven or twelve years yet a sufficient period for enormous profit. The remedy is, of course that advocated and practiced by such eminent fruit growers as Mr. W. H. Bunting, of Ontario, with peaches, to maintain them so many years, each year adding a little new orchard and cutting down the old trees and making other use of the land.

HUMBOLT SHARP

The youngest son of F. P. Sharp, the subject of this sketch was for

TAPPAN ADNEY, Woodstock, N. B.
A well informed orchardist and son-in-law of the late F. P. Sharp.

many years a prominent figure and authority in horticultural matters here when his father gave up active work and made over the nursery business to his eldest son Franklin. The younger son received for his part the old orchard at Northampton including "Model Orchard" and engaged in the wholesale apple business, in 1890 shipping 30 carloads to market.

The "Model Orchard," 4 acres of New Brunswickers, close planted and now thinned to 16 feet each way, was then in its prime produced 400 to 1000 barrels annually. After his brother's decease in 1892 he took into partnership, C. W. Dugan, and for many years this firm handled the bulk of apples shipped from the county, and also engaged in the nursery business. With the decline in production, the export surplus of fruit gradually fell off and he was persuaded to try his fortunes in the West several years ago and removed to Red Deer, Alberta. Although expert in his line the climate did not prove suitable for nurseries but he was phenomenally successful in gardening as his father had been. So receiving an advantageous offer from

Humbolt Sharp, Upper Woodstock, N. B.

the fruit section of British Columbia where his special talent would have better outlet he removed thither with family and is now engaged in apple ranching at Armstrong, in that Province.

It is understood that he is experimenting and carrying out some of his father's discoveries regarding nursery tree cultivation. He left here when interest in fruit growing was at a rather low ebb, and the county has felt a distinct loss, as he left no one here quite so well versed in those methods of cultivation, pruning, etc., by following which in the past the county had attained a respectable position as a producer of fine fruit.

COLES W. DUGAN

Mr. Dugan is a native of Woodstock who had "gone West," when opportunity opened to go into partnership with Humboldt Sharp, in the apple shipping and nursery business. The firm handled about all the County apples from 1895 for a number of years.

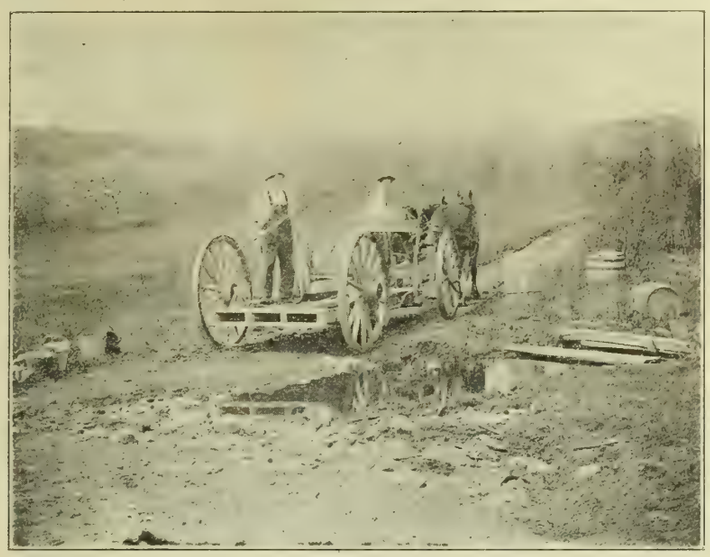
After the partnership dissolved Mr. Dugan went into the business of a wholesale dealer in farm psoduce and has been one of our largest shippers of hay, potatoes and apples. He purchased the Humboldt Sharp place at Northampton and owns the chief interest in ten acres, all Crimson Beauty apple trees in the Franklin Sharp Orchard, so that next to the Sharps he has had more to do with the handling of apples than any other man in the county and he has made it pay. It almost goes without saying that he is an advocate for the "local nursery," at any rate for this county, summing up his experience in these words:

"For sixteen years I handled practically all the fruit in the County and I have yet to buy, to my knowledge, a barrel of apples that came off an imported tree." Mr. Dugan is also actively interested in driving horses, his "Joe Hal" being perhaps his best known trackhorse.

LT. COL. H. F. W. DIBBLEE

Col. Dibblee is a citizen of Woodstock who has during many active years distinguished himself in connection with public and especially town matters who at the same time is one of our active farmers and interested in all matters relating to horticulture. One has only to get him started on the subject to be left in no doubt as to adaptability of New Brunswick to growing fine apples.

A son of the late Sheriff Dibblee and a connection of "Parson Dibblee" the first rector of Woodstock



Spraying in the Orchard of the Late F. P. Sharp, Woodstock, N. B.

A Young New Brunswicker

The Raymond Dairy and Fruit Farm, Woodstock, N. B.

who left in his diary interesting items about the country and the trials of the people in raising apples from seeds, as then was the only profitable practice, he is naturally appreciative of the impress left upon Horticulture by the late F. P. Sharp who showed us the way to profitable raising of fine varieties. He has a large young orchard of his own on his farm across the river.

Besides horticulture he is enthusiastic on the subject of the old "Warrior" strain of horses, which has descended in his family. He was for a number of years chief of the fire department and an officer in the artillary, now retired, and took a prominent part in canoeing when regattas and races were an annual feature of town life, and an enthusiastic sportsmen, in fact, an enthusiast in all his varied interests.

With A. B. Connell, Esq., he is trustee of the estate of the late F. P. Fisher, Esq., and is interested now in the planning and erection of various public buildings left by Mr. Fisher to the town of Woodstock.

WATSON BROTHERS

Three brothers displaying a faculty for working together are not so commonly met with but that the fact is worthy of mention. Such brothers are James, George and Mathias Watson. Their farms at the south of the village of "Hardscrabble" adjoin closely or rather comprise a single farm where in addition to general farming they have carried on for half a century the business of apple raising and market gardening.

The eldest (given in order above) came from the Old Country when a boy in 1848, with his father, Samuel Watson; his brothers were born here. It was at the time when upper Woodstock and adjoining district had begun to be the scenes of extensive activity in orchard and nursery work under direction of Mr. Sharp, so it was but natural that they should have begun work as boys with Mr. Sharp, continuing as long as the "Woodstock Nurseries" were in existence. They took exceptional interest in the subject and in their own work have been correspondingly successful. The brothers also, for a long time, specialized in cauliflower and cabbage, shipping a considerable amount to the St. John market. Their three acres of apple orchard of which one-half is Fameuse has been a source of profit, for they had learned the value of utmost care in packing so that our early apples packed by them for shipment are sufficient guarantee for better prices, while by exercising similar scrupulousness in packing the Fameuse and holding in storage they have commanded the top price in the local market.

Their Fameuse orchard stands on one of those bits of natural "Fameuse soil" where such a thing as scab has been unknown. Their crops have invariably been large, the fruit large and handsome, with the minimum cost for cultivation, a factor important to consider. Yet, speaking one day to them about this matter of net profit when considering what varieties would be most profitable commercially, the idea was advanced that if such a variety as New Brunswicker were sorted and packed as it should be and as it had been when Mr. Sharp set the standard there was more money in them at even a dollar a barrel at the orchard than in Fameuse stored and sold in Spring for five dollars, because of the greater quantity of crop, less care of special and costly nature when planted in the avrage soil of our country. This was said mainly in protest against the indifferent and almost invariably bad packing by our average farmers of the excellent, hardy and prolific varieties of which most of our orchards are comprised.

Good Fruit, Dairy Shorthorns and Poultry

A Good Combination

On F. Schafheitlin's Lyndhurst Farm, Canning, N. S.

LYNDHURST Farm, the steading of J. Schafheitlin, Canning, N. S. has an orchard of thirty-six acres which is considered to be the most valuable uart of the farm, and consequently is receiving special attention.

Lyndhurst was purchased by its present owner in September, 1910 and is run co-operatively by Mr. and Mrs. Schafheitlin, and their two daughters and two sons. The sons are preparing for their future vocation by studying at the N. S. A. C., Truro, and McDonald A. C., St. Anne De-Bellevue.

Prior to purchase by Mr. Schafheitlin, Lyndhurst with its thirty-six acres of orchard, dykelands and twenty acres of upland and pasture had been neglected for some years. Mr. Schafheitlin's predecessor did not keep any cattle on the place, only horses, whereas, now the farm supports twelve head of cattle including five milch cows, four horses, two colts, pigs, poultry and bees.

The daughters take particular interest in their flock of Rhode Island Reds and in cream-cheese and butter-making.

The Lyndhurst orchards have been much improved much to the satisfaction of the Schafheitlins since they took possession of it. Proper pruning, spraying and thinning and careful cultivation and extensive grafting has worked quite a change.

In 1911 the crop of apples was twice as large as it had ever been before. In 1912 the yield amounted to only 60 per cent. of that of the preceding year but the apples were of good size and clean quality, a fact much appreciated by the United Fruit Companees, of which Mr. Schafheitlin is an ardent member.

Mr. Schafheitlin's orchard practices are somewhat as follows:—

In fall, after the leaves have dropped, the orchard which had been seeded in June and July to buckwheat, vetch and which naturally grows much cadlock is plowed. In the spring as early as weather conditions permit he starts pruning the trees, a practice which he plans to follow every second year with a dormant spray of Lime-Sulphur and Arsenate of Lead—1 part Lime-Sulphur to ten parts of water and 2-3 lbs. of Arsenate of Lead to forty gallons of the above solution. During the months of May, June and July he gives his trees three more applications of Lime-Sulphur at the rate of 1-40 and Arsenate of Lead two to four pounds per forty gallons.

Residence of F. Schafheitlin, Lyndhurst Orchards, Canning, N. S.

Clean Cultivation in the Lyndhurst Orchards.

Poultry have a free run on Lyndhurst Orchards. One of the Colony Houses is seen in the center.

Blossom Time in the Lyndhurst Orchards

He is very careful to see that, whenever he sprays, that each tree gets a thorough soaking of the dilution and that no part of the trees remain dry. After the spraying has been finished, he thins the apples, beginning with the early varieties and finishing up with the later ones. He continues at this job whenever he has time to spare until the fruit has to be harvested.

During the months of May and June the orchard is cultivated. He uses about 600 pounds of complete fertilizer to the acre, or ten tons of barn yard manure. In a few acres of young orchard he raises potatoes and turnips. He does not get the results in root crops that he would like on account of the farm being over-run with cadlock, which is a great nuisance.

The Lyndhurst apple crop in 1911 amounted to 2200 barrels and in 1912 to 1300 barrels. This great falling off was partly caused by extensive grafting in the spring of 1912.

When Mr. Schafheitlin took the farm over there were 29 varieties of apples in the orchard but he intends to reduce the number of varieties to ten or twelve of the best commercial varieties.

The manager of the Canard Fruit Co., Ltd., of which Mr. Schafheitlin is a member says that the Lyndhurst apples were the best grown in 1912 by any member of the company as far as quality was concerned. They packed as follows:

Early apples. No. 1, 57½ per cent.; No. 2, 25½ per cent.; No. 3, 17 per cent.

Winter apples. No. 1, 61 per cent.; No. 2, 22 per cent; No. 3, 17 per cent.

The hay land is improved every five years by seeding down to oats and clover using 500 to 600 pounds Basic Slag to the acre as fertilizer.

Grade dairy Shorthorn cows are kept. He is keeping a daily record of the milk produced by each cow and in this way he tries to improve his herd. The heifer calves are raised and the bull calves are sold soon after birth.

Two of the horses on Lyndhurst Farm are brood mares which have been served by the best stallions available of their respective breeds. He plans to keep young and vigorous working horses by retaining the colts and selling off the old horses. The pigs are fatted from birth to the time they are five months old, when they usually attain a weight of 100 to 150 pounds Then they are butchered and the pork is sold at 9 to 12 cents per pound. About ten pigs are handled in this way each year and they materially help to turn waste product into cash.

A flock of 25 hens and 25 pullets of Single Comb Rhode Island Reds are also kept and each year when they are two to three years old the hens are killed off. The eggs for hatching are those produced by the best layers only and as a consequence a good laying strain has been established so that plenty of eggs are laid the whole year round. By careful selection of hatching eggs he hopes to improve the flock a great deal.

The hens are kept in colony houses, Macdonald type, and let out every day, whether cold or warm. In summer they are allowed the free run of the orchard.

The poulty rations consist of:—whole grain, oats, corn and buckwheat in the litter, mornings and at noon with milk and buttermilk evenings and roots or kitchen scrap and water once a day. Bran, oyster shell, grit are always on hand in feed chopper.

Italian bees are kept in Langstroth hives, which are protected in winter by packing cases. If necessary the bees are fed in spring and in one season they have made as much as 65 pounds of comb honey to the hive. One of the daughters takes special interest in bee raising and believes that the success in gardening and orcharding is partly due to the good work of the bees.

The Schafheitlins also grow a few acres each of potatoes, mangels and turnips, besides about 75 tons of hay and 350 bushels of oats and other grains all of which are fed on the farm and the fertility returned to the soil.

Mr. Schafheitlin says that his farming experiences have not been of long enough duration to say a great deal about financial success but is looking forward with bright hopes to the time when his sons, having completed their studies will return to the farm and together make it the success which the cause deserves.

The Schafheitlins all like farm life. They love their work and life in Nova Scotia and are ever ready to enjoy the many advantages that nature has bestowed on the Province of their adoption.

Bettering Own and Home District Conditions

Example Set by Joseph A. Kinsman Lakeville, N. S.

THIRTY-FIVE years ago Mr. Joseph A. Kinsman, of Lakeville, N. S., acquired the farm, on which he now conducts his farming operations, from his father.

The first year after it came into his possession he harvested only 65 barrels of apples from his four acre orchard. He set out young orchards every year until now it covers an area of over sixty acres, about thirty acres of which are in bearing.

Following are some of the yields in recent years:—

Year	Barrels packed fruit
1908	800
1910	1600
1911	3200
1912	1970

Within a few years he will possibly be growing 10,000 barrels of apples per year.

When Mr. Kinsman took over the property it maintained two horses, fifteen horned cattle and ten sheep. This year Mr. Kinsman is wintering ten horses, thirty-five horned cattle and fifty-six sheep. The sheep are well bred Oxford Downs; the cattle are pure bred Shorthorns. They are all of good quality and Mr. Kinsman sells a number for breeding purposes each year.

Gravenstein Row, in the Orchards of J. A, Kinsman, Lakeville, N. S.

Apple Picking Time in the Lyndhurst Orchards

The farm consists of 200 acres in the Valley and 300 acres of woodlands and pastures on the North mountain. The farm cuts about 100 tons hay, and also grows each year about 400 barrels potatoes, 2,000 bushels turnips, mangles, etc., and 800 bushels grain, oats, barley, etc.

The farm buildings are commodious and neatly kept. The residence, recently remodelled has telephone connection, bathroom, hot and cold water and other conveniences that make it an ideal farm home. A daily mail service delivers the Halifax morning papers at the door before dinner.

Mr. Kinsman has erected a large new barn 90x45, which, besides providing storage for manure, etc., has a fruit room in its basement that will store 1850 barrels. An apple warehouse on the premises provides ample room for 1000 barrels. The barn which was on the farm when Mr. Kinsman took possession has been kept in good repair and its dimensions are 44x42.

Mr. Kinsman has been an active worker for the best interests of his districts and he has been largely instrumental in getting many of the rural conveniences, daily mail, telephone extension, etc., for his district. He has been one of the chief agitators for a railroad through Lakeville district and the road now in course of construction will be a boon to the district. He has represented Ward 4 in the municipal council for 12 years and is an ex-President of the Kings County Board of Trade.

As an example of what Mr. Kinsman orchard is producing we refer to the following facts:—58 Starks set out 9 years ago picked 48 barrels; 25 Kings set out 10 years gave a yield of 17 barrels in 1912.

Mr. Kinsman has two sons associated with him on the farm. The other two sons are still in school and college. For a number of years Mr. Kinsman was one of the efficient fruit inspectors at the port of Halifax.

As an example of one who has striven and succeeded in bettering his own condition as well as the condition of his home district Mr. Joseph A. Kinsman has set a pace worthy of emulation.

FERTILIZERS for the PLUM ORCHARD

By Frank T. Shutt, M.A., Asst. Director and Dominion Chemist

IN COMMON with other orchard crops, the requirements of the plum tree, as regards plant food, are chiefly nitrogen, phosphoric acid and potash, and these essential elements of plant food must be present not only in fair quantities but in more or less readily available forms if vigorous growth and abundance of fruit are to be expected. In addition, lime is frequently of value, since all stone fruits make a considerable demand upon the available lime of the soil, and this, owing to natural causes or exhaustive cropping, may be reduced to mere traces.

Further, all rational systems of fertilization must include the renewal from time time of the vegetable organic matter of the soil, and this may be best attained when the supply of barnyard manure is insufficient, by the growth and turning under of green crops.

Nitrogen and Organic Matter:- Since these, from an agricultural point of view, intimately associated the one with the other, the latter being the natural conservation of the former, and economy, as a rule, dictating their use in orchards in such an associated form, we may conveniently consider their application under the same heading.

Barnyard manure undoubtedly stands first on the majority of farms for enriching the soil in these constituents and improving its physical condition. In composition and hence in value it is extremely variable, but good average samples of fresh manure may be considered to contain Nitrogen 0.5 per cent., phorphoric acid 0.25 per cent.; potash 0.45 per cent. The organic matter in fresh manure is usually in the neighborhood of 25 per cent.

Packing the 1912 Apple Crop---Three Generations of Fruit Growers on the Job
Photo by Frank A. Bolser, Spa Springs, N. S.

With many orchardists, however, the available supply of manure is insufficient and inadequate for the area to be fertilized and it is for such especially that the system of green manuring, as by the growth and turning under of a cover crop is especially valuable. The important role of the cover crop in the modern system of orchard soil is set forth in another place in this Bulletin and the whole subject of increasing fertility by means of clover has been very fully explained in Bulletin No. 40 of the Experimental Farms Series. It will, therefore, only be necessary here to state one or two of the principal reasons why clover or some other of the legumes should be employed for this purpose of enriching and improving the soil.

A vigorous crop of clover will contain at a moderate estimate, in its foliage and roots:-

Nitrogen from 100 to 150 lbs. per acre
Phosphoric acid 30 to 45 lbs. per acre
Potash 85 to 115 lbs. per acre.

It is evident, therefore, that by this use of clover we can with a single crop furnish the soil with as much nitro gen as would be supplied by a dressing of 10 tons of manure per acre. The great part of the nitrogen is taken by the clover from the atmosphere, and hence is a distinct addition to the soil. The phosphoric acid, potash and lime, it is true, have been obtained from the soil, but have largely been drawn from a considerable depth and hence increase the stores of these elements in the upper layers of the soil. Moreover, the decay of the clover sets free all these elements of plant food in forms readily utilizable by trees.

One or two words should also be added regarding the value of the organic matter so supplied. This eventually is converted into humus, the importance of which as a soil constituent it is difficult to overestimate. It only liberates slowly and continuously its plant food, but vastly improves the soil texture, whether it be a clay or a sandy loam. It increases the soil's power for absorbing and retaining moisture and it furnishes the best material for the development of microbic life which, as now known, plays so important a part in increasing a soil's fertility.

There is, of course, a possibility of too great an enrichment with nitrogen by this means; this would be indicated by a luxurious growth, dark green foliage and poor fruiting. Under such circumstances, the use of organic and nitrogenious fertilizers should be discontinued for a time. Instances of this kind however are rare.

To furnish immediately available nitrogen to young trees showing a

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Fruit Growing, Winter Dairying and Poultry Raising

On Robert Newcomb's Maple Avenue Farm, Port Williams N. S.

ABOUT two miles from the Port Williams D. A. R. station on the northern bank of the Cornwallis River is located Maple Avenue Farm, the steading of Mr. Robert Newcombe, one of the most progressive young farmers of Kings County. A Farmer representative had the pleasure of paying a hurried visit to Maple Avenue Farm a few days ago.

Mr. Newcombe is one of the progressive young farmers of Nova Scotai who considered it would be time well spent to take a course at the Nova Scotia Agricultural College, at Truro. After completing a two years course at that institution he returned home and settled on the old homestead.

Mr. Newcombe is a firm believer in the theory which has so often been proved that taking one year with another it is not advisable nor always profitable for a farmer to put all his eggs, so to speak, in one basket. He believes that Valley farmers who are so situated as to be in a position to carry on a few side lines are not living up to their opportunities if they do not devote some of their energies along lines that will bring in a little extra money in their respective seasons and help to tide over during adverse fruit growing seasons.

While he considers that the Annapolis Valley is admirably adapted for specializing in fruit growing he

ROBERT NEWCOMB, Port Williams, N. S.
Proprietor of Maple Avenue Farm

also contends and has proved his contention that one or more side lines may be profitably carried on at the same time.

Mr. Newcombe looks upon farming as a regular manufacturing industry and, as in the latter, a good share of the profits are now-a-days made from by-products that were formerly considered as waste matter. So it is with the fruit grower. There are many odds and ends of crops and time that can be utilizeb to swell the profits if he is carrying on mixrd farming with his fruit growing.

The side lines carried on on Maple Avenue Farm are dairying and poultry raising. These lines were selected as best adapted to the owner's conditions.

As he is a member of the United Fruit Companies he is not obliged to pack apples during the winter so to solve the problem of giving employment to his men all the year he practices winter dairying. His cows are mostly grades but he is making a start with pure-bred Holsteins. He has a few pure-bred heifers and a pure-bred bull.

Maple Avenue Farm, The Steading of Robert Newcomb, Port William, N. S.

King Trees on Robt. Newcomb's Maple Avenue Farm, Port Williams, N. S.

Apple Picking Time in Robert Newcomb's Maple Avenue Orchard, Port Williams, N. S.

As he only raises the heifer calves from his herd he usually has a surplus quantity of skim milk to spare and in order turn it into cash, on the farm he raises a lot of pigs. He raises from fifty to eighty every spring and about half that number in the fall.

In the Maple Avenue Farm hog pens we saw tne pure bred Yorkshire sow, Cindrella Jane, with her twenty-one fine young porkers survivors out of a litter of twenty-two. Who can beat this record?

In the poultry raising side line Mr. Newcombe keeps one hundred pure-bred Rhode Island Red pullets. Between the first of January and the first of April the pullets have averaged over a fifty per cent. egg yield. The chickens are hatched in an incubator as he finds that that is the ideal way to get good early layers in desired numbers. He intends to go into poultry raising on a much larger scale as he considers it the most profitable business on his farm considering capital invested and time required. The hens have free range and during the summer season they are even busy, as hens ought to be gleaning the greater portion of their food from the range and manufacturing eggs at a lively rate.

Apple growing, however, is the main specialty on Maple Avenue Farm. Photos of the Maple Avenue orchard are shown in this number. That portion of the orchard devoted to the growing of Kings was originally a piece of worthless sandy land, not worth five dollars per acre for the growing of farm crops but now paying ten per cent. over and above expenses on a value of $1000.00 per acre.

Mr. Newcombe is a thorough believer in up-to-date orchard practices. Having successfully used Lime Sulphur and Arsenate of Lead for several seasons he claims that he would not go back to using Bordeaux on any account as he considers the former superior in its effects, both on fruit and foliage.

The Maple Avenue orchards are thoroughly cultivated until the middle or last of June when tares are sown for a cover crop in all parts except a small area near the hen house where he sows buckwheat for a fall run for the chickens. Mr. Newcombe is also starting in strawberry growing. Last year he set out one acre and this year he intends to set out an additional two acres.

Mr. Newcombe is making good. He gives the N. S. A. C. due credit for the general interest and inspiration it has given him in farm practice.

The general neatness that prevails around the farm may be seen by a glance at the accompanying cuts.

Buy a Spray Pump.

Even if you have no more than a dozen trees it will pay you to buy a spray pump. The barrel spray pump is what the average small fruit grower needs. It will be cheaper to buy the pump and then mount it on a good molasses or vinegar barrel, than to buy one already mounted. Any handy man with tools can easily mount the pump on the barrel himself. It is poor economy to select a cheap pump.

The Rotation System of Orchard Management

As Practised by Ernest H. Johnson, Greenwich, N. S.

WHILE on a hurried trip through the Annapolis Valley a week or two ago we had occasion to drive from Wolfville to Port Williams. While approaching Glenwood orchards, the steading of Mr. E. H. Johnson, we noticed a different system of cultivation from that in vogue in the orchards of the majority of Valley fruit growers. Our curiosity lead us to interview Mr. Johnson re his methods of orchard management and found that for seven years he has practiced what he calls a "rotation system."

For orchards in full bearing he plows either late in the fall or as early as possible in the spring, every other dale in the orchard and cultivates that thoroughly once a week up to the first week in July, when he seeds down with ten pounds Mammoth clover per acre.

Mr. Johnson works on the assumption that the unplowed dales act as a kind of safety valve for the trees. If he has a heavy set of fruit and the season is dry he cuts the clover the last week in June and lets it rot on the ground but if the set is rather light and the season somewhat moist he leaves the cutting until the first part of July, still allowing the clover to rot on the ground. On the other hand, if the fruit should be a very light crop, and the trees on the moist land so that there would be a danger of their making such a rank growth of wood as to lessen the prospect of a crop for next season he would even advise taking off the clover for hay in order to check the growth of wood and thus throw more strength into the fruit buds that are forming for next year.

The next season he lets the newly seeded dale stand and plows the other dale, which has stood in sod one season.

If orchard soil should become lumpy either from lack of humus or from hauling off apples when land is wet, he finds that it is a paying proposition to give the newly seeded dales a light dressing with stable manure, either late in the fall or early in the spring, for a few years until the land begins to work up nice and light.

Mr. Johnson likes to have his bearing trees making about six inches of new growth of wood each year and in order to get this he either uses a good dressing of stable manure or from 100 to 200 pounds of Nitrate of Soda per acre.

On light soils he uses from five to six hundred pounds of Acid Phosphate and one to two hundred pounds of Muriate of Potash per acre, while on heavy soils he uses five hundred pounds best grade Basic Slag and four hundred pounds Muriate of Potash.

Mr. Johnson says that six or seven years ago when so much discussion was going on through the horticultural department of the farm papers, as to which was the better treatment for orchards—sod or cultivation—he combined the two systems with the best results, namely:—improved quality and increased quantity of fruits.

By this system, men who are not fond of stock or think there is not enough money in it to pay may still have large orchards and produce as large crops and likely better quality than the men who depend entirely on stable manure for their orchard fertilization.

The way orchards are being planted in the Annapolis Valley the saving of one half the cultivation will be a big item in years to come. The saving of one-half the clover seed for cover crops at current prices is no small item in some of the larger orchards.

Residence of E. H. Johnson, Greenwich, N. S.

Nine Year Old Spy---One Barrel 1911, in J. S. Margeson's Birchlea Orchard, Berwick, N. S.

In picking time he finds the sod dales very convenient as places on which to put all the barrels. When the barrels are placed on the grassy ridges they are kept clean, it also makes the hauling easier and in wet seasons it saves tramping the newly seeded ground. In fact, the rotation system has everything excepting looks in its favor. While it certainly does not look so well as if the ground were well under cultivation, still there are very few growers in the Valley who are growing fruit for looks. Consequently this fault may not prevent many from adopting the profitable method of culture practiced in the Glenwood orchards.

Mr. Johnson thinks the most profitable stock to raise on a fruit farm is the heavy draft horse, for in order to make a success of the fruit business one must have plenty of teams to cultivate his orchards during the early part of the season. The reason why fruit growers do not keep sufficient teams to do their work thoroughly in summer is the cost of wintering so many idle horses. Mr. Johnston's suggestion to the fruit growers is that they make up at least a part of their teams of heavy draft mares and have them drop their foals about the first of September, just about the time the apple picking season comes on and the after-grass is ready for pasturing.

On small fruit farms where only one pair of horses is usually kept, a pair of heavy brood mares, with a little extra feed, will handle the apple crop and suckle their foals, with very little inconvenience and much profit to the owners.

On the larger fruit farms, where more than one pair is kept it is often possible to turn the brood mares out to grass during the apple picking season and after that they may be brought in to make up a second team for fall plowing.

For winter quarters a mare and foal should have a box stable about 11 ft.x12 ft.; but they do not need nearly so warm a stable as dairy cows.

At the time we called on Mr. Johnson he showed us two as fine Clyde foals as we ever saw raised in summer, and for which he had refused $125.00 each. These foals, he said, had been out in a well enclosed yard, from one to four hours, according to weather, every day during the winter, so they had not suffered for lack of exercise. The mares had never been out of their stalls all winter and were in good condition for brood mares, suckling a foal and in an advanced stage of pregnancy with their September 1913 foals.

Mr. Johnson says that he has never known a case of scratches or stocking of the mares while they are suckling their foals, but as soon as weaning the foals commences, the mares must be exercised every day. He requires three heavy teams to do the work in his orchards and of these five mares are due to foal next September.

It is Mr. Johnson's idea that the Experimental Fruit Station at Kentville would benefit the fruit growers very materially by conducting experiments in horse raising, as the horse business certainly fits into the fruit industry better than beef raising. In this connection we would say that we were informed by Prof. W. S. Blair, of the fruit station, that he proposes conducting experiments along the horse raising line. He was much impressed with the results achieved by Mr. Johnson, whose horse breeding operations he seemed to be following with a great deal of interest.

Mr. Johnson is one of the most progressive fruit growers of his district. His achievements are looked to with pride by a wide circle of his acquaintances and he leads the way by precept and example in what he believes to be the most profitable practices to follow in Glenwood orchards.

As an instance of his public spiritedness we noticed that when the roads through his district were almost rendered impassable at the time of our visit by the combined action of rain and frost upheavals the section of road opposite his farm was almost as dry as the town streets, rendered so by the use of the split log drag. If each and every farmer would take a leaf out of Mr. Johnson's book in this respect, the roads through the length and breadth of our land would be very materially improved.

ERNEST H. JOHNSON, Greenwich, N. S.

I have visited many hundreds of orchards, old and young, and do not recall ever having seen a dozen dead or dying trees that were in this condition as the result of old age. Accidents, neglect, mistakes in pruning and injuries of various sorts, in nearly all cases preventable, have been the cause.—A. McNeil, Chief, Fruit Division, Ottawa.

THE FARM KITCHEN GARDEN

A Valuable Home Asset

By James Allen, Truro, N. S

MANY people who have taken up farming as their life's occupation do not know the good taste of some of our most common vegetables. These products our city brethern get and often have to pay good prices for them. The people who are fortunate enough to possess a farm might well have all these delicacies for their own use with very little effort or trouble, provided only a piece of land near the house is devoted to the purposes of a kitchen garden. The returns from even a small piece of ground properly managed will add greatly to the health and pleasure of the family and reduce

James Allen, Superintendent of Grounds and Gardens, N. S. A. C., Truro, N. S.

the outgo for other food and supplies.

The vegetable garden of the farmer or his helpmate should be situated near the house so as to be more convenient for cultivation and more accessible for gathering the products. It should be on a piece of land that is fairly well drained, having a gentle slope to the south. If it is possible to be sheltered on the north, by a windbreak of evergreens, it will help to make it an early planting spot. Early in the fall of the year, good barnyard manure, not too strawy, should be applied to the land broadcast at the rate of 40-50 ton per acre and should be plowed under. It should then be well harrowed as many times as possible, till just before heavy frost sets in, when the whole should be thrown up roughly with the plow, so as the climatic conditions of the winter will pulverize the soil, destroy certain insects and make it into an ideal seed bed, by springtime. It should then be loosened up and made ready for seed sowing. Just before the last harrowing it is a wise plan to broadcast some complete fertilizer which is well supplied with quickly available plant food. The farmer may think that an extravagant use of fertilizers, but if one goes on to grow vegetables the first aim should be quality as well as quantity. In order to get quality they should be grown without check, for if they get a check they will be tough, woody and bitter.

In this country of ours we should select the best seed we can get. The short season or quick growing varieties should be given the preference as they will come to maturity earlier. While this is especially true of some of the tender plants as beans, corn and tomatoes.

Even with some of the hardier vegetables, the earlier varieties are preferable on account of their quick growth. For the winter supplies later sowing may be made of the early varieties, and they will be better in quality too.

When the land has been put into proper condition and is ready to receive the seed we should get it in as soon as possible, weather permitting.

In the laying out of the garden, which is a matter of individual choice, it is to the owner's interest to have the crops planted in long straight rows so as to greatly facilitate the work of caring for it by the frequent use of the horse cultivator. Substituting horse cultivation for hand labor will greatly lessen the work and relieve the drudgery of garden operations.

Taking carrots, parsnips, and salsify, (or vegetable oyster) these require ground that is prepared deeply as they send long roots down into the ground which should be free from stones. They do not like to have anything obstruct their downward growth. The parsnips and salsify should be sown as soon as the danger from heavy frosts is past, sowing about eighteen inches between rows and thinning out to 6 inches apart, as they require a long season of growth. Part of the crop should be lifted in the late fall, and stored in a cool cellar and should be covered with sand or earth to keep from shriveling up. The balance can be left in the ground till spring when they can be lifted for spring use, as parsnips and salsify are greatly improved with frost.

Sowings of the early varieties of beets, carrots and turnips may be made on through the season to the middle of June in rows 4 in. apart and thinned out to 4 in. apart in the rows. This will give a supply for midsummer and on through the winter. For winter starage they may be treated as recommended for parsnips and salsify. Turnips are sown in drills 30 in. apart and thinned out to 12 in. in the rows. Some of the selected Swedes are best grown for winter use and the crop sown the last of May.

Onions require a good rich piece of ground which has had a good dressing of fertilizer with quickly available plant food. The seed should be sown as early as possible so that the plant will make considerable growth while the weather is cool and get ahead of the early weeds. They should be sown in rows 14 in. apart and when ready for thinning should be thinned out to 3 in. or 4 in. apart in the rows. The soil should be made rather firm over the seed after sowing.

Early onions, which are greatly used for flavoring soups and stews are grown from sets which can be obtained from the seed dealers. They are planted in well prepared ground in rows 14 in. apart and thinned 4 in. apart in the rows. They grow very quickly and are pulled when green and used as young onions.

String beans are another good vegetable belonging to the family of legumes or nitrogen bearing plants. They require soil of fairly good tilth with a liberal quantity of available plant fond containing a goodly percentage of nitrogen, because they are plants which will be stunted if checked in their growth and the ripening of the fruit will be late and of an inferior quality. They should be planted in rows 24 in. apart, 2 in. deep and about 4 in. apart in the rows after settled warm weather has arrived and the ground has become fairly well warmed up.

Peas are another of our legumes of which there are dwarf, medium and tall varieties. I think the dwarf varieties, such as Nott's Excelsior, American Wonder, etc., which do not grow much over 15 in. would be the easiest to grow in the farm kitchen garden. They would not require to be staked and they can be planted much closer than the taller varieties, making the rows 3 in. deep by 6 in. wide and scattering the seed in the bottom thinly, then cover with about 1½ inches of soil and when up about 3 in. tall pull in the rest of the soil as you cultivate.

Squashes and pumpkins are grown in hills 8 feet apart. Either the whole ground should be manured or a liberal dressing given at the hill. About 8 seeds should be sown in each hill thinning out to three of the strongest plants when they have attained their second leaf, and keeping a close lookout for insects. The first should be harvested when ripe before heavy frosts set in and kept in a cool dry place free from frost.

Spinach is one of our earliest vegetables we get from the garden in spring or early summer. It is sown in rows 15 in. apart rather thinly and should be cut before it starts to run to seed. The New Zealand spinach is a perennial and the more you cut it the more it will grow, which makes it superior to the annual variety.

Swiss Chard is another plant that is easily grown. It is a beet grown for the leaves which are cooked like spinach and the heavy mid-ribs are cooked like asparagus. The last two named I would recommend strongly for the farm garden.

Lettuce is one of our salad crops and one which should be grown by every farmer. Its tractable nature and freedom from insects and diseases makes it about one of the easiest to be grown. Sow thinly in the open ground when in proper condition to work, in rows about 12 in. apart and about 10 in. in the rows.

Sweet corn is sown in hills three feet apart each way with about 8 seeds to a hill thinning out to 3 or 4 of the strongest, or in rows 3½ feet apart and grown about 8 in. apart in the rows. It requires ground well worked up with a liberal supply of plant food and thorough cultivation.

Celery, for early use, should be sown in a hot bed in March and for the main crop about April 1st, in a cold frame that has had some good friable soil put in for its second bed. After sowing, the soil should be made firm with a small piece of board. When the young plants are up and are large enough, they should be picked off into another bed. When it is time to plant out in the open ground which is any time after the middle of June till July, they should

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The Superintendent's House and Part of Vegetable Garden, Experimental Station, Charlottetown, P. E. I.

Practices that Will Create a Market for N. B. Apples

By S. L. Peters, President N, B. Fruit Growers' Association.

OF THE pioneer fruit growers of New Brunswick probably there is not a better informed or more enthusiastic man in the business today than Mr. S. L. Peters, Queenstown, N. B.

When the department was in need of a fruit inspector for the province the choice fell on Mr. Peters as a man whose example would be consistent with the principles he would be called upon to teach.

Mr. Peters is not many stations removed from the three score and ten but his mind is as active and his energies are as unabated as those of men many years his junior. He is well educated, a forceful, pleasing speaker and one who has made good in orchard practice. He contributes the following advice for our New Brunswick fruit growing readers:

S. L. Peters, Queenstown, N. B.
Dominion Fruit Inspector for New Brunswick.

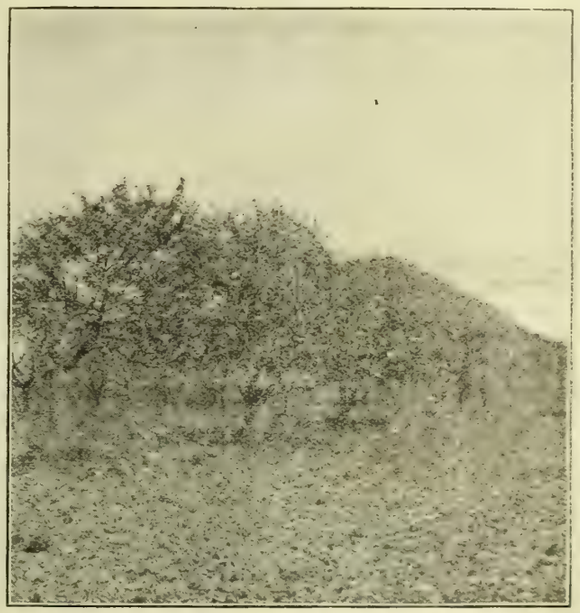
"I am pleased to note the prominence you have always given to the horticultural interests of the Maritime Provioces and learn with the greatest satisfaction that you propose giving particular prominence to this industry in your April issue.

With reference to the outlook for New Brunswick apples, I do not think it could appear brighter. The past year, 1912, every orchardist that gave to his business, proper care, from the opening of the spring time, until the fruit was picked, graded and packed has nothing to camplain of in marketing conditions. Prices were exceedingly good in our home markets for high grade fruit, and the profits lie, in growing nothing else, and then proper packing.

Having had the opportunity of visiting several sections of the Province during the months of February and March in connection with the short courses in fruit growing I was much surprised at the great number of apple trees, sturdy ones, strong and healthy that I judged was not doing much for their owners in the way of money making, simply because of neglect or want of care. Of course, this applies to those orchards planted by our fathers years ago, and when the settlements were being made. It seemed to me that there was a wealth of money in these old orchards if proper care and culture were given them. Why not? My friends, prune, cultivate, and fertilize those old orchards. Those trees that are not bearing good varieties, have them top grafted with varieties that are desirable for the market. In four years they will be giving you returns for your care and attention so abundant as to make you really feel the losses incurred in not having had it done earlier in life. It will be some years yet before we shall be able to supply our home markets with apples, of the best grade and variety, and when we have done this the markets of the world are open to us for the high grade quality and the special varieties that are sought after in these markets, and which can be so well and profitably grown in our own Province.

It should be our pride to grow, under our favorable conditions, nothing but the best fruit of its kind. See to it with the most scrupulous care that grading and packing is just a little better than is required under the "Fruit Marks Act." Let the New Brunswick standard for apple packing and grading be recognized as the best and we shall have no difficulty in marketing our products.

Everything looks promising for the present year. The winter has not been cold and the fruit buds look to have come through the season in good condition. The task is ours, to see that prouer pruning, timely spraying and thorough cultivation and manuring is given our orchards. The better work done, the better fruit we shall have and the larger our income from the orchards will be. The Fruit Growers' Association will hold their third annual fruit show in St. John in November of the present year. May we not hope to see every district in the Province represented at that exhibition with their best fruits, so that we shall be able to again vindicate the claim that New Brunswick has the best fruit lands available.



Clean Cultivation in Orchard of S. L. Peters, Queenstown.

Renovating a Neglected York County Orchard

Care for the Trees, the Trees will Care for You

ABOUT thirty years ago, Mr. Joseph Hawkins, Douglas, York County, N. B., purchased the farm on which he now resides. The farm had an orchard of old native apple trees, the greater number of which were afterwards cut down and replaced with new trees of the more modern varieties—Wealthys, Fameuse McIntosh Reds, Bethels and Alexanders. When the trees were young he tilled the land for a number of years. A few trees were set out each year until last year when he set out no fewer than three hundred trees of different varieties. Mr. Hawkins allowed his first orchard to grow up in grass and it remained so for about fifteen years or more and was occasionally fertilized with a top dressing of some kind. He found that by following this practice his trees were going back instead of forward in their yield. The fruit grew smaller, the trees became badly sun-scalded and badly covered with moss and other fungi. The McIntosh Red apples looked more like frost bitten butter nuts than apples and would be so badly spotted that they were unfit for use and he began to think seriously of top grafting the trees to some other variety.

Geo L. Thompson's Homestead, Berwick, N. S.

While working in his blacksmith shop one day in 1911—for he was a blacksmith by trade, farming and orcharding was only a side line— he was approached by Mr. A. G. Turney, the then newly appointed provincial horticulturist, who was looking for a small orchard, within a short distance of Fredericton, in which he could carry on demonstration work. Together they trudged through the orchard and finally it was agreed that the orchard would be worked under the direction of Mr. Turney.

Work was commenced about the first of April. The old trees were pruned and the brush was removed. The land was spread over with manure. The trees were scraped and fungus growths and peelings of bark were removed. The sun scalds were dressed and put in a condition for healthy growth by painting the wounds with white lead. The trees were then sprayed with lime water and the ground was ploughed as soon as conditions of soil and climate permitted. This was a difficult task. The hired man was requested to leave no sod unturned and he acted accordingly. The whole orchard was then top dressed with fertilizers in June and sown to a cover crop of clover and alfalfa, which took root and grew very nicely. The orchard was sprayed four times and it yielded a good crop of fruit. During the pruning season he heard some passers-by remark "I would not have my orchard cut in that way," while others said: "Mr. Hawkins's orchard is ruined.

Prior to 1911 he never got in one year more than $100.00 out of his orchard. In the year 1911 he got a return of over $300.00 dollars—a handsome profit being left after all incidental expenses were accounted for.

In the year 1912 his orchard was gone through and pruned and sprayed three times with no further expense

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Teacher, Institute Speaker and Fruit Grower

The Three Combined in the Person of L. D. Robinson, Berwick, N. S.

MR. L. D. ROBINSON, the subject of this sketch spent the first twenty-one years of his life with his father on a mountain farm, in Nicholsville, now owned by his brother-in-law, Mr. S. G. Saunders.

His father, Benjamin E. Robinson, was a pioneer in apple growing and continued to plant apple trees until he reached a ripe old age. Many of the old time would-be wiseacres used to tell him "you will never eat apples off them" but invariably the pioneer's answer was "If I do not somebody else will."

Nurtured amid apple blossoms and acquiring a close imtimacy with orchard management as he grew to manhood it is small wonder that the son of such a father should have developed an intense love for fruit growing.

On reaching his majority, Mr. Robinson took a two-years' course at Mount Allison, N. B. and then entered the teaching profession, in which he gained a reputation second to none in the province.

About thirty years ago, having resigned the principalship of the Dartmouth schools, he came to Berwick with his bride and settled upon the farm which he still occupies. Here he at once began the renovation of an old orchard of some fifty trees and made preparation for orchard extension, but before the close of the year the line of the school room took possession of him and he became the principal of the Berwick schools. Under his fostering care and untiring efforts this school soon became famous throughout the Annapolis Valley.

During the fifteen years that Mr. Robinson was connected with the Berwick school the farm was gradually improving. But it was not until he was able to give it his undivided attention that it was seen at its best.

Mr. Robinson brought to his farm the happy combination of practical and scientific knowledge, which soon brought forth results in increased crop production along with increased soil fertility.

He has specialized on potato growing, apple growing and strawberry growing. In all these lines his success has been very instructive to others as well as gratifying to himself.

One year he made a record in potato growing that probably has not been surpassed in the Province of Nova Scotia—570 bushels from two acres.

Last year, although unfavorable for strawberry growing he grew 15,000 boxes of strawberries on two and one-half acres. He was also the winner of the Prof. Cumming Prize of $10.00 for the best barrel of Gravensteins, produced in Nova Scotia, as well as a number of other prizes awarded at the 1912 Nova Scotia Horticultural Exhibition held in Bridgetown.

He is a firm believer in thorough spraying. He feels sure that far better apples can be produced by the use of Lime-Sulphur spray than by the use of Bordeaux.

An interesting, instructive spraying article from his versatile pen appears elsewhere in this issue.

Not only has Mr. Robinson won for himself a high place among teachers and horticulturists but among institute speakers as well. Having owned and operated one of the first spray pumps in the Valley, like Noah of old, he became the object of ridicule to the unbelievers. To their taunts "spray the roots" he would reply, "you will have either to spray your trees or cut them down." Fools who came to his meetings to scoff were often led to see the errors of their way and frequently remained to s(pray). And his prophecy eventually became true, they did and do spray.

IN JUDSON S. MARGESON'S ORCHARD
Note the Low Heads and Thrifty Growth.

Another Example of Thrifty Growth—Judson S. Margeson's Orchard.

Crimson Beauty Trees in the F. P. Sharp Orchard, Woodstock, N. B.

One of the first public demonstrations in the Annapolis Valley showing how to make Bordeaux mixture was given by Mr. Robinson, in Welsford, Kings County.

Mr. Robinson's sons, three in number, are ardent horticulturists. J. Milton Robinson, the eldest son, is a B. S. A., of McDonald College, a specialist in fruit culture, who is now assistant director of the Experimental Station at Kentville. It was a source of great satisfaction to Mr. Robinson to be associated as institute speaker in Annapolis County recently with his worthy son.

Louis Robinson, the second son, has graduated in law and has taken up the practice of his profession in the West where he is ever ready to uphold the good qualities of Nova Scotia grown apples. He was the means last fall of turning the joke on a hot air artist from British Columbia who was trying to impress the good qualities of British Columbia apples on a prairie town dealer as Mr. Robinson chanced to enter the shop to make some purchases. Mr. Robinson had two well-grown, perfectly-colored specimens of Nova Scotia Gravensteins in his pocket, which he had just received from home and when the B. C. artist pulled out a couple of western grown Gravensteins, much inferior to the Nova Scotia Scotia grown apple, and had the audacity to say to the dealer "they cannot grow any Gravensteins like those in Nova Scotia." Mr. Robinson's eastern spirit arose and pulling out his pair of Gravensteins remarked "these are Nova Scotia grown apples." He had the B. C. product trimmed to a standstill. Needless to say the B. C. artist was nonpulsed and the dealer saw the point.

Harold, the youngest son, is associated with his father in his orcharding operations while the only daughter, Bessie, is an expert in assisting her mother with the household duties.

Mr. L. D. Robinson is one of the few who harvested a large percentage of clean fruit by thorough spraying in 1912. He talks spraying, he practices systematic spraying and the results he obtains speak volumes in its favor.

Seasonable Spraying Suggestions by L. D. Robinson.

THE experience of the past season has demonstrated to fruit growers, as never before, the absolute necessity of thorough spraying. Careless spraying cost this Annapolis Valley, last season more than $100,000.00, to say nothig of the loss our reputation as fruit growers has sustained. Pruning, cultivating, fertilizing and thinning count for little where spraying has ben neglected.

We are facing competition and must grow better fruit. The first step toward better fruit is better spraying.

WHAT SPRAY TO USE.

It is an old saying that "Revolutions never go backwards." The great revolutions in favor of Lime-Sulphur will not go backwards. It may roll on till Lime-Sulphur is displaced by a better spray but it will never go back to Bordeaux. Lime Sulphur has put Bordeaux down and out on two counts. It does more work than Bordeaux and it does it better. Not only is Lime-Sulphur an efficient fungicide, but it is also a powerful insecticide, our bulwark against Scale, Bark Louse, etc.

Bordeaux is a fungicide only. The use of Lime-Sulphur adds a gloss and color to both foliage and fruit that nature cannot rival. The use of Bordeaux in quantities sufficient to control scab in a season such as the past, is certain to result in serious damage to foliage and fruit.

DILUTIONS OF LIME-SULPHUR.

The margin between the effective strength and the danger point of a

Lime-Sulphur wash for use on foliage is somewhat narrow. The hydrometer is very important in making dilutions for use on foliage, especially in the case of home made concentrates. The proper strength for dormant spraying is 1.03; for use on foliage 1.009.

NUMBER GALLONS CONCENTRATE TO USE.

Multiply the number of gallons the tank holds by the decimal part of desired strength, and then divides this result by the decimal part of the strength of the concentrate used. The figure obtained shows the number gallons concentrate to use. Commercial Lime-Sulphur tests from 32 degrees to 33 degrees barometer or from 1.283 to 1.295 hydrometer scale. We will employ the former figure as it represents about the average strength of the commercial Lime-Sulphur.

$\frac{40 \times .03}{.283}$ equals 4 1-5 gals. equals No. gals. concentrate to use in 40 gals. dormant spray.

$\frac{40 \times .009}{.283}$ equals 5 quarts equals No. qts. concentrate to use in 40 gals. summer spray.

These figures show that one cause of failure to get good results last season was the insufficient quantity of concentrate used—5 quarts should have been used instead of 1 gallon to 40 gallons for use on foliage.

ARSENICALS.

Arsenate of lead is the only form of Arsenic that can safely be used with Lime-Sulphur. There are two forms of Lead Arsenate—the mentral form and the acid form. Some authorities advise the use of the former as less liable to develop free arsenic in the spray. However, nothing has yet been proved to show that there is a preference. Arsenate of Lead should always be used in Lime-Sulphur sprays at the rate of not less that 2½ pounds to 40 gallons, not only as an insecticide, but also on account of its fungicidal effects. Arsenate of Lead should first be reduced to a paste by adding water then gradually thinned till it can be poured freely into the cask or tank. On account of the chemical action taking place when Lime-Sulphur and Arsenate of Lead are brought together, the agitator should be kept vigorously in motion when the Arsenate of Lead is being added.

WHEN TO SPRAY.

A good practical knowledge of the life history of orchard pests will help to decide the question of "when to spray." The old adage "an ounce of prevention is worth a pound of cure" applies with great force here. The object of spraying is preventive, not curative. Youth is the weakest link in the chain of life. Biting insects should be destroyed when they first hatch; apple scab as soon as the spores fasten themselves on the leaves. Once let apple scab, bud moth and caterpillars establish themselves, then all the spraying in the world will avail nothing. Spray for bud moth, scab, and bark louse, just as the leaf buds are bursting; for apple scab, bud moth, and caterpillars, a little before the blossoms open; for apple scab, codling moth, and other caterpillars, when two-thirds of the blossoms have fallen; for apple scab, apple worm, and other caterpillars, ten days after blossoms have fallen; and if weather conditions are bad, for apple scab, fly speck spot, young bud moth and other caterpillars, when apples are as big as large crabs.

A Section of Judson S. Margeson's Birchlea Farm, Berwick, N. S., in 1911.

SPRAYING OUTFIT.

In the larger orchards the power sprayer is rapidly displacing the hand pump. In orchards producing from 600 to 1000 barrels of apples, a good power sprayer will undoubtedly pay; in larger orchards the power sprayer has become a necessity. It is practically impossible to grow clean fruit in a larger orchard, where the spraying must be done by hand.

The essentials of a good power sprayer are: First, efficiency; secondly, simplicity; third, economy. An efficient power sprayer should be able to maintain a pressure of 200 pounds on four disc nozzles. No power sprayer without a mechanical agitator is worthy of the name.

Dr. Stewart, of Pennsylvania, in a recent address at Middleton, said the Dade propellor type of agitator was the best. Without thorough agitation Arsenate of Lead loses much of its value both as a fungicide, and as an insecticide. Disc nozzles are much to be preferred to the other types, and should always be at an angle to the rod. Rods should be not less 12 feet long and lines of hose not less than 25 feet—some use 50 foot lines of hose. After the day's work is over water should be pumped through the machine till it comes out of the nozzle clear.

HOW TO SPRAY.

Of all mistakes made in spraying, perhaps, lack of thoroughness is the most fatal. In the case of Lime-Sulphur thorough spraying means

(Continued on page 497)

A Beauty Scene in Nova Scotia. The Pereau District as seen from the Look-off near Canning.

Experimental Station for the Annapolis Valley

A Long Felt Need Supplied

THE fruit growers of the Annapolis Valley have for years been agitating for definite experimental work with orchard fruits. To meet their wishes a farm was purchased by the Nova Scotia Government at Kentville, N. S., located about a mile from the station, in the year of 1910. This farm was handed over to the Dominion Government in 1911 and has since that time been conducted as a part of the experimental farm system.

Little work except the clearing of some land was done until the spring of 1912, when work of a definite character was commenced and a superintendent appointed. The choice of a superintendent has been entirely satisfactory to all concerned. Prof. W. S. Blair, who has given up his work as Professor of Horticulture, at Macdonald College, P. Q., where he had a large department under his direction, takes up the work with a good record.

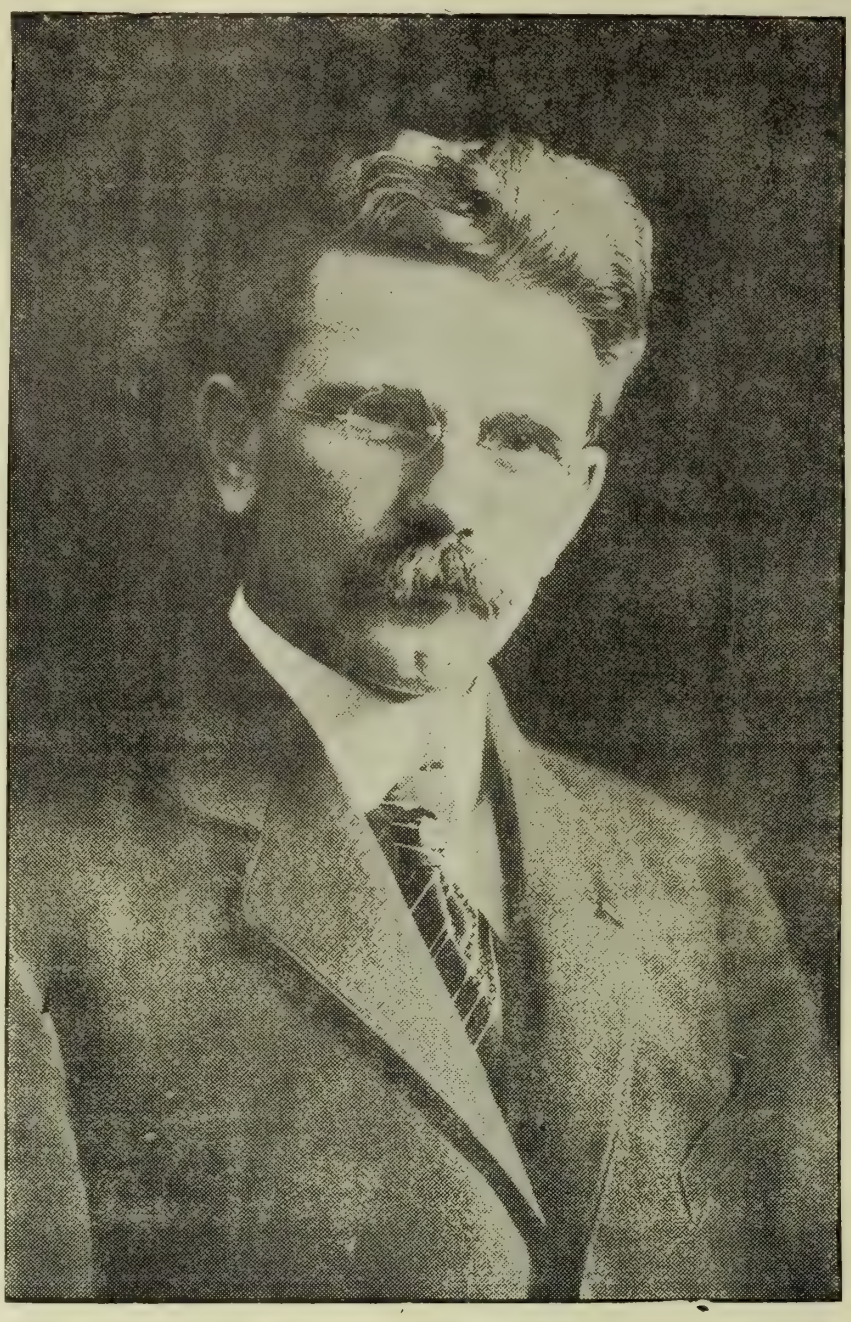
In looking for a man to take up the experimental work at Kentville, for the Annapolis Valley, where such large fruit interests were at stake, the endeavour was to secure the best horticulturist available, and it would seem, judging from the work already done and the plans for future work, that the choice was a good one. We had the pleasure of calling upon the superintendent a short time ago, and with him tramped over the various parts of the farm getting a general idea of the work contemplated.

The farm comprises an area of 294 acres of which only about 80 acres are cleared, including 10 acres of dyke land. The farm when purchased was practically all wooded. About 50 acres have been cleared, and 50 acres more are ready for stumping which it is proposed to do this year.

The clearing of this land with stumps still green is very costly and runs about $200.00 per acre. Stumping machines are used, the stumps are pulled out and burned after which a breaking plow with three pair of oxen is used in the final breaking. Many stumps have to be blown out with dynamite, adding materially to the cost. Following the plowing many roots must be gathered, piled and burned and the ground is then harrowed and seeded to buckwheat.

About 100 asres of the farm is taken up by a ravine which extends along one side of the back of the farm a distance of about one mile. Through this ravine a stream winds making with the heavily wooded banks one of the prettiest natural parks ever visited. At the upper end of the ravine two waterfalls, one having a drop of about 40 feet is especially attractive. The natural forests have been protected throughout the entire length of the ravine and the intention is to do no cutting in this area whatever, except to clear out dead leaves. The work of putting a good drive-way up to the waterfalls and developing the whole ravine into a park will necessarily be done by degrees and cover some years. Progress has been made and a good winter road makes it possible for visitors to enjoy the beauties of the whole ravine. This is certainly an attractive feature of the farm and a great asset to the town of Kentville.

During the summer nine buildings were erected on the station grounds. The superintendent's residence is plain but has good architectural features and is nicely situated. It is located on the western boundary. Towards the eastern boundary the bran, carriage, poultry and dairy buildings are located and at some little distance from this is a foreman's residence and a double house for the herdsman and head teamster.



Prof. W. S. Blair, Superintendent of the Station

The front part of the farm is sloping toward the north, and on this slope an orchard of 18 acres has already been planted. The upper fields are fairly level with a little heavier type of soil than that found on the lower lying areas.

J. Milton Robinson, B. S. A.
Assistant Superintendent of the Station.

While fruits will be given the first consideration, it is the intention to run about one-third of the farm in farm crops. The superintendent is of the opinion that fruit growing can be carried on more profitably on the majority of farms by carrying some stock as well. He thinks the growers must carry more permanent help in order to handle their orchard in the most economical way and dairying or some form of live stock husbandry which will give winter employment is a solution of the problem of efficient help.

The barn is well equipped for carrying about 30 head of stock. In addition to the three pair of working oxen and seven horses nineteen steers were fed during the winter.

A large silo has been erected and this year ten acres of corn will be grown in addition to five acres of turnips. Twenty acres of potatoes will be planted in the young orchard. Prof. Blair does not believe in fillers for the average farm as a business proposition, and thinks intermediate farm crops can be grown to much better advantage. He has no

Getting the land ready for the plow on the Kentville Experimental Station.

Breaking the newly cleared land for the Experimental Orchards, Kentville, N. S.

The Superintendent's Residence, Experimental Station, Kentville, N. S.

Scene on the Experimental Station, Kentville, N. S.
Barn in course of construction. Foreground stumped and plowed ready for setting out trees.

New Barns and Farm Help Cottages on the Experimental Station, Kentville, N. S.

objection to fillers one way through the orchard but thinks a space 33 to 40 feet apart should be left between the rows one way thus giving an opportunity to grow farm crops profitably between the trees while the trees are growing and enable the operator to properly handle the orchard after it does grow. He is also of the opinion that cultural experimental work is of the greatest importance and experiments with this in view will be undertaken with both orchard and field crops.

A comprehensive series of experiments with orchard fruits has been mapped out. In addition to planting an orchard of the leading commercial sorts grown in the Valley, cultural, fertilizer, and cover crop experiments will be carried on. Thick vs. thin planting will be worked out by keeping close record of the value of the intermediate crop grown, as compared with the closely planted orchard in which no intermediate crops are grown.

There is no bearing orchard on the farm excepting a few scattered trees and to meet the requirements of the growers in their present problems it is proposed to rent an area of four acres in each county, Hants, Annapolis and Kings. These areas have been secured and will be conducted as a part of the Experimental Farm system, giving special attention to spraying, thinning, and fertilizer work. The superintendent is of the opinion that thinning and spraying are the two most important problems in the Valley at the present time and these will receive first attention.

Newly broken land on Experimenta Orchards, Kentville, N.S. Set out with trees and seeded with buckwheat cover crop.

It will be well for Maritime fruit growers to keep closely in touch with the results of experiments carried on at the Valley Experimental Station. We feel confident that Prof. Blair will leave no stone unturned to blaze the way and by precept and example smooth the paths of the fruit growers.

Use Plenty of Hoe on Vegetables.

You ask about my method of vegetable raising. I guess I go about it much the same as everyone else.First I see that my land is well dressed and thoroughly worked and put in my seed as soon as it becomes warm enough. From the time the seed is in the ground I keep on the lookout for weeds; one cannot raise a good crop of vegetables and weeds in the same bed. I keep the hoe and cultivator busy all the season. I am often asked how I raise such good stuff. I tell them by tending to it all the time and having the ground well dressed. The reason so many gardeners fail to get good crops is that they are afraid of the hoe. I have no secret way, only use plenty of hoe.

I have been raising garden stuff for the past eight or nine years and have taken exhibits to fairs and have never failed to get a good share of premiums. At harvesting time I usually sell most of the stuff as I take it from the garden.

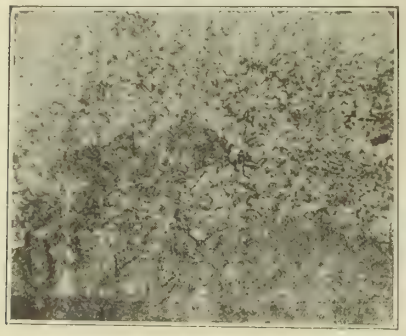
Beets, carrots, squash and cabbage are the most called for and, I think, the most profitable, although I raise a variety of all the vegetables. Last fall I prepared an acre of land with several kinds of fertilizers and will try it as an experiment in the spring.

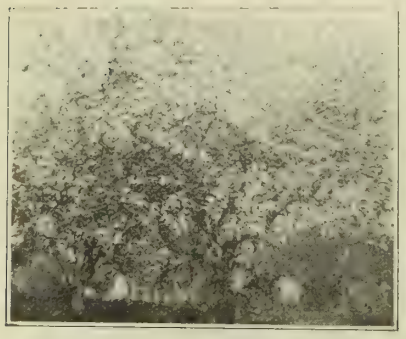
A Kings County, N. B. Pioneer Apple Orchard

Planting for Future Generations

FORTY years ago there were very few commercial orchards in Kings County, as for that matter in New Brunswick. Most farmers had a few trees to grow fruit for their own use but grafting was not widely practiced and many of these were native seedling apples.

The interest in fruit growing was not wide spread at that time and the man who put out an orchard and cultivated it until it bore fruit could not depend on borrowed enthusiasm as at present. And he did not get murh encouragement from his neighbors either. The man who planted trees on his best potato land until the value of growing apples for market was talked about, and sometimes not considered the wise man of the district.

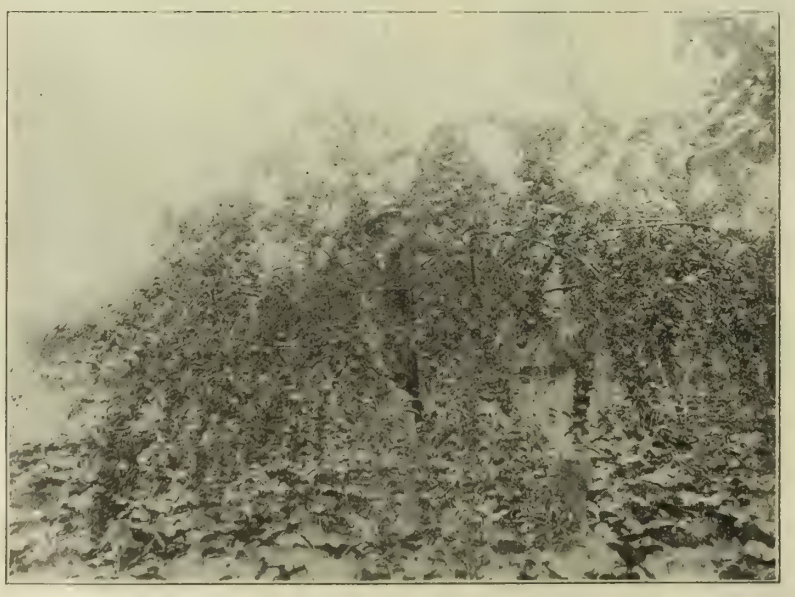




Blossom Time, 1912 in Gorham Orchard

The man who went ahead then and established his orchard and created his market was a true pioneer and like the pioneer in other branches of farm practice he had to learn a good deal from experience.

One of the men who did this pioneer work in Kings County was Jos. Gorham, of Gorham's Bluff, Kingston Parish, as one of the first to establish a commercial orchard in the county and to prove that apples could be made one of the profitable crops of the farm. From different sources he obtained trees and planted them out on his best land, giving them good cultivation, and growing crops between the rows as long as the shading of the trees would permit. The close planting system advocated by F. P. Sharpe, of Woodwhole of the 500 trees were put out 15 by 15 feet. Summer and fall varieties predominated, New Brunswicker, Red Astrachan, Alexander and Fameuse were most largely planted although there were a great many others. As these limited experiences showed that some were less profitable than others recourse was then had to top grafting, changing even tained from Nova Scotia and other points outside the province, topworked on the poor trees and later became distributed through the district. In that way a number of the best varieties like Bishop Pippin, Gravenstein and King of Tompkins were first introduced in the Long Reach district and from ther e upward to the poor trees to better and more profitable varieties. Scions were ob-



A Quarter of A Century Ago in the Gorham Orchards.
The boy in the picture is Mr. A. R. Gorham, the present owner of the orchards.

A Top Grafted Apple Tree in the Gorham Orchards.

other points along the Valley.

For thirty or thirty-five years the orchard has been bearing large crops, sometimes going to 800 barrels per year, and one year with another yielding a good income to the owner from the ground occupied. Some of the shorter lived trees are now dying out but the majority look good for another thirty or forty years of bearing.

Jos. H. Gorham, "Uncle Joe" died in 1901 and since that the orchard has been managed by one of his sons, A. R. Gorham, who has won quite a reputation as an exhibitor of good fruit at the exhibitions. He also is doing pioneer work at present in establishing a boxed apple trade on the St. John market. Gorham's Bluff Bishop Pippins and Gravensteins packed in boxes are becoming known on the market and are yielding the packer good returns for his labor and skill.

Top Grafting in A. R. Gorham's Orchard.

Top Grafted Trees in the Gorham Orchard.

The Fourth Annual Maritime Horse Show

THE fourth annual Maritime Horse Show held in the Fair Building Amherst, N. S., on the 9th, 10th and 11th inst. marked another milestone in the annals of Maritime horse breeding.

That the citizens of the Maritime Provinces are a horse-loving people was clearly evidenced by the throngs of visitors who came early and stayed late to witness the various events in which the pick and pride of Nova Scotia, New Brunswick and Prince Edward Island equines were exhibited.

Mr. Fred Richardson, Columbus, Ont., and Dr. J. A. Sinclair, Cannington, Ont., placed the awards in the Draft and Light horse classes respectively.

They judged without fear or favor and in cases where the entry did not come up to the requirements for its class they unhesitatingly ruled it out or, if only of an inferior quality in cases of no competition, they awarded second or third prizes only acrording to the merit of the animal shown.

The programme was well arranged by the managing committee and it went off without a hitch so that it did not lag behind and thus the attention of large appreciative audiences was maintained until the close.

THOROUGHBREDS

were few in number, the only representatives of the breed being the aged stallion Bendemeer, the young stallion Busy Amherst and the mare Anna Smith all shown by Geo. M. Holmes, Amherst, N. S.

STANDARD BREDS

were out in full force, Dr. Stewart, the judge, said that the aged Standard Bred Stallion class at Amherst was the second best class he had seen at any Canadian Show.

Seven aged stallions came up for inspection and were tried out on the Amherst streets before the awards were made.

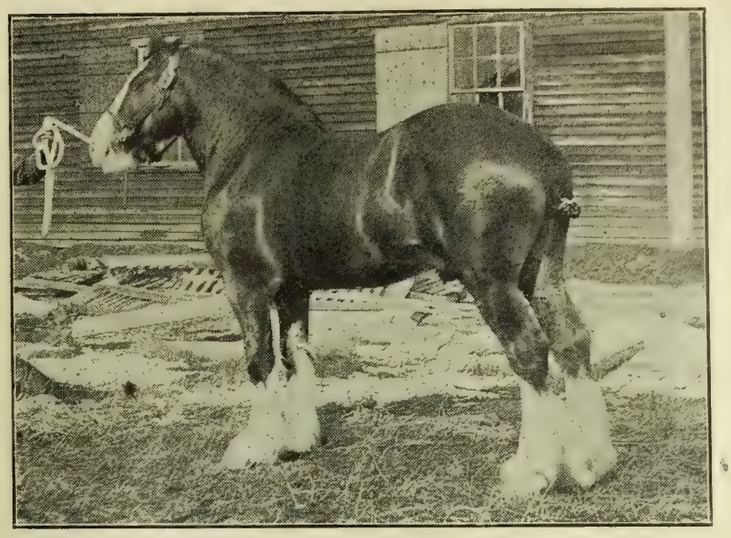
Mayor Todd, owned by Hammond Kelly, Charlottetown, and exhibited by the veteran, P. S. Brown led the field and was followed in second place by King Dodds, a former unbeaten champion, owned by Dodd Dwyer, Pictou, N. S. Royal Autograph, owned by James Hennesey, River Herbert, N. S., and Christian King, owned by Wm. H. Hill, Sydney, came in for third and fourth monies while further down the line and without the money's pale were Baron Cecil, Baron Britt and Right Wilkes all out in the pink of condition.

In the two-year-old stallion class there were only two entries, Silk Bow, owned by S. E. McGregor, New Glasgow, N. S. and Blue Beard, owned by W. H. Curry, Amherst, N. S. They won the red and blue ribbons in their respective order.

Four mares foaled previous to January 1st, 1910, came before the judge. Dina Hartshorn, by Phallaco and driven by her owner D. R. Sutherland, Pictou, N. S. topped the list while in second place was found F. J. Locke's Helen Garcie by Torbrook out of an Israel dam. Lady Buzz Fuzz by Buzz Fuzz, owned by Cecil T. Coates, Nappan, won the white ribbon while the green went to Hugh R. McMonagle's Inheritus by Montrose.

In the three-year-old filly class, Geo. M. Holmes' Miss Sue by Will-Be-Sure and Etter & Lowes' Nellie-Be-Sure by the same sire were placed in first and second positions respectively followed in third place by a mare exhibited by Conductor Coffee, of Amherst.

Song Bird by Achille, owned by T. D. Blaikie, Great Village, N. S., had no competition in the yearling filly class.



BARON SQUIRE.
Champion Clydesdale Stallion at the 1913 Maritime Horse Show.
Owned by McFarlane Bros., Fox Harbor, N. S.

The coveted male and female championships went respectively to Mayor Todd and Dina Hartshorn.

HACKNEYS

were shown by R. A. Snowball, Chatham, N. B., McFarlane Bros., Fox Harbor, N. S. and Rev. R. T. Hawkes, Bartibog, N. B. Snowball's two aged stallions, Model Performer and Cock o'the North captured first and second monies in their class and McFarlane Bros' Sedgeforth Enterprise took third award. Model Performer also captured the purple championship diploma for best Hackney stallion, any age.

Rev. R. T. Hawkes' Signal, by Model Performer had no competition in his class.

Snowball's Langton Lily was the only Hackney female at the show and considering her great age, 21 years, and that she has raised fourteen foals and is now carrying her fifteenth she was out in exceptionally good form and would have stood strong competition.

CLYDESDALES

were as usual one of the main features of the show. Eight aged stallions appeared before Judge Richardson.

McFarlane Bros' Baron Squire by Baron's Pride, Snowball's Baron Belgraddin by Baron Primrose, Fred C. Clark's Labori Again by Handy Andy and Vanderbilt, owned by Clarence A. Brown, Newport Corner, won prizes in the order named while four other good ones, Flash Favorite and Royal Baron's Pride, Royal Flash and Baron Mac were further down in the scale. Baron Squire captued the diploma for best Clydesdale stallion, any age.

Three-year-old stallions were shown by Wm. O'Brien & Sons, Windsor Forks and Geo. E. Fisher, Chatham. O'Briens' Bob McGregor by Norseman out of Jennie Windsor captured the red ribbon and Fisher's Tom Brown by Baron Belgraddin came in in second place.

Nine aged mares, many of them heavy in foal, faced the judge. Logan Bros' [illegible] and Baron's Fancy were finally placed in first and third positions sandwiching McFarlane Bros' imported Bess Spencer by Sir Spencer by Sir Hugo, in second place.

R. A. Snowball's May Lothian and McFarlane Bros' imported Nell Bowie by Golden Chief stood in fourth and fifth places respectively while further down the line were some ratting good ones.

The three-year-old mares' line up had five contestants and the monies went to R. A. Snowball's Moss Rose and Chatham Jeanie, Stewart Etter's Belle Pride and Wm. O'Brien's Belle of Hants.

Snowball's Miss May by Baron Balgraddin and H. B. Pipes' Princess Nora by Norseman were the only competitors in the two-year-old filly class and were placed in the order mentioned.

H. S. Pipes had the first prize yearling filly in Fleur-de-lis by Handy Andy while her only competitor was Kate of Meadow Brook by Baron Belgraddin out of Kate of Barharrow owned by R. A. Snowball.

Logan Bros' Pink Rose was the champion female and thus won Dunlap Bros. & Co's silver cup for best Clyde mare, any age.

PERCHERONS

The Percheron breed was represented by only two aged stallions. Rodrique, owned by the Petitcodiac Horse Company and Embigo, owned by W. E. Barnes, Sackville, N. B., both out in good condition and placed in the order mentioned.

Logan Bros.' Pure Bred Clydesdale Four-in-Hand. Winners of the Arthur Wallace Silver Cup at the 1913 Maritime Horse Fair.

ROADSTERS

were out in full force and some very nice useful horses were included in some of the sections. The stallion section comprised the aged Standard bred stallions referred to in the standard bred class and were placed as already referred to.

There were fifteen entries in the section for aged mares or geldings, 15-2 hands or over. Dina Hartshorn, the first prize standard bred mare captured the red ribbon in the class and also won the silver cup donated by the St. Regis Hotel, Amherst, for the best Roadster, mare or gelding, in harness.

J. C. Purdy's Susie Wilkes, by Abbott Wilkes stood in for second money closely followed in third place by Derby, L. A. Simpson's Clayson gelding. Gesner R. Baker's Happy captured the fourth money and Frank Lock's Helen Gracie, by Torbrook took the fifth and last prize.

Several of the entries in this class were ruled out for being under the 15-2 mark.

The aged mare or gelding under 15-2 class comprised eighteen entries. Lady Buzz Fuzz a Standard bred mare came in for first money; Francis, owned by C. B. Chapman, Amherst, won second award while Queen Brazilian by Brazilian, owned by Alder P. Elderkin, Amherst, stepped into third position followed in fourth and fifth places by Fanny C. owned by Fred C. Clark, Victoria, P. E. I., and Brazil by Brazilian, another of A. P. Elderkin's good ones.

In the three-year-old roadster class Willie, owned by W. S. Reid, Sackville, N. B., Eva, by C. W. Simpson, Amherst, Gyp, owned by H. S. Pipes & Son and Miss Sue owned by Geo. M. Holmes, Amherst, captured first, second, third and fourth awards, in their respective order in a section of seven entries.

Two-year-old fillies were shown by J. M. Crandall, Salisbury, and H. S. Bell, Moncton. Crandall's Lady Kip by Rudy Kip captured the red ribbon and Bell's Fairy B. by Will-Be-Sure carried off the blue. Rudy Kip Jr., a stallion, was shown in this section by Elias White, Amherst but he was ruled out by Rule 6, which he had evidently overlooked and for which ovetsight he was narrow enough to think he had a grievance against the show.

The choicest plum in the yearling section of the roadster class was won by F. M. Blenkhorn's Forest Boy, followed in second and third places by a pair of Rudy Kip colts, Ruby Kip and Goldie Kip, shown by Dr. F. A. Taylor, Moncton, and Miles Wort-Salisbury, N. B. There were eight entries in this section.

A. P. Elderkin's Bess and Rosie, L. A. Simpson's Black Bess and Derby, Etter & Lowe's Dott and Doll and Thos. Munro's Ruritania and Bobs captured the choicest plums in the order named in the matched pair roadster section. Another pair, Brazil and Queen Brazilian, shown by A. P. Elderkin completed the entries of this section.

CARRIAGE HORSES IN HARNESS.

The aged stallions in this class were the same as the entries in the corresponding section of the hackney class and the placings were identically the same.

The section for mare or gelding, 15-2 and over, foaled prior to 1910 had ten entries. Etter & Lowe, Amherst,

(Continued on page 489)

Increased Value of Farm From $900.00 to $15,000.00 in Ten Years

And in the Meantime Acquired A College Education.

AT ROCKLAND on the rocky sides of the South Mountain near Berwick, N. S., is situated the orchard of Judson S. Margeson, one of the most successful orchardists of the Annapolis Valley, and one whose achievements are frequently referred to as an example of what a young man possessing a combination of brains, brawn and undaunted courage may accomplish in the land of the Mayflower.

At the age of twenty-two Mr. Margeson began to think of engaging in

Judson S. Margeson, Berwick, N. S.

business for himself but before doing so he decided to acquire a better education and consequently entered the Berwick High School where he spent two years. After graduating from the High School he was undecided as to his life work. He planned to purchase a ten acre block of land and set the same out in orchard, as an investment. On further investigation he found that by taking the whole place, of 100 acres land would be much cheaper. So he decided to buy the farm en bloc for $900.00, giving in settlement a mortgage for $700.00 and $200.00 cash.

This farm consisted of four or five acres of brook meadow land, twenty acres of old hay land partly over grown with bushees and without rock, one and one-half acres, just set out with 100 trees and the remainder was in very rocky pasture.

For the next four years Mr. Margeson attended the Academy and College at Wolfville, taking partial courses in each. During a part of one year, while at Wolfville he took two hours per week in horticulture. Vacations and many week-ends were spent working on his farm. Circumstances made it necessary for him to board and hire all team work done.

The year after the farm was purchased, Mr. Margeson inherited the sum of $1500.00 from his father's estate he having disposed of his property about that time. This money was used to meet the bills incident to acquiring his education.

NEAR TO NATURE
A Corner of Judson S. Margeson's Orchard, Berwick, N. S.

LOW HEADED APPLE TREES
Judson S. Margeson's Orchard, Berwick, N. S.

During the first year he cleared nine acres, moderately stony for Rockland but exceedingly strong for the Annapolis Valley, on which he set out 900 trees. The second year he cleared eight more acres and set out 800 additional trees. The third year seven acres were cleared and set out with 700 trees, four acres of this was cleared of large bushes. The fourth year six acres were cleared of bushes and rocks and set out with 600 trees.

All the land was plowed once or twice and harrowed, but not fertilized except in the holes where the trees were placed. He used bone meal and phosphate, mixed, a handful of each to each tree.

Trees were set out in hexagonal method so that any way you find three trees or more, they are in a straight line. He used two rows of fillers to one row of standards. The standards are mostly Starks, Northern Spys, Blenheims, Ribstons, Ben Davis and some Tolmans. These last were put in with the intention of procuring good trunks for grafting. The fillers were mostly Wagners and Ontarios.

Mr. Margeson says that if he were doing it again to the same extent, he would use the same method, but plant standard fillers and semi-fillers. But if planting on a small scale the ridges at the edges are of different lengths, and make it difficult for cultivation.

In caring for the trees up to the present time, very little fertilizer has been used, until they began to fruit, but he thoroughly cultivates and plans to harrow after every rain., to keep the moisture in the ground.

Very few cover crops were used as he has been fighting weeds. He does not grow crops in his orchard to any great extent. He has not pruned thus far, but he expects to keep them low and well headed to facilitate picking and spraying and also to avoid less shaking by winds.

Mr. Margeson grows a little grain, but not extensively, in his orchard.

Before building and settling on the farm he had seventeen acres of potatoes planted in his orchard on the halves. The next year he had six acres planted on the halves and the following year he himself planted eight acres. Since that time he has not planted many potatoes and he intends to plant less in the future becuase the seasons, when potatoes are planted, cultivated and harvested are just the times when he is obliged to be busy in his orchards, spraying, cultivating and fruit picking.

When Mr. Margeson had his home prepared, he came to the conclusion that it was not good for man to live alone and so on June 17th, 1908, Miss Mabel V. Jones, daughter of Dr. R. V. Jones, of Acadia University became his bride.

The young couple have established an ideal home and full of faith in themselves and optimism re the future of their productive acres and the possibilities that await the industrious fruit grower they set an example worthy of emulation.

(Continued on page 500)

A Panorama of Starr's Point, One of the Oldest Orchard Sections of Nova Scotia, Take Fro

Growing Summer Crops in Winter Season

In the Gravatt Greenhouses, Berwick, N. S.

WHATSOEVER thy hand findeth to do, do it with all thy might." and "Do unto the other as thou would'st that he should do to you" are two adages which will open the gate that leads to the ladder of success for any person who will closely adhere to them.

It would be hard to find a better exponent to those two grand principles in the Maritime Provinces to-day than Mr. Arthur Gravatt, of Berwick, N. S., a name familiar to many of our readers through seeing his advertisements of plants for sale in the columns of the Maritime Farmer.

Mr. Gravatt was born in Walton on Thames, Surrey, Nottinghamshire, England. Early in life he was apprentcied to a gardener and he set about learning the business in all its details. He afeerwards secured employment in the gardens of Sir Oswald Moseley, Rollaston Hall, Straffordshire where he arose from the ranks of two hundred gardeners employed on the estate to be second man in command and where he received fair wages for his services.

Sickness in the family and heavy doctor bills, however, made heavy inroads into his income. The sick one was finally placed in a hospital where she began to improve in health and where Mr. Gravatt was advised to take her away to some other clime as soon as she would be sufficiently recovered to stand the journey.

Consequently, Mr. Gravatt turned his face towards Canada, the land of the promise, to prepare a home for himself and family.

About eight years ago he landed in Nova Scotia and went to Kentville but after failing to obtain employment he went on to Berwick and arrived there with his income reduced to his last copper. Had he been possessed of sufficient funds when leaving Kentville it is more than likely that he would have gone to the West and Nova Scotia would have lost one who has since become a good citizen.

Arriving in Berwick in the spring of the year he hired out for $20.00 per month and board and in the fall he was able to sent to England for his wife and family. During the first winter he took his first lessons in fruit packiag, working in the warehouse for eight cents per hour, but he was willing to learn.

The second year he worked as manager of a farm, and the third season he took the farm on shares and the fourth season found him with a rented orchard with which he was successful in making fair profit.

While working along in this way he did a considerable trade in market gardening by working with cold frames before and after hours. He was ridiculed at first but ere long the success he was attaining made people look at his industry in a more favorable light. For several years he worked on an average of about 20 hours per day, but he was interested in his work and bound to make good.

DOUBLE DECKERS HEAVILY LADEN
Another Scene in Jndson S. Margeson's Orchard

Apple Picking in Judson S. Margeson's Orchard

The farm which he now owns was then in the hands of a man who was not making very fast progress towards wealth with his greenhouse plants. Seeing the good work done by Mr. Gravatt with his crude equipment the owner invited the latter to come with him and conduct the business on shares. He agreed to do so under a five year contract and soon the tide began to turn in his favor. Then the owner of the plant offered to sell his interest to Mr. Gravatt who tackled the $3,500 proposition without money. Some friends who had been keen observers of his integrity came to his assistance and the property passed over to Mr. Gravatt. He has met his payments as they matured and was always ready to look after accrued interests. In this way he kept faith with the friends who had endorsed his paper and gradually he has worked off the heavy financial load.

Last year he marketed 1200 baskets of tomatoes. The green sold for 40 cents and the ripe went for 60 cents per basket. He had been told that he could not find a market for cucumbers but last year he grew half an acre of them and sold the produce at $25.00 per ton to the McCready Co., of St. John.

Wishing to get more capital to extend his business he formed a Joint Stock Company and with the added capital he has gone forward and built the most modern green houses in the Maritime Provinces. The new

A. Gravatt, Berwick, N S.

houses cover an srea of about one-half an acre. They are heated and watered by the most modern devices. The various plants grown are set in the ground in these buildings. Instead of the laborious spading system comcomly used, the buildings are so arranged that the ground area may be plowed and harrowed by horse power.

The old glass houses have also been overhauled and a better heating system has been installed.

The total area under glass on Mr. Gravatt's farm is now about 1½ acres. Every kind of vegetable and plant for which there is a demand in Maritime markets are grown. Halifax, the Sydneys and the summer hotels throughout western Nova Scotia furnish a ready market for all the produce he can grow.

At the time of our visit to Mr. Gravatt's plant we were informed that just before Easter he had ship-

(Continued on page 500)

Roof of R. S. Starr's Willow Bank Farm Barn, Starrs' Point, N. S.

DISPERSION SALE OF

High Class and Show Ayrshires

We purpose dispersing our entire herd of pure bred and Grade Ayrshires now on our farm at

FOREST GLEN

Westmorland Co., N. B., on

Friday and Saturday, May 23 & 24

A strict record has been kept of each and every cow in the herd and as the food consumed by each cow has been charged against her production, boarders were quickly spotted and disposed of. This rigorous record keeping and weeding has brought the herd up to a good average producing capacity.

Terms : Under $50.00 Cash. Over that amount notes will be accepted with approved security, bearing interest at 6 per cent for four months.

Sale will begin at 11 o'clock. Luncheon will be served.

For nearly four years this herd has been headed by the richly bred bull "St. Louis King"--27094--a son of the noted Show bull and dairy sire "Pearlstone of Glenora" a many times winner in Canada's leading exhibitions and in 1909 was selected by A. S. Turner & Sons to head their world famous dairy herd at Ryckman's Corners, Ont.

The dam of St. Louis King "Vera of Kelso" is one of a family noted as producers and showring winners, her full sister Lily of Kelso was winner of the Canadian bred class at Sherbrooke, Que., 1909.

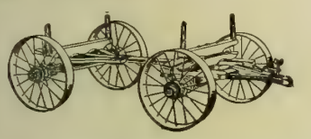
St. Louis King is of good size, ideal dairy type and conformation, and a look at the 30 or more of his offspring in this herd (or sale) will convince the most critical that he is breeding true to type and dairy conformation.

JAMES A. TELFER, *Auctioneer.*

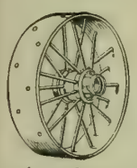
Catalogues on application to R. CHESLEY COLPITTS, Manager, Forest Glen Stock Farm, Forest Glen, N. B.

All animals offered for sale have been inspected and are free of tuberculosis

BUILT low, especially for farm use, a T-A Handy Farm Wagon *saves much hard work.* It is easier to load and unload, and will haul bigger loads without tiring horses, more than a small load.



T-A Wide-Tire Steel Wheels and Handy Farm Wagons



T-A Wide-Tire Steel Wheels are lighter, stronger, cheaper, and better *in every way* than ordinary wooden wheels. *Make your old wagons new* by fitting them up with these superb wheels.

Our *free booklet* (which please ask for) tells how you can make farm work easier and more profitable.

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—EMPIRE—

Cream Separator

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The following statement is only one of many showing the loyalty to EMPIRES that is found in every dairy community:

"Grandmother was proud of her EMPIRE Cream Separator. Father and his brother have EMPIRES. I and my brother and two married cousins each have an EMPIRE. No other pays so well or gives the satisfaction our folks have had with EMPIRES

This statement, and many others, shows the loyalty to EMPIRES in every dairy community.

Our factory is running nights because EMPIRES are superior and are in great demand, The public is paying this compliment only to EMPIRES.

Ask for Catalog 131

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Agents Dept.

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Annapolis Valley Fruit Farm
Overlooking the Minas Basin

62 acres with 475 choice apple trees, a splendid opportunity to develop large commercial orchard; 55 acres machine-worked tillage; splendid 9-room house with 36-ft. piazza; barn with tie-up for 12 head; carriage house; owner a merchant has no use for the farm; located in a thrifty town where in a few years farm will cut into bldg. lots, going now for only $5300, part cash; for full details and traveling instructions to see this and other farms in many different sections, see page 67, our "New Mammoth Farm Catalogue No. 36," just out; beautifully illustrated and filled with a wonderful assortment of money-making farms, send today for your free copy, it will save you lots of time and money. Box D. Sussex, N. B.

Fourth Annual Maritime Horse Show.

(Continued on page 485)

captured first and fourth monies with their Nip and Tuck. Elderkin's Pilot stood in second position, H. S. Dupuy's Glyn was third and Peel Bros. from Oxford captured the fifth award with Dick.

Gypsey, owned by J. C. Purdy, Amherst, Gipsey, owned by A. P. Elderkin and Rex owned by Geo. M. Holmes put up a three cornered contest in the under 15-2, carriage horse foaled prior to Jan. 1st, 1910 class and were placed in the order named.

Carl Ripley, Maccan, had the only entry in the section for carriage horse three years old. But as he was not up to class he was only awarded a second prize.

There were four entries in the matched pair section. A. P. Elderkin carried off the first money with Pilot and Gypsey. Etter & Lowe's Nip and Tuck were placed in second position and Geo. M. Holmes and W. B. Strang's pairs captured third and fourth monies respectively.

SADDLE HORSES.

In the saddle horse ridden by gentlemen class there were seven entries and as they walked, trotted or cantered around the arena they put up a very natty appearance. Logan Bros' Starlight led the class. A. P. Elderkin's Pilot came in in second place followed in third and fourth positions by Geo. M. Holmes' Anna Smith and C. B. Embree's Tom.

Gypsey, owned by J. C. Purdy and ridden by Miss Blanchard, of Kentville; Gipsey, owned by A. P. Elderkin and ridden by Miss Robertson and Timbrook owned by Geo. M. Holmes were the only entries in the placed in the above mentioned order.

Holmes' Anna Smith by Sir Simon topped the hurdles in the leaper class Ladies' saddle horse class. There were W. H. McLellan's Everill was the second highest jumper and Tom owned by C. B. Embree could not rise higher than third position.

J. C. Purdy's Francis ridden by Miss Blanchard was awarded first prize in the leaper ridden by lady class. The other horse entered in this class refused to take the hurdle.

There were four entries in the section for carriage mare or geldings 15-2 hands or over. Two of these were disqualified for unsoundnesses and the remaining two, Starlight, owned by Logan Bros. and Prince, owned by A. P. Elderkin were placed in first and fourth places respectively.

Mares or geldings under 15-2 hands were shown by A. P. Elderkin and Geo. M. Holmes and the red and blue ribbon were placed accordingly.

A. P. Elderkin with Prince and Bonny, J. C. Purdy with Susie Wilkes and Gypsey and Geo. M. Holmes with Harry and Timbrook were the only contestants in the matched pair class and were placed in their respective order.

Five carriage tandems were entered. The first and second team winners were also winners in this section with Etter & Lowe's Nip and Tuck in third place.

A. P. Elderkin, J. C. Purdy and Etter & Lowe were exhibitors of carriage four-in-hands and won out in the orchard mentioned. The three quartettes put up a very creditable showing. Elderkin had four jet blacks, Purdy had a pair of chestnuts as a wheel team with a pair of blacks for leaders while Etter & Lowe's quartette was made up of four well balanced chestnuts.

The Terrace Hotel silver cup for champion carriage horse in harness was won by Etter & Lowe's Nip.

Lieut. H. Montgomery Campbell's silver cup for champion carriage and saddle horse was presented to J. C. Purdy, the winner, by Mrs. Camp-

(Continued on page 492)

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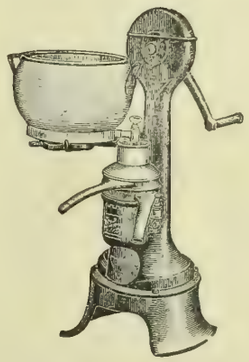
The WATERLOO BOY

in preference to all other cream separators is because the "Waterloo Boy" is



So Simple
So Easy to Turn
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So Quick in Separating
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Seldom out of Repair
Soon Pays for Itself
LASTS A LIFE TIME

There are other advantages in favor of the "Waterloo Boy." These are explained in our literature, which will be mailed to you free on request.

The ease of running, ease of cleaning, simplicity, interchangeable spindle point, low-down supply can, general pleasing appearance and perfect skimming of the "Waterloo Boy" MAKES IT A FAVORITE EVERY WHERE IT GOES.

Then, too, our large capacity machines, so constructed that they turn more easily than most other separators, regardless of capacity, will enable you to separate YOUR MILK IN HALF THE TIME- This is a great advantage it will pay you to enjoy.

Bear in mind we allow you to prove all these claims—since "The Proof of the Pudding is in the Eating."

Write us for full particulars about the "Waterloo Boy" and our special terms to you to use the "Waterloo" and represent us locally in your district.

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Gasoline engines, for farm and boat, cream separators, threshing machines, wood-cutters, grain grinders, our specialties.

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The best and most economical of the Molasses Feedstuffs.

A very small quantity per day will keep your Horses, Cattle, and all Live Stock, in good condition.

We ask you to give it a trial and we know you will then be a regular customer.

If your dealer does not stock it, kindly write for prices and full particulars.

Agents in Maritime Provinces:

BAULD BROS., Ltd., - Halifax, N. S.
A. C. SMITH & CO., - St. John, N. B.
CARVELL BROS., - Charlottetown, P. E. I.

The Apple

I PRESUME it is conceded that apples are grown and eaten for profit and pleasure. It is the most widely grown and known of all tree-fruits. According to Mr. W. T. Macoun, the origin of the cultivated apple is surrounded in mystery. It is supposed that it had its beginning in the wild apple of Europe. Our fancy grade commercial varieties bear scarcely any resemblance to the very small, woody, fruit of the wild parent, so long has been the process of evolution. Although the early settlers brought with them the seeds of of this attractive fruit, it is only within a generation that apple culture has made rapid progress. Mr. Macoun thinks there are now, probably, considerably over 2,500 named varieties.

To the present generation of apple growers it is surprising, that until recently, orchards were starved, pruning was barbarous mutilation, and the value of spraying, and thinning unknown. To the writer, it would be equally surprising if the successful producer did not derive pleasure as well as profit from his orchard. The problem confronting the fruit-growers of the Maritime Provinces is the desirability of producing fruit of the finest quality that will not suffer in comparison with the finest fruit of other countries.

If, as Mr. Alex. McNeill affirms, co-operation is the secret of success at the marketing end of the fruit-growing industry, we may rest our cases there, as far as the selling of our fruit is concerned, (Nova Scotia leads the rest of Canada in the practical adoptionof the principle of co-operation in the marketing of apples). But what about the producing end of the business? The apple will be in great demand as long as growers con-

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Take this good advice *now*, before you paint or let a contract. Four years from now you'll be glad you did. Learn how *vital* is the large percentage of Brandram's B. B. Genuine White Lead--World's hundred year standard--combined in

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Abraham Lincoln once said: "I do not know much about the tariff, but I do know this much: when we buy goods abroad, we get the goods and the foreigner gets the money; when we buy goods made at home, we get both the goods and the money."

The CAPITAL SEPARATOR is Made in Canada---Not Made in a Foreign Country and Assembled in Canada---Furthermore it is a Guaranteed Machine.

CAPITAL NO. 5

Capacity 500 lbs. per hour. Height of milk tank from floor 45 ins. All gears stop when handle is dropped. The easiest separator of its size in the world to turn and operate.

An authorized Guarantee and Insurance Bond goes with each machine. This protects you against loss through fire or accident. YOU may try the Capital in your home and YOU be the JUDGE. A postal brings you particulars.

We also make and sell—

New Empress Steel Ranges
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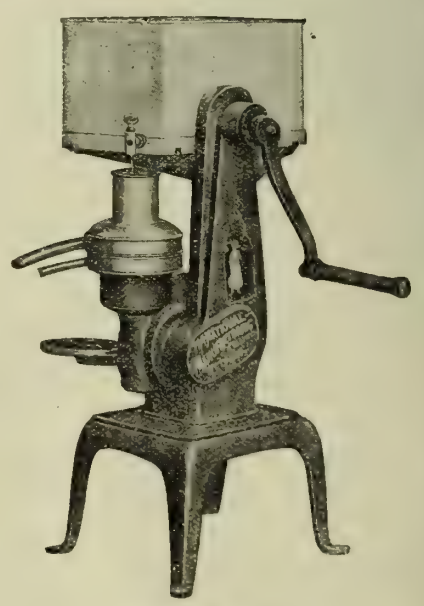
Good Health Chemical Closets
(No farm house should be without one.)

Guaranteed to give satisfaction or money refunded. Write for particulars and free trial offer to-day.



CAPITAL NO. 6

Capacity 500 lbs. per hour. Height of milk tank from floor 38 inches. Can be changed to 300 lbs. capacity at a small expense. Instantaneous clutch — self oiling.

THE NATIONAL MANUFACTURING CO., LIMITED,

OTTAWA, Ont. BROCKVILLE, Ont. REGINA, Sask. EDMONTON, Alta. MONCTON, N. B.

tinue to produce commercial varieties. Cultivation, as well as improved methods of transportation, storage, and marketing, is essential, in view of the demands of the markets. Discriminating purchasers and consumers desire and demand fruit of good appearance, flavor, texture, and keeping qualities. They desire and demand the best. The market returns and reports confirm my opinion that when fruit of the finest quality, properly graded, and packed, is offered for sale, the price will be satisfactory. Surely the lessons of the selling and shipping season just closed will have a salutary effect upon our friends. I am disposed to think that there will inevitably be an over-production of inferior fruit each year, as long as apples are improperly guarded and packed. I venture to express my firm conviction that in producing fruit of the finest quality, properly graded and packed, we shall never have to face the problem of over-production. I cannot conceive of such a condition in consequence of a large and increasing supply of fruit of the desired variety and quality. Permit me to repeat the demand for choicest apples, in sound condition, and graded according to the requirements of the law, will always exceed the supply.

And, why this sustained demand? My reply is; because of the fact that the apple is both delicious and nutritious. The apple is eaten for pleasure and profit. It is no longer regarded as a luxury, but as a necessity, as a brain and muscle producer. "An apple a day keeps the doctor away." As an article of fruit-diet it has no superiors, and but few equals. Altogether, apart from its pleasant flavor, it has a distinct food value. A great deal could be said in favor of a fruitarian diet in general, and an apple diet in particular.

In this connection I refer my readers to "Farmers' Bulletin 293," U. S. Department of Agriculture. This Bulletin is a summary of all available data on the composition, food value, and place in the diet of all fresh and preserved fruits, I quote from the Author's conclusions;—"In general, it may be said that fruits are wholesome, palatable, and attractive additions to our diet, and may be readily made to furnish a considerable part of the nutrients and energy required in the daily fare. The characteristic chemical constituents of fruits are carbohydrates, and so they are naturally and properly used in a well-balanced diet to supplement foods richer in protein, as cereal grains, legumes, nuts, eggs, dairy products, meats, fish. Fruits contain considerable mineral matter, and as they dilute foods they may be added to the diet to supply iron and other mineral constituents without unduly increasing the supply of protein and energy. Intelligently used, fruits are a valuable part of a well-balanced diet and may even be eaten in larger quantities than at present.

I conclude this desultory talk by quoting lines on

MY APPLE TREES.

My apple-trees from winter's chill
In springtime waken with a thrill,
While vital currents start and run
With every day of climbing sun,
Till south-wind voices woo and call
To leaf and blossom carnival.

My trees note how the seasons go
From summer bloom to winter snow:
Their youthful graces lithe and slim
Are grown to burly trunk and limb
Through wondrous gift of magic rings
The oft-repeated summer brings.

Within their shade the robin builds,
The catbird sings, the thrasher trills;
The green leaves turn and whisper low
Such secrets as the south winds blow,
And lull to sleep and quiet rest
The dreamers in the robin's nest.

I lean against the rugged grace
My wide-spread arms may not embrace,
And muse on all the summer flown,
The forms of beauty made my own.
While clouds of bloom and humming bees
Make glad my spreading apple-trees.

My faith is quickened when it sees
The blossoms on the apple-trees,
The promisr fair, the certain clew
To fruitage since the world was new,
Such hoarded sweets of sunshine warm
To glad the heart of winter's storm.

The harvest that my orchard brings
Is better than the wealth of Kings;
The dreams, the rest, the quiet joy,
And peace to heal the heart's annoy—
Such joy upon his head may be
Who lives to plant an apple-tree.
—G. Bryant, Berwick, N. S.

Renovating a Neglected York County Orchard.

(Continued from page 479.)

than picking. The season was very wet and hard on fruit but nevertheless it gave returns of over $700.00, giving a profit, he told us, over and above expenses of $512.62.

Mr. Hawkins is firmly of the opinion that the time is not far remote when the St. John river farmers will know that they can raise as good fruit as can be grown anywhere in Canada, if the people will allow themselves to be educated in proper method.

Mann, Star and Golden Russett Trees in blossom in 1912.
Photo by F. A. Bolser.

Mr. Hawkins' orchard prior to 1911 was an example of the kind that are all too commonly found throughout the Maritime Provinces. In the short period of two years it nas been transformed, through careful management, and is an example of what the average farmer may accomplish in the fruit growing line if he heeds the instructions which are now so readily available.

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When You Select
Maple Leaf Paints & Varnishes

for your painting and finishing Do not select them for their excellence of color alone, nor merely because they cover better and wear longer than other paints and varnishes. Choose them because they protect the best, and preserve property longest. That is why they pay. That is why their use means service and money saved.

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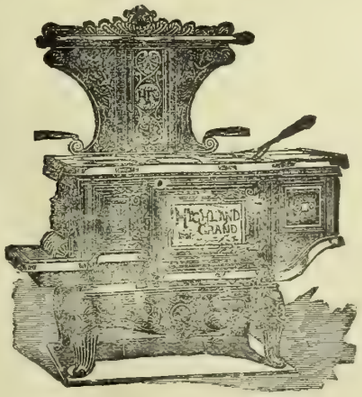

depends somewhat on good cooking, and good cooking depends largely on a good Stove. If you provide your wife with a

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you can be sure she can get no better cooking Stove to work with.

The *Highland Grand Range* is one of our best, is economical on fuel, either with coal or wood, and we guarantee it to give good results.

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Acadian Pride Homespun

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Guaranteed Pure Wool.

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The strongest and best

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pants made in Canada, heavy weight, dark gray mixture, manufactured from pure Nova Scotia wool. This cloth is kept up to the highest standard of excellence for durability by the St. Croix Woollen Mill Co., Ltd., Newport, N. S. These pants are kept by the leading clothiers of the Dominion. If you cannot procure them write CLAYTON & SONS, Halifax, and enclose $3, with waist and leg measure for sample pair, which will be delivered to you postage paid.

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In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

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BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire Cattle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

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Stewart Bros., Alliston, P. E. I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown. N. S.
Wm. A, Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
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Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

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Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

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"HILLSIDE STOCK FARM"

We have for sale at right prices four Ayrshire bulls from twelve to fifteen mos. old. They are sired by the champion bull of 1911; a son of the renowned Scotch champion "Spicy Sam."

Prescott Blanchard, Truro, N. S.

Fourth Annual Maritime Horse Show.

(Continued from page 489)

bell. Mr. Purdy won this trophy in 1912 and again this year on his trappy Gipsey.

HEAVY DRAUGHT PURE BREDS.

There were eight entries in this aged class for pure bred heavy draught mares or geldings, all Clydesdales. Logan Bros. with Pink Rose and Princess May captured first and third places while McFarlane Bros' Bess Spencer was sandwiched in in second place. R. A. Snowball's Marionetta captured the green ribbon.

There were just enough prizes to give each of the exhibitors a share in the three-year-old pure bred heavy draught class. Snowball's Moss Rose, Stewart Etter's Bell Pride by Pride of Windham, and his Soubrette of Homestead by Handy Andy and Wm. O'Brien's Bell of Hants by Norseman came in for the first, second, third and fourth prizes in the order named.

Logan's Pink Rose and her mate Baron's Fancy, Snowball's May Lothian and Marionette and McFarlane Bros' Nell Bowie and Bess Spencer carried off the honors in the aged heavy draught pure bred team in harness class.

Snowball's Moss Rose and Chatham Jeanie led the way in the three-year-old heavy draught team class, and were followed in second place by Etter's Bell Pride and Soubrette of Homestead.

The Arthur Wallace silver cup for the best pure bred heavy draught four-in-hand was presented by Mrs. Wallace to Logan Bros, who won the trophy in 1912 and again this year on Pink Rose, Baron's Fancy, Princess May and Polly McGregor, a splendid quartette of Clyde mares of which their owner may justly feel proud.

THE HEAVY DRAUGHT GRADES

were a particularly useful lot and showed what splendid farm teams our farmers could have if they followed one line of breeding for some years. Nearly every animal shown in this class was the progeny of a pure bred Clydesdale sire.

Fowler Bros.' Minnie and Mayor by Prince of Annick led the way in the section for heavy draught mares or geldings in harness, foaled previous to January 1st, 1909. W. P. Keilor's King followed in third position. Any one of the three could stand more competition.

The four-year-old section of the heavy draught grade class was represented by T. W. Keilor's Sue, by Vanderbilt and W. P. Keilor's Queen. Queen captured the red ribbon.

Sandy and Nancy, by Prince Alert, shown by Ronald Rutherford, River Herbert, had no competition in the section for three-year-olds. They are a pair of useful colts and were placed in the order named. The same pair had no competition in the team in harness class.

Fowler Bros.' Minnie and Mayor led the team class with W. P. Keilor's King and Queen a good second.

There was only one entry in the two-year-old draught grade class but as it was not good enough for first prize, Judge Richardson only awarded him third money.

The silver cup donated by the Amherst Hotel, Amherst, N. S., for the best heavy draught grade four-in-hand was awarded to Etter & Lowe on a quartette consisting of Fowler Bros.' Minnie and Mayor and Keilor's King and Queen.

CLYDESDALE GRADES.

The special prizes offered by the Canadian Clydesdale Horse Association for the get of registered Clydesdale stallions were awarded as follows:

Mare or gelding shown in single

"Bumper" Barley Crops

are easily obtained by the intelligent application and use of Nitrate.

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written by Jas. Shackleton. By mailing $1.00 to-day for this great book, you will also receive the Canadian Poultry Review free for one year. But you must act now. Book contains 30 chapters. Here are some: Chap. 1—Feeding of Chicks. Chap. 3—Rearing of Breeders. Chap. 4—Main Cause of Mortality in Chicks. Chap. 6—Factors of Prolificacy. Chap. 8—Crops in Poultry Yards, illustrated. Chap. 9—Best Breeds of Fowls. Chap. 11—Differences in Eggs. Chap. 12—Pekin Ducks, illustrated. Chap. 15—Main Cause of Degeneracy. Chap. 16—Causes and Prevention of Diseases. Chap. 17—Factors of Fertility. Chap. 18—New Blood and Grading Up; etc.

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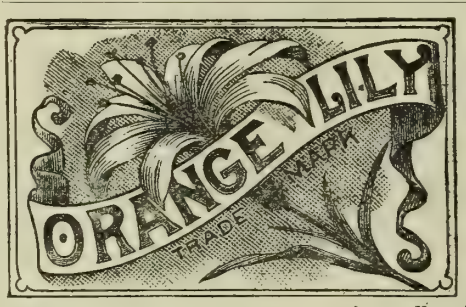

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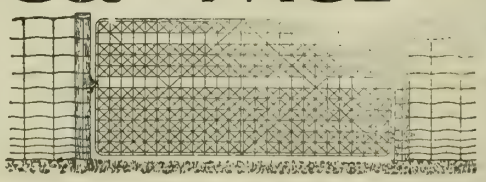

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Present offering. One fine bull fit for service and several bull calves three or four months old, sired by Helbon Dehols Prince, and from cows that are producers. Among them one whose two nearest dams average over 26 lbs. butter in 7 days. For particulars and prices write

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Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd. A few bull calves and yearling heifers for sale.

FRED S. BLACK, Amherst, N. S.

Strawberry Plants

I have for sale the Senator Dunlop. This variety is acknowledged by commercial Strawberry growers to be the best and earliest market berry raised in the Maritime Provinces. Plants tied and boxed ready for shipment $3.50 per thousand. In lots of 5000 or over $3.00 per thousand, cash with order.

MANNING ELLS, Port Williams, N. S.

Sea View Stock Farm

offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

Sgd. J. D. IRVING,
Buctouche, N. B.

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Imported Clydesdale Colt "Spicy Robin" rising three year old, Sire Radium by Hiawatha. For further particulars apply to

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Cossar Farm, L. Gagetown, N.B.

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Size	Price doz.	Fifty tags
Cattle.....	75c	$2.00
Light cattle...	60c	1.50
Sheep or Hog.	40c	1.00

No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample mailed free.
F. G. JAMES, Bowmanville, Ont.

Lawndale Stock Farm Shorthorns

We offer at present a few young heifers and bulls, as well as three cows, all bred in the purple.

Information cheerfully supplied to enquirers, Address,
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$3.00 and $1.25

Per setting is all I am asking for eggs from my 2 pens of Noted Prize Winning Rose Comb Rhode Island Reds. I will guarantee you cannot get eggs for less than $10. from breeders outside the province that will hatch chicks as good as my $3.00 pen. This pen is headed by 1st. Amherst Cock mated to 10 winning females. Pure American Beauty Strain. Will sell pen for $50.00, any 4 of the pullets are worth this.

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Jerseys & Yorkshires For Sale

Bull calves by Foxhalls St. John O'Dreamwold, and young pigs, both sexes, ready to ship in April.

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harness, foaled previous to January 1st, 1909—1 and 2, Fowler Bros. on Minnie anh Mayor by Prince of Annick; 3, W. P. Keilor's King by Honesty; 4, J. R. Embree's Champion.

Mare or gelding shown in single harness, foaled on or after January 1st, 1909—1, Walter Bullmer's Dan, by Vanderbilt; 2, W. P. Keilor's Queen by Hercules; 3, Chas. M. Shipley's Topsy by Vanderbilt; 4, T. W. Keilor's Sue.

Team in harness foaled previous to January 1st, 1909—1, Fowler Bros.' Minnie and Mayor; 2, W. P. Keilor's King and Queen.

Ronald Rutherford's Prince Alert colts had no competition in the class for young teams.

They also won first and second prizes in the class for singles foaled on or after January 1st, 1910 and Elbert Black's Nellie Grey by Vanderbilt was awarded third money.

GENERAL PURPOSE.

The general purpose singles were ten in number and the following prizes were awarded:—1, R. A. Snowball; 2, Peel Bros.; 3, Fowler Bros.; 4, W. E. Barnes.

Peel Bros. led in the general purpose team class, followed in second place by S. M. Styles.

AGRICULTURAL.

Aged mare or gelding, nine up—1, and 2, Etter & Lowe; 3, J. R. Embree; 4, C. B. Embree.

Four-year-old aged mare or gelding, a quartette—1, Walter Bullmer; 2, C. M. Shipley; 3, Jas. E. Goold; 4, Henry Donkin.

Of this number at least three were by Vanderbilt whose get are proving to be valuable farm horses. Vanderbilt is now owned by C. A. Brown, Newport Corner, N. S.

Two-year-old mares or geldings, four entries—1, Geo. M. Holmes; 2, Wilson Beatty; 3, Elbert Black; 4, Chas. M. Shipley.

The class for yearlings brought out six entries which were placed as follows:—1, Geo. M. Holmes; 2, W. F. Beatty; 3, W. E. Barnes.

Matched team—1, Etter & Lowe; 2, J. R. Embree; 3, C. B. Embree.

PONIES.

Pony in single harness, under 12 hands—1, Thos. Hooper, Truro, N. S.

Pony in single harness, 12 hands up to 13-2 hands—1, Arthur Wallace, Pictou, N. S.; 2, Helm, Amherst.

THE HAULING COMPETITION

brought out a strong class of powerful equines in both single and double sections.

The single awards went to:—1, F. S. Black; 2, W. F. Beattie; 3, W. O. Bowser.

Black's horse hauled 2795 pounds.

In the doubles' section the winner of first and second prize was W. F. Beatty, whose team hauled a total of 3740 pounds.

Meals!

LOTS of home baked bread, cake and pastry are always welcome. But baking is not *always* an easy job. Perhaps we can help you. Here is a truth backed by honest *proof*.

Help:

Regal Flour readily yields the *best quality* and the *utmost quantity* of bread per barrel of any flour in the world. Makes light, white loaves. And *such* meltingly flaky pastry.

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Try Regal once. If it is not just as good as we have promised, your dealer will return your money. We then have to pay him back. So unless you like Regal we lose completely. Isn't it fair to expect that Regal will mean easier, nicer meals?

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POULTRY & FRUIT FARMS
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SPECIALISTS IN WHITE WYANDOTTES & BARRED ROCKS

WE have some of the finest stock in the Maritime Provinces. All our birds reared on free range, thus ensuring size, health, and vigor, so essential for heavy egg producers.

If you want winter layers try the *BROOKLANDS STRAIN* you will not be disappointed.

STOCK, EGGS AND DAY OLD CHICKS

We have installed an 1800 egg capacity Incubator to especially cater for the day old chick trade.

Custom hatching a specialty. Correspondence solicited.

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Columbian Wyandottes

Finest exhibit in mating, $3.00 per 15. We offer special prize of $1.00 for best cockerel and $1.00 for best pullet from above mating at next Amherst Fair. Barred Plymouth Rocks, McDonald College Utility strain, 75c per 15. $3.00 per 100.

Orchard Hill Farm, Brown's Flats, N. B.

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Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.
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From prize mating Rose and Single Comb R. I. Reds and Buff Orpingtons and S. C. Brown Leghorns. Eggs $2.00 per 15. Send for mating list.

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Commercial Strawberry Plants
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Senator Dunlap—Perfect blossom, very vigorous, good size, good quality, very productive. $3.50 per 1000 f. o. b.
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Cash must accompany order.

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White, Buff and Black

Bred for laying and exhibition. The best combination hen of all the breeds. Large, beautiful and great layers. No bother with your neighbor's when you keep this breed. Eggs from either pen $2.00 per 13. Have a pen of Whites, 1 cock, 11 pullets and yearling hens, $15.00. No culls, all good ones. Shipped on approval, only if you are not satisfied I expect them to be prepaid back to me. Also a beautiful pen of Blacks, 1 cockerel and 6 hens and pullets, only 1 hen in this pen, $10.00. This is a rare bargain. Am selling to make room. Shipped on approval.

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White and Columbiam Wyandottes, Single Comb White Leghorns, and Light Brahmas. We use trap nests. In business over 30 years. Brahma eggs, $3 for 15; $5.00 for 30. The other varieties $2 for 15, $5 for 50, $10 for 100. Address,

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Pure Bred Ayrshire Bull Calf

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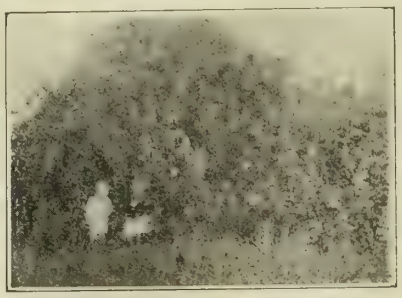
Walter McMonagle & Sons, Sussex Corner, N. B.

FARMER ADS BRING RESULTS

The Farm Kitchen Garden.

(Continued from page 478.)

be planted in well prepared soil in double rows about four feet apart and six inches apart in the rows each way. These double rows are more economical for blanching with boards and with this method we always use the early self-blanching varieties. To blanch with boards set on edge along each side of the row of celery and bring it in close at the top to about three or four inches to exclude all light and support boards by stakes. If it is to be blanched with earth set the rows singly about 4½ feet apart and the plants six inches in the rows. Celery must have thorough cultivation keeping all weeds down until it would be large enough to smother the weeds itself. When it is about 10 in. high we start to draw a little earth up to the plants taking care



98 p. c. Clean Fruit and Almost a Full Crop in '12
Photo by F. A. Bolser.

that none gets into the hearts as it would cause it to decay. The late or tall varieties we keep growing longer and before danger of heavy frosts is at hand we store in a good cellar or pit. A cellar which has a dry cool air overhead and moisture around the roots is what is needed most so that the plants won't shrivel up where they will keep on blanching through the winter.

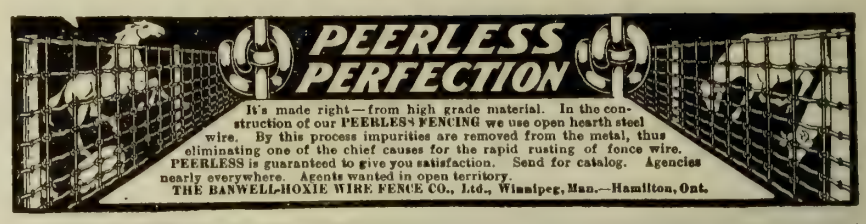
Cabbage is another plant that should be grown in the garden. For early use the seed of some of the early varieties should be sown in a gentle or moderately warm hotbed about the first week in April. When they have shown their second leaf they should be transplanted into another cold frame and when large enough hardened off preparatory to planting outside. The ground should be well prepared and enriched with

Another Years Showing in an Orchard that has an Unbroken Record of No Faliure for 8 Years in succession and does not plan to fail Next Year.
Photo by F. A. Bolser.

plant food. Thorough cultivation should be given to conserve moisture without which a good crop is impossible and sometimes means the difference between success and failure.

For the late crop the seed can be sown in a cold frame when danger from frost is past. It is better to sow rather thinly to avoid the necessity of transplanting to another bed. When they are large enough, transplant to the open field and cultivate the same as for early crop.

Cauliflower is cultivated about the



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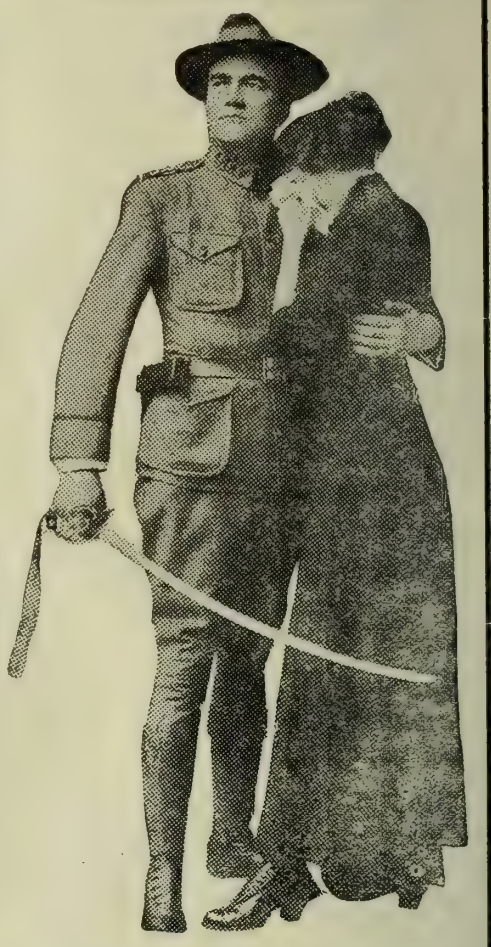

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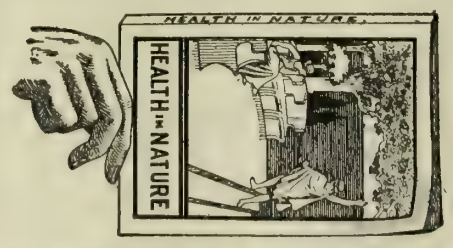

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King of Islabank—381273

A choicely bred young bull rising 2 yrs, sire Cherry Bank Sunrise, dam Crouchville Lass that sold at the dispersion sale at Hill Grove Farm last May for $260.00, this is a rare chance to get a first class dairy bull.

For price and particulars write

EDWARD RILEY,

Coldbrook, P. O., t. John, N. B.

FOR SALE!

A few choice White Leghorn Cockerels from prize stock. Eggs for hatching all breeds. Send for catalogue.

Maritime Poultry Supply Co.
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FOR SALE

The pure bred Clydesdale Stallion Flash Favourite, imp. (12147) sired by Royal Favourite, dam by Flashwood. Imported and owned by the Nova Scotia government for four years at Truro, N. S. Flash Favourite has proved a sure foal getter and a sire of colts noted for their quality and size. Price reasonable.

ALFRED HAMILTON,
River John, N. S.

BOOKING orders for eggs now in the following varieties—R. C. Rhode Island Reds, Barred Plymouth Rocks, White and Silver Laced Wyandottes and S. C. Black Minorcas, Mating List Free also catalogue of Leg Bands. Agents wanted for OCULUM the great poultry remedy.

GEO. H. SEAMAN, Moncton, N. B.

1870 1912

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PRODUCE COMMISSION MERCHANTS

141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

For Sale

Pure bred Clydesdale Stallion, Marquis of Meadowlands, (No. 10749); dam, Imp. by Sir Hugo; sire, Kings College Imp. Foaled June, 1909.

Marquis is a fine upstanding horse with best of underpining and plenty of style throughout.

Full particulars apply to

Morris Scovil
Gagetown, N. B.

HEREFORD STOCK FARM

Let us know how much money you want to invest in Hereford bulls, heifers, or cows with calf by her side or bred to "Prime Lad".

Buff Orpingtons and White Wyandottes, good laying and Utility strains, eggs $1.50 per 13.

R. R. BLACK, Amherst, N. S.

A Fancy Annapolis Co, Pack Needs no Inspection, another Product of the Valley which is a World Bearer.
Photo by F. A. Bolser.

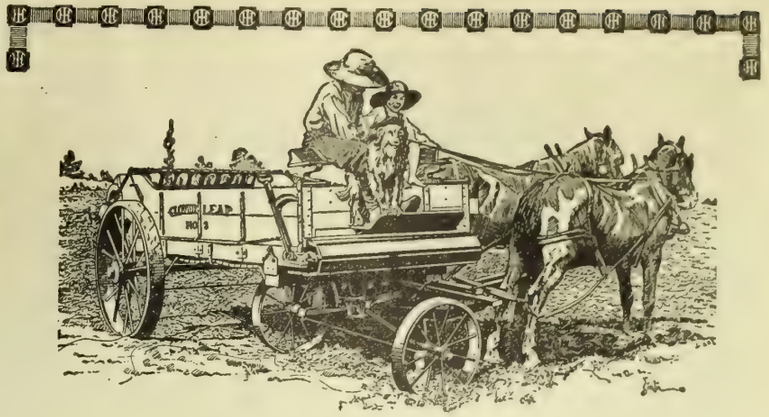
same as cabbage but requires ground a little more moist and richer in plant food as it is more easily checked in its growth. It requires thorough cultivation in ground well prepared. When the head comes to maturity and if too many come in at once to be used up at one time a good plan is to fold some of the outer leaves over the head, to exclude all the light to keep it white. The early varieties are best to be grown in this country and last but not least secure the best seed that can be got, as it plays a very important part in the future success of the crop.

Cucumbers succeed best in a well sheltered spot and should be planted in hills when the weather becomes warm enough, about 4 feet apart. It is well to add a shovelful or two of well rotted manure and thoroughly mix with the soil. Sow about 8 seeds to a hill and when all danger from insects is past thin out the weakest plants leaving about four of the best to come to maturity. All fruits should be gathered when ready whether it is required or not for if left on the vines to go to seed will lessen the productiveness.

Tomatoes should be started about the last of March in a hotbed, in a nice light, loamy soil. When they get their second leaves they should

A Crab Tree in Blossom
Photo by F. A. Bolser.

be pricked off into another hotbed where the heat is less than in the first, about 4 in. apart each way and kept growing nicely until planting out time. About three weeks before planting out time they should have been started to be hardened to the conditions of the open field, where they should be planted to a distance of 3 feet apart in hills adding about a teaspoonful of Nitrate of Soda to each plant which will give it a good start. A dull day is preferable for planting in the field. To secure early fruit it is best to grow the plants to a single stem pinching out all side shoots, as the strength that would go into those shoots will go into the fruit and it will mature quicker than if they are left to grow at random. If grown to a single stem they can be planted about 20 in. apart in the rows with the rows 3 feet apart. Use the early maturing varieties, such as Earliana and Early Ruby.



Land Value Almost Doubled

IT is no longer an unusual thing for us to get reports from farmers who have been using manure spreaders properly and consistently for periods ranging from three to five years, to the effect that the land on which the manure spreaders have been used is regularly raising so much more produce that the value of the land is almost doubled.

"The beauty of it is," writes one Ontario farmer, "that the increased fertility seems to be permanent. Dry weather has less bad effect on our crops now than it used to, the soil is much more easily worked, making the day's work easier both for the horses and for the men, it is less trouble to raise better crops, and we are a good deal surer of good returns since our soil was built up by the use of an

I H C Manure Spreader

I H C manure spreaders, **Corn King** or **Cloverleaf,** are made in various styles and sizes to meet any and all conditions. There are wide, medium and narrow machines, all of guaranteed capacity; return and endless aprons; in short, a spreader built to meet your conditions and made to spread manure, straw, lime, or ashes as required.

I H C spreaders will spread manure evenly on the level, going up hill or down. The wheel rims are wide and are equipped with Z-shaped lugs, which provide ample tractive power without jarring the machines excessively. The apron moves on large rollers. The beater drive is positive, but the chain wears only one side. The I H C agent will show you the most effective machine for your work. Ask to see an I H C manure spreader. You can get catalogues from him, or, if you prefer, write the nearest branch house.

International Harvester Company of Canada, Ltd
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At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton

The Fence You Ought to Buy at the Price You Want to Pay is Standard Fence

We believe it to be the best Fence sold in Canada. It's the one fence that through all the price cutting—HAS NOT CUT THE QUALITY.

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Send for our catalogue—it contains full particulars—and besides gives you a lot of useful information about how to build fence, how to judge your requirements exactly and how to order to your best advantage.

DON'T BUY FENCE until you have received a copy.

Write for it now before you forget. A postal will do. Address:

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Live agents wanted for Standard Fence, Posts and Gates. Write for special terms to-day.

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High Class Holstein Cattle. Young stock bred from heavy producing and showing ancestry for sale.

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and sena them in

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Pure bred Shorthorn bulls, all ages. GUY DIXON, Point de Bute, N. B.

FOR SALE.—One pure bred Aberdeen Angus bull, 18 months old.—L. M. ANDERSON, Sackville, N. B.

IMPROVED BERSHIRE PIGS for sale. Choice Stock.—Highland Stock Farm, Victoria, Car Co., N. B.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Black Percheron Stallion, age six years. For particulars apply to LEO MILLER Linville, Carleton Co., N. B.

SHORTHORN BULLS FOR SALE whose sires, dams, and grandam were bred in Ontario and Scotland. WALTER EATON, Upper Canard, N.S.

FOR SALE—Four Ayrshire bulls, five to eleven months old from good producing stock. JOHN F. FROST, Hampton, N. B.

FOR SALE—Two yearling pure bred Guernsey Bulls from good size stock. T. D. BLAIKIE, Great Village, N. S.

FOR SALE.—One pure bred Shorthorn bull, eighteen months old, color red, good size. Apply to C. H. RIPLEY, Rossendale, Cum. Co., N S.

STRAWBERRY PLANTS.—Best and most productive varieties. Sold at reasonable prices. Send for catalogue.—JOHN N. CHUTE, Berwick, N. S.

CHEESEMAKER—Wanted for Season, 1913, at the Salmonhurst Cheese Factory. Apply stating particulars to A. J. JENSEN, Salmonhurst, Vic. Co., N. B.

HOLSTEINS FOR SALE—Six bull calves ranging in age from three weeks to five months old. Also an aged bull, very quiet. JEFFRIES BROS. Sussex Corner, N. B.

RICHLY BRED AYRSHIRE BULL, three, four and ten months old for sale cheap. For particulars apply to T. J. HAWKINS, Landon, P. O., Col. Co., N. S.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

FOR SALE—One pure bred Jersey bull, one pure bred Shorthorn bull, each 16 mos. old, sires of both from College Farm, Truro. Write A. JOLLYMORE, Brule Shore, N. S.

VALLEY FARM HOLSTEINS FOR SALE—Two pure bred Bull calves dropped in April 1912 1 bull calf dropped in October from good producing stock. W. G. CAMPBELL, Salisbury, N. B.

ENGINES for all purposes such as pumping water, spraying, wood sawing, motor boats, etc. Cut out the drudgery and let the engines do the work.—GUARANTEE MOTOR CO., 371 Bay N, Hamilton, Ont.

WHITE ORPINGTONS — Cook-Philo strain. Day old chicks, $4.00 for 12. Hatching eggs, $2.00 for 15. A few fine cockerels and pullets at $3.50 each.—C. W. GILLIATT, Masonic Home, Windsor, N. S.

ALL kinds of books on Poultry, Pigeons, Rabbits, Pheasants, Horses, Cattle, Farming, Gardening, Bees, Fruits, Flowers, Vegetables, etc., Catalogue free.—MORGANS POULTRY SUPPLY HOUSE, London, Ont.

EGGS FOR HATCHING, One Dollar per setting. Single Comb Brown Leghorns, White Wyandottes and Houdans. See our win at Amherst in Christmas issue. WOLFVILLE POULTRY YARDS, Wolfville, Nova Scotia.

SAMPLE ENGINES AT SPECIAL PRICES.—1 1-2, 3 1-2 and 6 H. P. sizes. They have been only slightly used. They will be adjusted and in perfect condition and just like new before leaving our factory. Prices and further particulars on request.—THE PAGE WIRE FENCE COMPANY LIMITED, Walkerville, Ont

FOR SALE—Ohio Improved Chester White Pigs, registered. Five dollars at five weeks. Dam sired by first prize boar at Toronto and London exhibition. Pairs furnished not akin. WALTER S. COGSWELL, Centreville, N. B.

GUERNSEY BULLS FOR SALE—We have on hand 1 bull 2 years old in May; 2 bulls 14 months also 1 ten months. All good quality stock and from good dams and sires. We must sell to make room for young stock and will sell right. Come and see them or write us. WILLIAM COX & SON, Canard, Kings Co., N. S.

FARM AT BARGAIN in Annapolis Valley. Mature orchard, picked 1000 bbls. apples, tree run. Young orchard 17 acres dyke, excellent house, pasture and timber. Episcopalian and Baptist Churches, High School, D. A. R. Station and stores within 1 mile. Absence of owner demands immediate sale. Terms easy, $6,500. GEORGE SANDERS, Round Hill, N. S.

Growing the Market Cucumber.

I always devote part of my farm to cucumbers, which I have found profitable as a market crop. Whenever possible I choose a well-drained, sandy loam which has been in clover sod the previous year, as the plants grow faster upon such a soil than in a soil less light and less well suppliedwith humus.

The ground is harrowed well, first with a disk, then with an acme harrow. It is then marked out in checks 4½ feet each way. I prefer having cucumbers in hills, as this method gives the plants more leaf surface than when the seeds are sown in the single row system. It is also easier to cultivate check rows than single rows. After marketing the ground is furrowed out one way with a one-horse plow set deeply. A large shovelful of fine hog manure is then placed in each hill. If such manure is not available I use well rotted stable manure, but I always get better results from the former. I never use commercial fertilizers on cucumbers. Planting is always deferred until after danger from frost has passed.

In planting, I always go at right angles to the way the rows were followed, thus insuring straight rows in both directions. Six or eight seeds are dropped in the hill, which is made by treading the ground firmly before the seeds are dropped. The seeds are then covered lightly with earth. When they sprout a second planting is made alongside the first, so that should unexpected unfavorable weather arrive the second showing will be unhurt and a stand of plants secured. If the weather continues unfavorable a third showing is made several days after the second.

Several insects are often troublesome with cucumbers. For cutworms I use poisoned bran about four inches from where the plants are coming through. For striped beetle I dust frequently with plaster, which acts as a repellant. When the plants get their rough leaves they are thinned to two in a hill, after which they are kept clean until the vines meet, when they are cultivated for the last time.

During the picking season the vines are gone over regularly at short intervals and the cucumbers removed as soon as they attain marketable size. This prevents any check in the growth of vines that may follow neglect in remouing premature fruits. It also increases the number of fruits that can be secured from the individual vines.—South Jersey Trucker.

Save Money on Butter Parchment.

The Maritime Farmer's co-operative system of selling butter is bringing in orders by wholesale. The users of pure butter parchment are realizing that this offer means the saving of considerable sums to them, as well as giving them a pure parchment paper that will not ruin their butter. So many imitations have been offered from time to time, on the plea that they are just as good as pure paper, that customers in many sections have only understood the difference when confronted by losses occasioned by the use of inferior parchment paper. The parchment offered by the Farmer is brought direct from Germany and every sheet of it is guaranteed. By buying in large quantities from the best mills of the world, the Maritime Farmer is able to give its customers the benifit of a large saving. A postcard addressed to the Maritime Farmer will bring full particulars to your address. Write to-day and save money on wrapping of your dairy output. The Maritime Farmer supplies printed or plain parchment in all sizes.

Ford
THE UNIVERSAL CAR

"The car of the hour" it has been many seasons! But it's more than that now. It stands alone--"the universal car." Nothing but a wonderful merit could have created so enormous a demand for it. Better get yours to-day.

There are more than 220,000 Fords on the world's highways—the best possible testimony to their unexcelled worth. Prices—runabout $675—touring car $750—town car $1000—with all equipment, f.o.b. Walkerville, Ont. Get particluars from Ford Motor Company of Canada, Limited, Walkerville, Ontario, Can.

Talking Machines, Sewing Machines, and Used Organs

at

Half Price

They are moving out quickly. Many and many a home is more cheerful as the result of this great sale. A few of each still remain and if you want to make sure of getting a used Gramophone, or a used Organ, or a high grade Sewing Machine at just half their regular price, fill in, cut out and send to us the form below.

J. A. McDONALD,
PIANO & MUSIC CO.,
Halifax, N. S.

I am interested in the purchase of.....
.....at half price and wish you would send me full particulars by next mail. In sending you this form it is understood that I am under no obligation to buy.

NAME .....

ADDRESS .....

ONE CENT A WORD

FOR SALE—Well bred roadster (female), bred to foal May 1st, 1913, by a pure Hackney, 8 years of age.—L. M. ANDERSON, Sackville, N. B.

WANTED—The name and addrees of the party who mailed Postal Note No. H. 998512 at Moncton, N. B., on March 15th, so we may give proper credit for same.—THE MARITIME FARMER, Sussex, N. B.

MY BARRED PLYMOUTH ROCKS are bred to lay. Extra large. Narrow Barred. True Rock Shape. $2.00 for 15. C. CAREY, Yarmouth, N.S.

FOR SALE—A limited number of choice Pure bred Yorkshire pigs from the best of "Macdonald College" stock. FISKE BROS. Florenceville, N. B.

FOR SALE—Pure bred Holstein bull calf, 3 months old, nicely marked, sired by prize winner, price $30. S. J. DARCUS, Fredericton, N.B.

FOR SALE—5000 bus. potatoes (reds, whites and McIntyres) apply to J. J. LACEY, Sec. Tracadie Cross Farmers Institute, P. E. I. stating highest price.

AGENTS WANTED to sell mining stock at 10c share. High pay to business producers. Write at once to A. R. AARESTRUP, 206 Creighton St., Halifax, N. S.

FOR SALE Two pure bred Shorthorn bulls, 1 yr to 1 1-2 yrs. of age, of dual purpose breeding good average stock. Also a grade Clydesdale mare, 4 yrs old this spring bred to foal in June, prices reasonable. L. M. ANDERSON, Sackville, N. B.

HIGH CLASS
JEWELRY

18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....68 cents
18k Rolled Pendants, worth $3.00, our price..... ....99 cents
Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....$1.36
Boys Watch..... .....69 cents nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
Box D.
Sussex, New Brunswick.

P. E. Island Seed Oats For Sale

In order that our local farmers should be supplied with the very best cleaned and true to name oats, we have purchased from the most reliable growers in Prince Edward Island, a large quantity and will therefore be in a position to sell to any who may want good, reliable seed.
Correspondence solicited.

The Sussex Mercantile Co., Ltd.
Sussex, New Brunrwick

To whom it may concern: This is to certify that I have used MINARD'S LINIMENT myself as well as prescribed it in my practice where a liniment was required and have never failed to get the desired effect.
C. A. KING, M. D.

Engine Bargains !

3 H.P. Guarantee make, $50
5 H.P. American make, $60.
4-6) H.P. Guarantee, $75.
7 H.P. Defiance, $100.
7 H.P. Eacine, $75.
5 H.P. 4-Cycle, $100.
12-18 H.P. Fairbanks Speed Engine.
20 H.P. 4-Cycle Craig, heavy duty.
7 1-2 H.P. Mianus, $95.
4 H.P. Stationary, Fairbanks.
4 H.P. International Stationary.
6 H.P. for Land and Water use.
6-7 1-2 H.P. Guarantee, $90.
Pumping Engine, Small Farm Engine, and about 10 other Marine Engines, all rebuilt and in good order.

GUARANTEE MOTOR CO.
369 Bay Street North, Hamilton, Ont.

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

Seasonable Spraying Suggestions.

(Continued on page 481)

drenching every leaf, every fruit, every twig, every branch. This can be much more easily done and quickly accomplished with a high pressure power sprayer, but it can also be accomplished by a hand pump.

Thorough spraying not only results in in better fruit but in more fruit. There are two causes for the "June drop"—lack of fertilization of the blossoms, and lack of thorough spraying. Where spraying has been carelessly done apple scab often attacks the stems of the blossoms and the young fruit and in such a case no fruit can develop on those stems.

Entomological Laboratory for N. S.

The Dominion Entomological Laboratory, at Bridgetown, N. S. was opened in the spring of 1912 for the purpose of studying under local conditions the more injurious insects of the province.

The station consists of a two roomed portable house fully equipped for the breeding, study and preserving of insects. A separate breeding room is being constructed at present for work on the Brown Tail moth.

Experiments in hand consist of one large spraying experiment to determine the best dates of speaying for the green fruit worm and the Budmoth. In connection with these the life histories, parasites, amount of damage normally done in orchards cared for in various ways and other points which may be of possible value will be worked out for both species. Three other orchards will be under observation during the coming season to determine the value of cultivation on the green fruit worm.

The native parasites of the Brown Tail moth will be bred at the laboratory during the coming season and a number of parasites now established in Massachusettes will be imported and colonized. This work will also be done with Gipsey moth parasites. Although Gipsey moth is not in Nova Scotia at present it seems only a matter of time until it arrives and if its parasites can be established here on the native caterpillars before it arrives, its control when it does come will be so much easier.

During the season of 1912, the San Jose Scale was discovered in the Annapolis Valley by the Field Officer of the Division of Entomology, stationed at Bridgetown and it is owning to its early discovery that the efforts to exterminate the pest owe their chance of success. The Apple Maggot was also discovered for the first time in Nova Scotia in an orchard in Digby county and will be studied locally as soon as an opening can be found in the program.

The experiments on both Budmoth and Green fruit worm have up to the present given particularly gratifying results. These results will be verified during the coming season and when made public will enable the fruit growers to fight these two pests more intelligently and economically.

The laboratory at Bridgetown is the only station of the Division of Entomology in Nova Scotia and is directly under the supervision of Dr. C. Gordon Hewitt, Dominion Entomoligist. George E. Sanders, the Field Officer at the Laboratory, is in immediate charge of the breeding and experimental work and during the winter also has charge of the combined Dominion and Provincial Brown Tail moth inspector.

Mr. Saunders is a native of Nova Scotia. He graduated B. S. A. in Biology at Guelph. After graduating from the O. A. C. in 1907 he was employed by the Illinois State Department of Agriculture first as inspector and later as assistant to State Entomologist. In 1910 he returned to Canada as Inspector under the Insect and Pest Act in which capacity he worked in Ontario, New Brunswick and Quebec and for a time in the Ottawa offices. He is at present Field Officer for the Division of Entomology for Nova Scotia where his attractive manner and thorough work have won for him and his work the confidence and co-operation of the farmers in general.

Clydesdale Stallion For Sale

Clyde Stallion, Flash Favorite 2nd (11269), sire and dam imported by N. S. Government, foaled June 1st, 1908. Weighs 1500 lbs., is of the heavy draught type. Sound and a sure foal getter. A well trained, prompt, and kind worker. Has been twice a prize winner at Amherst Horse Shows.

Inspection invited. Long distance 'phone.

FRED. S. BLACK, Amherst, N. S.

How Cabbage Seed is Grown.

Seed farms are always interesting. A large proportion of the cabbage seed used in the United States is grown on Long Island. In fact this industry is a very important one with the farmers of that section. As cabbage is a biennial plant two seasons are required to grow a crop of the seed. The plants are set during the latter part of July and the first of August, and are put 15 to 18 inches apart in rows 3 feet wide. By setting out at this time a small head is produced by the time cold weather comes. A large head is not desired. At the approach of winter the plants are dug or pulled up and buried about 18 inches deep in trenches for protection.

The lattet part of March or the first of April the plants are taken from the trenches and again set in the field. If the heads are hard they are split open with a knife before setting out. Throughout the spring and early summer cultivation is given and sharp ridges of soil are worked around the stalks to prevent falling over. The seed stalk develops from the small head formed during the fall and grows 3 to 4 feet high. When mature the stalks are cut and allowed to lie on the ground until dry, when they are hauled to the barn or other convenient place for threshing.

This operation is performed either by hand or by a threshing machine. The latter maethod is much quicker but breaks a good many of the seeds. The hand method is most commonly used. A large space of ground or floor is covered with sheets and the seed stalks piled on them. Between the piles barrels are placed and the threshing is done by flailing these barrels with the seed stalks. When this part of the operation is completed the pile of seed is raked over with a hand rake to remove all the hulls and other coarse material. Then the seed is dried and run through a fanning mill to remove the finer particles of foreign matter. It is then ready for sale.

JOHN RICHARDS,
Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand. Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

HOMESTEAD FARM

Holstein–Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

LOGAN BROS.
R. R. I.
Amherst, N. S.
Long distance 'Phone

Maple Green Farm

Holstein Cattle and Shropshire Sheep

To make room we offer for quick sale at greatly reduced prices two extra choice Bull calves 4 mos. old. Both out of dairy test winners and sired by "Maple Grove Mercena Mercedes" who's dam gave in the R. O. P. 12064 lbs. milk and 567 lbs. butter as a 2 yr. old.

Also 8 registered Shropshire Ewes. All supposed to be with lamb to Imp ram and 2 ram lambs, first cheque for $75 takes the "lot of sheep."

R. L. HICKS, Dalhousie Jct., N.B.

NORTHERN GROWN TREES

Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery —no agents. Send list of your wants for prices, etc.

E. L COLPITTS
Petitcodiac, New Brunswick

Holstein Bulls For Sale

We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

Price if taken before April 1st, $40.00

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
Loch Lomond West Nova Scotia

Annapolis Valley Orchard Farm.

75 Acres, Only $4,000.

600 apple trees; fine chance for large commercial orchard; 30 acres used for tillage; brook pasture for 10 cows, 15 acres wood and timber; good 10-room painted house, 30-ft. piazza; 40 x 60 ft. barn with cellar; stable, granary, etc.; owner's other business forces immediate sale, hence the low price, easy terms; for details and instructions to see this and a 220-acre farm for only $3200 with income of $3050 last year. Write Box D, Sussex, N. B.

Fertilizers for the Plum Orchard.

(Continued from page 475)

nitrogen-hunger (indicated by a sparse development of foliage and a yellowish green colour) nitrate of soda may be used as a top dressing, at the rate of 100 to 200 per acre. acre.

PHOSPHORIC ACID, POTASH AND LIME:—There is probaly no better medium for supplying these elements to orchard soils than unleached hard wood ashes. These should contain from 5 to 6 per cent. of potash, and in the neighborhood of 2 to 3 per cent. of potash, and in the neighborhood of 2 to 3 per cent. of phosphoric acid, and from 30 to 35 per cent. of lime. Not only are these constituents in a condition that renders them readily available, but in many parts of Canada they are cheaper than in any other form of commercial fertilizer. Fifty to eighty bushels per acre is the usual application.

Bone meal should contain from 3 to 4 per cent. of nitrogen, and 20 to 24 per cent. phosphoric acid. Since its plant food is only slowly liberated in the soil, it is considered a "lasting" fertilizer and one well adapted to orchard use. The application is usually about 300 lbs. per acre. Superphosphate will contain from 15 to 20 per cent. of phosphoric acid, the greater portion of which should be in a soluble (available) condition. The application is from 200 to 400 lbs. per acre.

Basic slag is another phosphatic fertilizer, and one that of late years has advanced much in favor. While not containing any water-soluble and hence immediately available phosphoric acid, it presents this element in combinations that readily yield their phosphoric acid to plant growth. Good brands contain about 14 per cent. assimilable phosphoric acid. It is alkaline due to the presence of lime and is therefore, of special value for sour and ill-drained soils and those naturally deficient in lime. It has given good returns on heavy clays and peaty loams. The application is in the neighborhood of 500 lbs. per acre. Certain experiments in England point to the desirability of furnishing part of the phosphoric acid as superphosphate and part as Basic slag, more especially for moderately heavy loams.

Potash can be obtained in the form of muriate (50 per cent. actual potash) or as Kalnit (12 per cent. actual potash); 100 to 150 lbs. of the former and 200 to 500 lbs. of the latter are the limits for ordinary application.

Voorhees, in his work on FERTILIZERS, suggests one or other of the following mixtures for orchards: (a) One part, or 100 lbs. each, of ground bone, superphosphate, and muriate of potash; and, (b) a mixture of one and a half parts, or 15 lbs. of ground bone and one part, or 100 lbs., of muriate of potash.

Soils differ so greatly as to their fertility that it is impossible to state definitely the amounts of these fertilizers that could in all cases be used with profit. From 300 to 500 lbs. of such mixtures per acre on fairly good soils would, no doubt, be ample, but on very poor soils these amounts, according to the experience of many orchardists, might be considerably increased.

LIME:—While lime is only required, by reason of excess of humus, or the refractory character of the soil, it may be applied at the rate of 1 to 2 tons per acre. A special application of lime may not be necessary in cases in which Basis Slag is used, since the fertilizer contains about 30 per cent. lime.

Comparison Proves It

You will be better pleased with Red Rose Tea---you'll praise it more and more if you ever try a package of another tea.

N.B.—Coffee users will find Red Rose Coffee as generously good as Red Rose Tea.

374

RED ROSE TEA "is good tea"

DROP A CARD

KINGSDALE MATING LIST
Our mating list is now ready for 1913.

KINGSDALE POULTRY SUPPLY CATALOG
Fully illustrated 60 pages all up to date.

EVERYTHING FOR THE POULTRY KEEPER

KINGSDALE POULTRY & SUPPLY CO., **SUSSEX, NEW BRUNSWICK**

RIVERSIDE HOLSTEINS

We have now for sale two exceptionally good high grade young cows, one 5 years old, is a show cow and 50 lb. producer, due to calve January 20th sired by Sir Rooker Posch Artis, Sire of 1911 Champion at Amherst and 1912 1st money Holstein cow, also several others forward in calf.

LEA & CLARK, **VICTORIA, P. E. I.**

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, **WELSFORD, New Brunswick.**

AYRSHIRE BULLS FOR SALE

I am offering a two-year-old bull for sale. He is out of the famous cow White Heather of St. Annes. I have also two other choice bulls that are fit for service. Correspondence solicited.

J. FRANK ROACH, - - Sussex, N. B.

Custom Hatching and Day Old Chicks

We can supply Day Old Chicks from our Standard Utility Bred B. P. Rocks and White Leghorn Pens at rate of 20c apiece for April and 15c apiece for May delivery. Prices for Hatching Eggs supplied by customers is $3.50 per 100 eggs in lots of 75 or over.

With our modern Hatching Machinery, including new 3000 egg Candee Sectional Incubator, and long experience in the business we feel we can give satisfaction. Some 250 and 360 egg Model & Prairie State Incubator for sale.

Kinnear Poultry Company, Ltd., Sussex, N. B.

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, **free** of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure — **you**, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience**, we know better than any doctor. I know that my home treatment is a safe and sure cure for **Leucorrhoea** or **Whitish discharges, Ulceration, Displacement** or **Falling** of the **Womb, Profuse, Scanty** or **Painful Periods, Uterine** or **Ovarian Tumors** or **Growths**, also **pains in the head; back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar** to our sex.

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address**, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost**, my book—"WOMAN'S OWN MEDICAL ADVISER" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers of Daughters,** I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all woman's diseases and **makes** women well, strong, plump and robust. **Just send me your address,** and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 309 - - - - WINDSOR, Ont.

COULD NOT LET ANYONE TALK TO HER

SHE WAS SO NERVOUS.

Diseases of the nervous system are very common. All the organs of the body may be sound while the nervous system is all upset, on account of the troubles and worry which fall to the lot of one who has to look after the troubles incident to housekeeping, and when the nerves become unstrung the heart is also effected.

In Milburn's Heart and Nerve Pills is combined a treatment that will cure all forms of nervous disorder as well as act on the heart itself, and for this reason we would highly recommend them to all run down women.

Mrs. Wm. Smith, Terra Nova, Ont., writes:—"I wish to tell you that I have used Milburn's Heart and Nerve Pills. I was so nervous I could hardly let anyone talk to me until a neighbour told me to try your Milburn's Heart and Nerve Pills. I got three boxes, and did not have to get any more as they completely cured my nervous system."

Milburn's Heart and Nerve Pills are for sale at all dealers, or mailed direct on receipt of price, 50 cents per box, 3 boxes for $1.25.

The T. Milburn Co., Limited, Toronto, Ont.

BARRED ROCKS

(Exclusively.)

Never beaten out in 15 years of competition. Now holders of Silver Cup for Best Birds at Amherst Fair, 1912. Offering eggs from six pens—every bird an exhibition specimen. Prices cheertully given on application. A few colonies of Bees for sale.

CRAIG BROS., Amherst, N. S.

Elmwood Stock Farm

offers for sale Bull Calves, from five to six months old. They are straight and right. Well marked, more white than black. From my stock Bull, Boron Posch (4852) which has won a number of 1st prizes at our Provincial shows.

W. L. ETTER,
Shubenacadie, N. S.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

C. C. H. EATON,
Canard, N. S.

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months. A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.B.

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

Raspberry Plants !

Wishing to remove all Raspberry stock from ground they now occupy, we are making the following low prices for April: King (early), $1.25 per 100. The celebrated "Herbert," $2.00 per 100. Hiram, $1.00 per 100. Cuthbert, $1.25 per 100. Eaton (new), $1.50 per 100. Any variety mailed, postpaid, 50c per doz.

Orchard Hill Farm,
Brown's Flats, N. B.

Use of Fertilization in Apple Orchards.

(Continued from page 471)

Q. A Member—How about Basic Slag as an orchard fertilizer?

A.—We have only had one year's experience with Slag. It should be a satisfactory carrier of phosphorus, but I am not recommending it especially until we get some definite evidence that it is better than our own carriers of this element. Thus far it has seened foolish to me to ship our phosphic rocks to Europe and import their Slag, both containing phosphate

Mr. Buchanan—We have it here, and it is cheap.

A.—Then perhaps it would be well for you to use it.

Q.—What is the effect of fertilizers on keeping quality?

A.—We have no definite results on that yet, being so crowded with getting these other results but I will say that in the case of the Baldwin where nitrates retarded maturity by three weeks it made it a winter apple, whereas the unfertilized Baldwin was a fall apple and would not keep so long.

Mr. Shaw—We have a feeling that where fertilized with stable manure, apples are softer.

A.—This may be true and it also is liable to cut the color. In case of some varieties also, such as the York Imperial, we cannot leave them on the tree long enought to recover the color loss.

Q.—In these orchards where you carried on these experiments, what previous treatment had they received?

A.—They had been tilled, mostly.

W. W. Pineo.—Most of us cannot raise apples here without cultivation.

A.—There is no objection to cultivation though so far as conserving water is concerned, a proper mulch treatment has been shown to be at least as good and where fertilizers also are needed it seems that greater total returns can be secured without cultivation than with it. This, however, is primarily a local question, and no method that is now satisfactory should be changed until the purposed change has been tried in a small way and definitely proved to be better.

Q.—After you apply the fertilizer to surface of soil, what then? Any tillage?

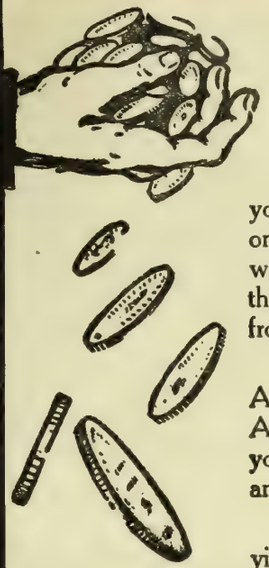
A.—You can either work it into the soil or leave it on top to be carried in by the rains. The form of tillage which does the least damage to the roots is preferable. Deep plowing is undesirable, should not be deeper than 4 inches, and a double action disc is usually preferable. By far the majority of feeding roots will be found between 3 and 12 inches deep, regardless of the cultural method unless the soil is very dry.

W. W. Pineo ploughs his orchard twice, once in the fall and once in the spring 3 ins. deep and does not think there is any better system—harrows up the 1st of July and then sows clover.

I always prefer a low headed tree. I don't see what use a tree has for more than 12 inches of trunk or 18 inches at the most. It is difficult to get this kind of tree from the nursery. The only way that we can get it is to buy a one-year-old unbranched tree and grow the head to suit ourselves. Nursery men object to selling us these one-year-old trees, but there is a growing demand for them.

If nursery men would head all trees low it would be well, then those who want high headed trees could cut off the lower branches. Nursery men will here again tell us that there is no demand for this kind of tree, but if they would use their influence to make low headed trees more popular, there soon wodld be a demand.

MONEY IN POTATOES



Don't let any of it slip through your fingers

If the average crop is good enough for you, you are going to miss the **big** profit on your potatoes. The **extra** bushels are what count. With potatoes at $1.00 a bag they are gold. Don't let them get away from you.

You should get 240 bushels to the acre. And you can if you start in early enough. Are you going to let bugs fly away with your profit? Are you going to sit down and let weeds and blight get in their work?

At the present high prices, the average yield of 120 bushels is not enough. It will net you $48.00 to the acre over and above expense and labor. But expert potato growers have learned how to double the crop. The extra 120 bushels add $80.00 per acre to the profit, making a total clear profit of $128.00 to the acre.

What these men have learned has been gathered together in a little book entitled "Money in Potatoes." This is the best practical potato book we know. It gives you a chance to learn in a few hours facts that it took many years to accumulate.

The $80.00 Coupon will entitle any bona-fide farmer to a free copy while they last. 16

THE $80.00 COUPON

The Canadian Potato Machinery Co., Limited
F **Galt, Ontario**

As a Potato Grower I would like to have a free copy of this book.

Name.....

Address.....

Bruce's Big Four Field Root Specialties

BRUCE'S GIANT FEEDING BEET—The most valuable Field Root on the market; combines the rich qualities of the Sugar Beet with the long-keeping, large size and heavy cropping qualities of the Mangel. We offer two colors, WHITE and ROSE. ¼ lb. 18c, ½ lb. 29c, 1 lb. 50c, postpaid.

BRUCE'S MAMMOTH INTERMEDIATE SMOOTH WHITE CARROT—The Best of all field Carrots. ¼ lb. 53c, ½ lb. 94c, 1 lb. $1.80, postpaid.

BRUCE'S GIANT YELLOW INTERMEDIATE MANGEL—A very close second to our Giant Feeding Beet, and equally easy to harvest. ¼ lb. 18c, ½ lb. 29c, 1 lb. 50c, postpaid.

BRUCE'S NEW CENTURY SWEDE TURNIP—The best shipping variety, as well as the best for cooking; handsome shape, uniform growth, purple top, ¼ lb. 18c, ½ lb. 24c, 1 lb. 40c, postpaid.

FREE—Our handsomely illustrated 112-page Catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc., for 1913. Send for it.

134

JOHN A. BRUCE & CO., Ltd. Hamilton, Ontario
Established Sixty-three years

HANDY CLOTHES SPRINKLER

HOME M'F'G. CO. Box 772, HALIFAX, N.S.

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

Growing Summer Crops in Winter Season

(Continued from page 487)

ped out 25,000 head celery which he had in storage since last fall. Large quantities of rhubarb are also grown under the benches in the old green houses and in the cellars of his storage buildings, all of which command handsome prices at this season. Cabbage, cauliflower, parsnips, carrots and various other vegetables are handled in large quantities.

The orchard on the Gravatt farm yields from 700 to 1000 barrels apples and is increasing in value.

Mr. Gravatt purposes to put his whole energy into intensive farming under grass. He grows a succession of crops and no part of the covered area is allowed to remain idle for even a day.

At a later date we hope to show cuts of the Gravatt green houses.

From an employee Mr. Gravatt has become an employer. He has five or six hired men to assist him in his operations.

Mr. Gravatt pays personal attention to each and every detail of his work. He sees that his customers get full value for their money and that no one is sent any stuff which he would not like to receive if he were the purchaser.

He certainly is an exponent of the spirit of adages referred to at the commencement of this article and by their due observance he has made good in the land of his adoption. He does not wish to go West or anywhere else. Mr. Gravatt and his bright, hospitable, little family say "Nova Scotia is good enough for us." He could not be purchased now for one cent. We figure it would take a sum extending into the five figures to buy his holdings, and all has been accomplished in less than eight years.

Increased Value of Farm From $900.00 to $15,000.00 in Ten Years.

(Continued from page 486)

The following results speak for themselves and are very encouraging:

First trees out four years produced .... 11 barrels.
2nd year orchard produced .... 17 barrels
3rd year orchard produced .... 135 barrels.
4th year orchard produced ....600 barrels.
5th year orchard produced .... 1750 barrels.

Mr. Margeson has made good. His farm is today valued by Mr. S. B. Chute, General Manager of the United Fruit Companies of Nova Scotia than whom there is no better authority on orchard values in Canada, at $15,000.00.

Mr. Margeson's achievements are a source of inspiration to many men of his acquaintance. He is a keen observer and he has brought the influence of a good education, sound business ability, and a willing mind into his transactions and slowly but surely he has been able to bring life out of chaos and lay the foundation of of one of the best conducted commercial orchards in the land of Evangeline.

Paul Campbell, Merton, Ont., picked 65 boxes of No. 1 Snows, one box of No. 2 Snows and one box of culls off one tree. Of 1,000 barrels of apples from his orchard, 97 per cent. of them were No. 1. He has sprayed thoroughly with lime-sulphur for the last five years. So good is his fruit that he readily disposes of all of it directly to his customers by private order."—Farm and Dairy.

GOOD SEEDS FOR GOOD CROPS

Reliable Merchants everywhere sell

STEELE, BRIGGS' SEEDS

Look for them — accept no other.

Steele, Briggs' are the best grown. No matter what you need in Seeds, this name stands for highest quality.

Behind every packet is the strongest seed reputation in Canada.

Thousands of successful growers everywhere use **Steele, Briggs' Seeds** year after year because they are sure of what they are buying. We retain control of our packets and supply them fresh each season.

Look for this box at your local store. If your local dealer cannot supply you, send in your order direct.

STEELE, BRIGGS SEED CO. Limited
TORONTO, ONT. HAMILTON, ONT. WINNIPEG, MAN.

ONTARIO WHEAT + MANITOBA No 1 HARD

BEAVER FLOUR

YOU can make a bigger and better loaf of bread with "Beaver" Flour than with any Western Wheat Flour.

Of course, there's no comparison between Ontario fall wheat and western wheat. Bread made of Ontario flour alone is immeasureably superior to that made of western wheat in texture, fineness, whiteness and flavor.

It is true that western wheat flour makes a big loaf—but it is heavy, tough, full of holes and uninviting both in appearance and flavor. "Beaver" Flour has the delicacy of flavor—the fineness of texture—the snowy whiteness of the best Ontario fall wheat, with the strength of Manitoba wheat flour.

Because "Beaver" Flour contains both Ontario fall wheat with a little Manitoba spring wheat to increase the strength.

"Beaver" is the original blended flour—a product of science and patience—perfected after years of testing.

If you want real home-made bread with the real home-made flavor—if you want light, delicious Pastry, Cakes and Pies—use "Beaver" Flour, best for one, best for all.

DEALERS—Write us for prices on Feed, Coarse Grains and Cereals. 138

T·H·TAYLOR Co LIMITED CHATHAM ONT.

Budded vs Grafted Stock.

(Continued from page 465)

ly cultivated the apples are as fine as can be grown anywhere.

There are acres and acres of suitable orchard sites in and around Port Elgin, which may be purchased at reasonable figures.

One of the greatest needs of the district is better railroad facilities. If the I. C. R. could be induced to take over the N. B. & P. E. I. railroad and put it in proper shape, it would make a big change in this part of the province.

I would suggest that you emphasize the need of a better quality of nursery stock for the Maritime Provinces and recommend one-year-old budded trees in preference to three-year-old grafted trees.

My experience in planting trees during the past year has been as follows: I ordered my trees through the New Brunswick Fruit Growers' Association. My order was filled in part with one-year-old budded trees and the remainder with three and four-year-old grafted trees. These trees were all set in the same field on uniform soil and had the same care and attention. The budded trees made a growth of from eighteen to twenty-eight inches, while the grafted trees grew only from two to six inches. Another strong point in favor of the one-year budded tree is that it is usually a straight shoot from four to six feet long, with very few, if any, branches and are full of leaf buds from the roots up. You can leave a bud wherever you want a branch to grow and rub the rest off. In this way you can form any kind of a head you wish, while with the grafted tree of three years, it is generally trimmed to a long trunk with a bunch of limbs at the top and about all you can do with it is to leave it as you get it.

I would also recommend the testing of new varieties of apples suitable to the soil and climate of New Brunswick. Our government should make tests in the illustration orchards of a winter variety called the Mammoth Black Twig. I believe it will prove a promising variety for New Brunswick orchardists to grow.

Trusting my few rambling notes may be the means of arousing at least a small share of interest in fruit growing in these parts.

W. A. Scrimgeour,
Amherst,
N. S.
and Port Elgin N. B.

A spray rig will last in proportion to the care bestowed upon it. I had one that was perfectly satisfactory and I hoped it would last for a good many years; but one of my men put the thing in winter quarters full of water and Jack Frost got in his work by bursting the tank and several other parts, completely ruining it. —W. A. Pratt.

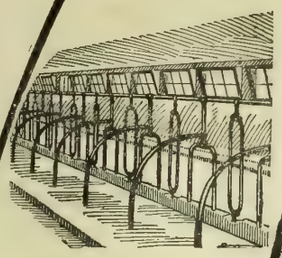
If you are building or re-building this Spring—you need the

Louden New Catalogue

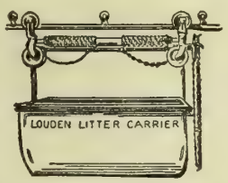
Just Published

"Everything for the Barn"

1847-1913



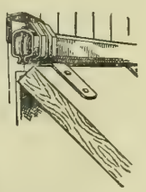
Sanitary Steel Stalls



Feed and Litter Carriers

The Louden Junior

The best Carrier ever made



Barn Door Hangers

For 47 Years

—the Louden Line has been finding easier ways to farming—saving labor—saving time—saving money.

Since 1867, when Mr. Louden took out his first patent on a hay carrier, right down to his latest patent on a cattle stanchion in 1912, the Louden perfect barn equipments have been taking the backache out of farming.

In these days when farm help is so scarce, expensive and independent, let the Louden tools and equipments reduce your labor problems.

LOUDEN
Barn Equipments

have attained their enormous popularity out of sheer merit. Years of experience, experiment and constant improvements, have made them perfect to meet present day conditions.

You can't go wrong if you choose Louden Goods. We make

Everything for the Barn

Cow Stalls and Stanchions	Mangers and Partitions
Calf Pens	Bull Pens
Feed Racks	Feed Carriers
Litter Carriers	Milk Can Carriers
Overhead Tracks and Switches	Swinging Cranes

We are pioneers and inventors of the largest and best line of

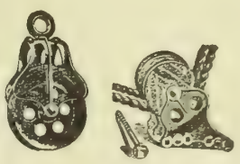
Harpoons	Hay Slings	Balance Grapple
Pulleys	Hay Forks	Barn Door Hangers
Hay Carriers	Sling Pulleys	Tracks

and every kind of Farmers' Hardware.

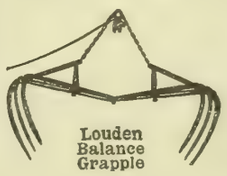
You surely should get a copy of our Catalogue Write for it to-day. Free for the asking.

The LOUDEN MACHINERY CO.
Dept. 28 - GUELPH, Ont. 2

"Cow Comfort" Steel Stanchions



All kinds of Pulleys



Louden Balance Grapple

Hay Slings

Double Harpoon Fork

Compare the "BISSELL" with other disks

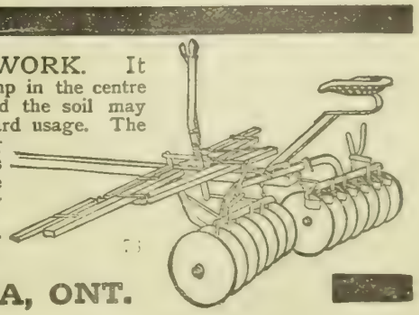
Thousands of Farmers have tested the "Bissell" Disk Harrow in the same field with other makes and found that the "Bissell" HAS THE GREATEST CAPACITY.

The plates are the correct shape. They cut, turn and pulverize the soil where others only scrape the ground and set it on edge.

The "Bissell" Scrapers meet the plates chisel fashion and keep the plates clean. Movable Clod Irons—an exclusive feature—keep the space between the plates clear.

The "Bissell" stays RIGHT DOWN TO ITS WORK. It won't bind, buckle or hump in the centre no matter how stiff or hard the soil may be. It is built to stand hard usage. The simple method of balancing the driver's weight removes neck weight. It is the Harrow you should know more about.

Write to Dept. M for catalogue with description.



T. E. BISSELL CO., LTD., ELORA, ONT.

From Sickness to Health,---Poverty to Prosperity

By Barry I. Whitehead, Upper Queensbury, N. B.

WITH one exception the persons mentioned in the story I am about to relate are all living and at the present day are citizens of New Brunswick, and it is by their requests that I employ assumed names simply for the express purpose anonymity, the facts are all true. The hero of this story is a prosperous resident farmer of York County, New Brunswick.

A large steamer had left port at Liverpool, England, one bright day the middle of April, 1902, bound for St. John, New Brunswick.

Captain Hammond was sitting on deck a few hours later with his glass watching the receding shores of old England, when one of the mates approached him. "What's to be done, Captain?" he said. "One of the men found a stowaway hid among some old sails and rigging on the lower deck, just a boy too." "Is that so, Jake," replied the captain with a laugh, "we have a passenger like that nearly every trip, and something must be done, bring the young dog up here to me, I reckon he will wish he was somewhere else before he sees land again. I got to turn over a new leaf." "He can't move sir," replied the mate "he is that sea-sick." Alright I will go down and see him" replied the captain. "Lead the way."

In a moment the captain was beside the boy who was lying on a pile of old ropes unable to raise his head, he opened his eyes as they approached and rightly guessed that the captain stood before him; but was so dreadfully sick that he cared little if he lived or died, or if it was captain or sailor before him. Those who have experienced sea-sickness will understand the feelings of the poor boy at this moment.

"Well, you young scamp how do you like the sea?" asked Captain Hammond. "I am very sick, sir" groaned the boy. "I should think so," replied the captain. "Jake" he said turning to the mate "go bring me some brandy."

When Jake returned with the brandy he gave the boy some and after a short time he seemed a little better.

"Thank you, sir," he said as the captain gave him a second drink, "I believe I feel a little better, are you very cross because I am aboard?"

The captain could not forbear smiling at the boy's question. "Yes" he said. "I am very cross. What will your parents say to you going off in this manner; or have you been up to some mischief and trying to escape the punishment, answer me?"

The boy's eyes filled with tears. "My parents are dead" he replied, "and I have done no mischief, I want to go to Canada." "What do you intend to do in Canada?" asked the captain. "I am going to learn farming," replied the boy, "and in time buy a farm of my own," and, he continued, "my mother and two brothers died less than a year ago and my father just three weeks ago. The last night my father lived he said to me "Charlie, my boy, in a few hours you will be all alone in the world with no relatives or money, if you can ever get a chance to go to Canada, go. I have read much about it as a land of prosperity and its need for settlers and help of all kinds. You always said you were going to Canada to farm when you got older, and you will soon have no ties to keep you here. They say the climate is healthful, if you could go soon perhaps you will escape the dread disease that has taken your mother and brothers and that is soon to claim me."

"What did your relatives die with?" asked the kind captain, as he looked in pity at the frail, handsome youth. "Consumption" replied the boy. "What is your name and how old are you?" "My name is Charlie Thorpe, sir, and I am fifteen years old." "Well, my boy, I am going to have a bunk prepared for you at once you are sick and it is very cold here. Have you been well before you came aboard?" "Quite well, sir, except for a bad cough. I took care of my father and he was in bed ten weeks,and during that time I seldom had enough to eat, we were very poor, sir, and I could not get steady work, but since father died three weeks ago I have been getting a job any where I could, but in London there are a dozen boys for every job nearly, so I did not get many, and I slept anywhere night over-took me. I was afraid I would be put in the Orphans' Home, and as I had enough money to go to Liverpool,I did so and I learned yesterday that this vessel was to sail today, so last night I stole on here and hid among this rubbish. I thought perhaps after you got to sea you might let me work my passage." Captain Hammond's voice trembled as he hastily replied. "You will have the passage without the work, I guess."

So Charlie Thorpe made one true friend in Captain Hammond who immediately had a bunk prepared and had him in it in a few minutes. He was taken good care of and in three days he was able to go on deck with assistance.

As Charlie Thorpe is the hero of my story perhaps a description of his personal appearance would not be amiss as he appeared on deck for the first time one afternoon. He was rather small and thin for a boy of fifteen, very pale with large black eyes and black curly hair, his complexion now since his illness is rather ghastly, and he was very feeble when he walked. He was a manly looking boy, Captain Hammond thought, and but for his too pale face would be handsome. But as he looked at him an this particular afternoon and heard the frequent racking cough he thought he was already a victim of consumption. "Well how are you feeling, my boy" he said, as Charlie appeared on deck, "rather a better sailor?" "Yes sir" he replied. "I feel much better, but so very weak."

The captain noticed that his clothing was old and worn and going to his cabin brought him a long heavy coat which he helped him put on. "You must protect yourself from the cold, Charlie" he said, "as you are rather poorly, so you can have this coat which I advise you to put on whenever you sit on deck." "Thank you, sir, I will" he replied.

"May I ask you what you intend to do when you reach St. John?" asked Captain Hammond. "You will not be able to work for a while." "I hardly know sir, but I shall look around for work. I must do something. I only have a few cents. It is rather hard to have no money, no home, and no friends and be ill into the bargain." And the lonely boy leaned his head wearily on his hand.

"You have one friend my boy, if you will allow me to be" said Captain Hammond. "Will you let me help and advise you?"

"Thank you," returned Charlie. "I shall be glad, in deed, to have such a friend as you, you have been very, very kind to me already and I shall always be thankful to you for it. I will be very glad if you will advise me what to do. I should like to go to the country to work if I could." "Well," replied the Captain, "I have an idea in my mind and I will tell you what it is and it may suit you alright. My home is in St. John and we will reach there day after to-morrow. I will take you home with me, and in the meantime I will communicate with a cousin of mine who resides on a large farm in York County about twenty-five miles above Fredericton. He has a hard time getting help, and I am confident that he would hire you for the summer and perhaps for a year. He has one son two years older than you and a daughter a little younger, they are very nice people and you would have a chance to learn farming to your heart's content."

"Captain" said Charlie, "I can never thank you enough for your kindness, I shall feel better from this moment in knowing I have such a friend as you." And tears of gratitude shone in the boy's eyes. "Never mind," replied the captain. "We won't talk any more about it now so rest and enjoy yourself as much as you can and try and regain your health and spirits."

The remainder of the voyage was uneventful to Charlie except that he enjoyed it, and several lady and gentlemen passengers were very kind to him and often gave him fruit and wine and talked to him at times. Charlie did not know that Captain Hammond had told them his sad story and thus enlisted their kindness in his behalf.

Noble Captain Hammond, he is looked on to-day and always will be as one of Charlie Thorpe's most loved and honoured friends.

CHAPTER II.

On April 28th, 1902, the majestic steamer which carried Charlie Thorpe arrived in port at St. John and our young hero first set foot on New Brunswick soil. Captain Hammond took him home with him where he was kindly received by his wife and daughters. The following day the captain called in one of the best physicans in the city to see Charlie, who pronounced him "run down," but when he heard that his relatives had all died with consumption he looked very grave and recommended him to spend all the time possible in the open air. On learning that Captain Hammond was to get him a situation in the country he said, "you can go to the country any time, the sooner the better but you must do no hard work for six months at least." Turning to Charlie he said. "Go to the farm by all means, do a little light work and keep in the open air, sleep in a tent as soon as the weather will permit, and eat abundantly of eggs, meat, milk and fruit in season and take good care of yourself and I will have strong hopes of your complete recovery."

After the doctor had gone Charlie turned to the captain and his wife. "The doctor thinks I have consumption now doesn't he?" "Well, as you are so poorly he is afraid it might be nereditary but we must follow his advice to the letter," said the captain. "But I must work," returned Charlie. "Yes light work, but no hard work. I will write to my cousin, Robert Brown, this very day and explain your state of health, and see what he says. Would you be willing to do some light work for awhile for your board and clothes?" "Yes, sir, willingly, and perhaps I shall get better." replied Charlie, the great fear of the dread consumption being uppermost in his mind.

So Captain Hammond wrote to Mr. Brown all about Charlie, how he came to New Brunswick and his present state of health, and asked him if he could give him a home for a few weeks and in return he would do what work he was able, as he was anxious to learn farming and that the doctor had ordered an open air life for him. A reply came a few days later saying he would give Charlie a home for six months with his clothes and board, if he was able to help milk and feed pigs and calves and do such work as he could after he got well. "If so," wrote Mr. Brown "send him along next Tuesday, May

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3rd, to Keswick Station, York County and I shall be there when the train arrives. If he leaves St. John on the early train he can connect with the Gibson train and will arrive at Keswick 10.45 A. M."

After reading, Captain passed the letter to Charlie who exclaimed with delight "How lucky. I shall look after that kind of work with pleasure, and just think I never even saw a farm yet, I got everything to learn. Perhaps I can drive a horse sometimes when I am better." "Yes, of course you will, but always remember to take care of yourself," replied Mrs. Hammond, who was growing very fond of the boy. The day before Charlie was to leave for the country, Captain Hammond made him a present of a nice tent, and Mrs. Hammond and daughters gave him a new suit of clothes. Charlie thanked them with tears assuring them that he would never, as long as he lived, forget their kindness, and he never has.

On the 3rd of May, Charlie Thorpe bade his kind friends adieu and started out to learn farming and regain his health. The captain bought his ticket and put him in the conductor's care and bade him write to them often.

Charlie felt rather depressed as he was carried away from his friends, but he resolutely turned his thoughts to other channels, and took note of the fine scenery he was going through, what beautiful farms, and now and then he would catch a glimpse of a large herd of cattle or a flock of sheep and lambs or perhaps some colts.

Charlie Thorpe made several resolutions that morning as he was going towards Fredericton; first, that he would take all possible care of his health; second, that he would try to please Mr. Brown and his family in all things and try to learn to farm, and last, but not least, he resolved to have a farm of his own if he regained his health. Did he regain his health and did he keep his resolutions? The following pages will tell.

On arriving in Fredericton he took a coach and drove to the St. Mary's station as the conductor had advised him, and took the train from Keswick, a distance of ten miles. He was equally charmed with the scenery the farther up the river he went, and the time passed so quickly he was surprised when the conductor called out Keswick.

CHAPTER III

Charlie Thorpe was very kindly received by Robert Brown and his family. Mrs. Brown was a motherly, middle-aged woman who petted and fussed over him as if he had been her son. Mr. Brown was of a kind and jovial disposition. Frank, their son, was a nice, jolly fellow, and very pleased at the prospect of a companion and Jessie, who was about Charlie's age, was a pretty, rosy-cheeked girl.

For several days after his arrival, they would not let Charlie do anything as he was thought very ill, though he insisted he only looked that way in comparison to Frank who was so rugged. Never-the-less, Charlie presented the tent that his kind friend in St. John had given him, and Mr. Brown consulted Dr. Graham, who chanced along, as to the best place to erect it. He proposed that it should be arranged to enclose a portion of the front veranda, leaving three openings or windows for good ventilation. This, said he, will be much better for several weeks or until the ground is thoroughly dry and the warm summer weather sets in. Mr. Brown told Dr. Graham Charlie's story as Charlie had told it to him from the time of the death of his parents until the

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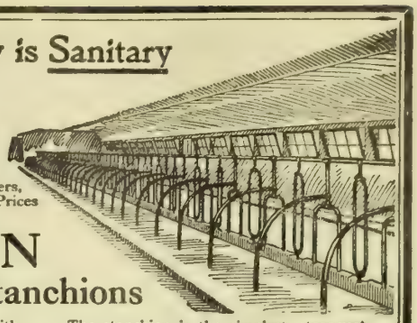

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present time. "Do you think there is a chance for him, Doctor?" he asked. "That is hard to say" replied Doctor Graham. "The boy seems very weak just now, and according to your account there is a possibility that he has inherited consumption but I don't say that it is so, and fresh air and good food has wrought some most wonderful cures."

So a part of Mr. Brown's veranda was enclosed as Dr. Graham had proposed and Charlie slept there and took his meals on the other part of the veranda. Many were the dainty and wholesome dishes that good Mrs. Brown and Jessie prepared to tempt the fickle appetite of the invalid. After a few days Charlie began to feed pigs, calves, poultry, ect., and to help milk, but he was very careful not to tire himself too much. He felt he owed it to his kind friends as well as himself to take every precaution. He was much interested in the farm stock and work, which all helped to keep his mind from brooding on his health. Often he had drives with Frank or Mr. Brown, and occasionally he and Jessie would be sent on some errand with a quiet driving horse, when the men were busy in the field.

Gradually his appetite began to improve and his strength to return and he did more work accordingly. He was delighted with the change for the better as were his friends. After he had been three months with Mr. Brown he wrote for the third time to Mrs. Hammond at St. John, to let them know regarding his health.

The following is a copy of the letter he wrote and will describe his condition in his own words:

Dear Mrs. Hammond,—

As I promised to let you know again this month how I was getting along, I will write you this evening. I feel just O. K. now and am gaining every day in strength. The air is delightful and I got a tremendous appetite and still take my meals here on the veranda where I am now writing, and continue to sleep in my shack, as Frank calls it, and the windows open day and night, unless it is raining in. I have been helping Mr. Brown and Frank at hoeing this week in addition to my own chores, but they will only let me hoe an hour each day as you know it is pretty hard work, if we forget the time Mrs. Brown does not and comes out to remind me; they take great care of me. I often think was a boy ever as fortunate as myself to fall in with such kind friends, as you people and Mr. Brown's here. If I keep improving I am going to rake the hay for Mr. Brown next month when they begin haying. Jessie says she raked a lot of it last year with the horse rake you know, and so I am sure I can. Mr. Brown says if I do he is going to begin paying me wages, but I want to work all the year for nothing and then will never repay them for their kindness to me. After the hay is cut in the orchard we are going to put up my tent out there Frank says we will cut it there first.

When I came here I could hardly carry a pail of milk, and now I carry a pail in each hand. Mr. Brown said to me just this morning, "Charlie you are a trump to raise calves, they are growing like weeds." I will write and tell you all about my work sometime. I wish you could see the colts, two bays, and their names are Bob and Bess.

I suppose the captain has not returned from his last voyage, he will be glad to hear that I am getting better. It is to him I owe my good luck if not my life. Give him my kindest regards when you write him again, please. Also remember me to

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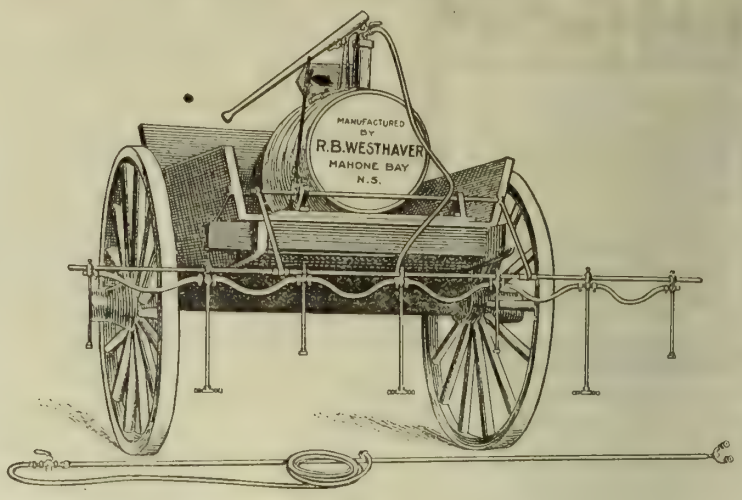

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the girls. With best respects for your self,

Ever your friend,
Charlie Thorpe.

P. S. I forgot to tell you that Mr. Brown gave me a nice Sunday suit two weeks ago, and Mrs. Brown made me a suit to work in this week. Please write to me soon.

C. T.

Yes, Charlie Thorpe was now on the road to recovery. He began to help Mr. Brown and Frank in the fields, after doing his own work, raking hay, helping with the harvesting of the grain, potatoes, apples, etc. As he stated in his letter to Mrs. Hammond the Browns were very careful of him, not allowing him to overexert himself in any way, and they were almost as happy in the improvement of his health and appearance as he was himself. "Charlie is going to make a great worker, Frank," remarked Mr. Brown to his son one afternoon after they had sent Charlie away from the harvest field to take a couple of hours rest. "He is a smart turned fellow and learns to do everything so quickly, and is interested in everythivg about the farm, from the poultry to the horses. I don't believe he would take a minutes rest now-a-days if we did not urge him to." "Yes, he is smart," replied Frank, "and is getting real strong too, the open-air life is certainly curing him for he told me the other day that he has not taken a drop of medicine for two months." "He is almost an expert at raising calves and pigs," said Mr. Brown, "he always feeds them right on time every feed, and I believe it is the proper way for they are the best ones we have ever raised for their age." "Yes, yes, I guess that is the right way alright," answered Frank, all the farm papers preach that up and Charlie is always reading them, he told me one day that between you and the farm papers he expected to learn mixed farming in a short time." Mr. Brown laughed heartily. "We will do the best we can for him," he said. "He is awfully fond of the colts," remarked Frank, "and can drive them as well as I can, he says if you will get another plow, father, that he will help me do the fall plowing with them. I think it would be a good plan, don't you father? A little work would be good for them, and we must get a good lot plowed if possible.

"Yes, certainly," answered his father, "a little work like that will help us and be better for the colts. I will get a light plow when I go to Fredericton next Saturday." "Has he told you he is thinking of going in the woods the middle of November?" asked Frank. "No," said Mr. Brown in surprise, "what can he do in the woods?" He said he was talking to Mr. Woodworth, the day he drove those men down to the station. You know Woodworth is going to lumber in Keswick and he wanted Charlie to go and cookee for him and offered him twelve dollars a month. He said he told him that he would let him know for sure after he had talked to you about it, and I was wondering if he had," said Frank. "No he has not yet," replied Mr. Brown "and we must not let him go in the woods this winter, he is too willing and has not yet fully regained his health. If I should buy that block of lumber land above here that we cruised last week, we must have a boy to stay here and take care of things for us, if we try to get any lumber. Of course, we can be home nights, but would have no time to look after the stock, and that is the kind of a job Charlie should have this winter." "That's true" replied Frank, "I didn't think you would want him to go, and he will do as you say, for he said so."

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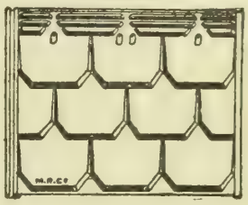
CAN BE BENT OVER HIP ROOF "EASTLAKE" METALLIC SHINGLES can be bent over the hip of the roof instead of having to be cut off and half the shingle wasted as with many others. This not only saves material, but saves a break in the roof, preventing a possible opening for leakage and damage.

LIGHTNING PROTECTION "EASTLAKE" METALLIC SHINGLE Roofs cost less than wooden shingle roofs equipped with lightning rods. With an "EASTLAKE" roof you do not need lightning rods, as they not only act as a lightning conductor, but are lightningproof and fireproof.

INVESTIGATE Before roofing your buildings, investigate carefully all kinds of roofing, including "EASTLAKE." The more closely you investigate, the stronger you will be in favor of "EASTLAKE" METALLIC SHINGLES

EASTLAKE METALLIC SHINGLE

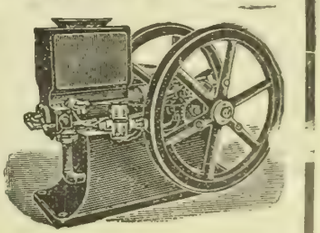


If you want the best you will use "EASTLAKE."

Write for free booklet to-day 688

THE METALLIC ROOFING CO. LIMITED
MANUFACTURERS TORONTO & WINNIPEG

MAKE A "MONARCH" DO YOUR CHORES



Our special factory for building farm engines has experts to work on each part of the "Monarch." It is built different from ordinary engines, with very big bearings (adjustable), over-size carbon-steel shaft, etc. Besides, it has equipment not found ordinarily—protected fuel tank and sight guage in base, governor, timer, primer, etc. It is the best engine made—Sizes: 1 1-2 to 35 h.p., for farms.

Ask for our "RED-CIRCLE" folder, and our easy buying terms and catalogue. A post card will do.

CANADIAN ENGINES LIMITED, DUNNVILLE, Ont.

Sole Selling Agents for Eastern Ontario, Quebec and Maritime Provinces, The Frost & Wood Co., Limited, Smith's Falls, Ont.

BELLEVIEW STOCK FARM

Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

C. A. ARCHIBALD, - Truro, N. S.

YOUNG HOLSTEIN BULLS !

We have lots of them, all ages, from one to six months. Show Calves from our best cows. Now is the time to get your choice. Females all ages, bred for the fall shows and dairy tests. Some excellent high grades fresh or springing. Also Three Draft Fillies rising two, three and four, and a quantity of Seed Potatoes.

LEA & CLARK, VICTORIA, P. E. I.

Nothing more was said about the matter for three weeks or more. Charlie was very much taken up with plowing. Mr. Brown had got the new plow two weeks before and though the colts were broken, they were very soft when put to heavy work, being only two years old the spring before. Charlie soon found that they sweated very easily and began to get tired after a couple of hours work, so he only plowed two hours in the fore-noon and two in the afternoon, this gave him plenty of time to do his other work, though he often felt very tired at night, he never acknowledged it.

Charlie enjoyed himself very much these days being of a lively disposition he was the life of the Brown family and many were the games he, Frank and Jessie enjoyed, and many an evening was spent in singing, all of them having splendid voices and Jessie played the organ very nicely. Often tney would be invited by some of the young people of the neighborhokd to a small party, and occasionally Jessie would invite them all in, and the long autumn evenings passed very pleasantly. There had been two picnics early in the fall and Charlie had then got acquainted with nearly all the younger people with whom he was a general favorite. They attended the Baptist church at Macnaquac or Queensbury, the Browns being members of the church at the latter place. Charlie had been brought up a Methodist. Thus several months passed happily away, especially to our hero.

CHAPTER IV.

"What are you thinking of my boy?" asked Mrs. Brown, as Charlie was sitting in a preoccupied mood one evening before the fire. "You look as solemn as a judge." "Of my past life," replied the boy, "I can't help thinking that if my father and mother had come out here to Canada a few years ago, that they might have been living now. Their last illness began just as mine did, a bad cough and failing strength. Had I not left England when I did, I should have been dead before this. They used to read to me about Canada and the many chances for poor people to better themselves out here. And we used to talk about coming out and buying a farm as soon as father could save up the money. Then little Willie died, and mother in less than a year after, then father's health began to fail and before many months he died, all of the dreadful consumption. Oh, why did they have to stay there and die in poverty and leave me alone in the world." And poor Charlie laid his head on the window sill and sobbed aloud. Mrs. Brown and Jessie shed tears of sympathy, and Mr. Brown and Frank were much affected. "It is God's will my dear boy," said Mrs. Brown, wiping her eyes. "Yes," said Mr. Brown "It was God's will or they would not have died. I trust they were prepared." "They were," answered Charlie. "They were both sincere christians and brought me up to trust in God." "Then," said Mrs. Brown softly,, "if you continue faithful you will all be united by and by." "Come Jessie," exclaimed Mr. Brown, "Give us some music to cheer Charlie; a cloud on his sunny face is like an eclipse of the sun." "Just a moment please," said Charlie. "I should like to have a monument erected to their memory with the first money I earn, do you think I could, Mr. Brown?" "Yes, certainly you can," Mr. Brown replied. "We will get Captain Hammond to do it for you on one of his

Horsemen Attention!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Their use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pinkeye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Troubl, Fevers, Cuts, Sores and will remove bunches of all kinds.

BEFORE USING

Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

For Sale all Dealers

Price 25 cents

Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

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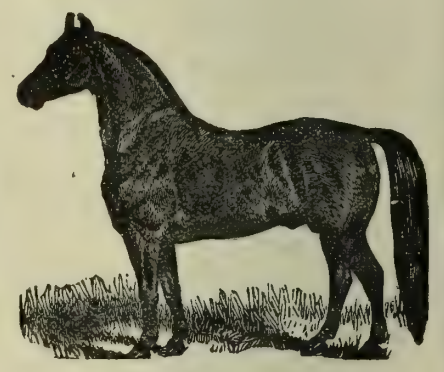
DR. J. Woodbury's

Horse Liniment



AFTER USING

Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

HORSE POSTERS

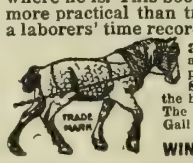
ORDER your horse posters from us. We carry the largest assortment of Pictures to choose from of any office in the Maritime Provinces. Our prices are right and our work is guaranteed to satisfy you.

The Maritime Farmer

SUSSEX, N. B.

FREE-FARM ACCOUNT BOOK

Bickmore's Farm Account Book will be sent free to any farmer who will tell us who and where he is. This book is arranged to keep all accounts in simple form—more simple and certainly more practical than trying to remember them; shows what to charge against crop production; has a laborers' time record; and section for personal accounts. **64 pages, for ink or pencil.** Not a cheap affair. Its quality is in keeping with **BICKMORE'S** Gall Cure, a soothing, healing salve, the old-time reliable horse remedy. Horses are now too valuable and too high priced to take chances of losing their services. **Bickmore's** Gall Cure heals and cures **Harness and Saddle Galls; Rope Burn, Cuts, Scratches, Grease Heel, etc.** You don't have to lay the horse off. **Bickmore's cures while the horse works.** Great thing for sore teats in cows. The work-horse trade mark on every box. None genuine without it. Be sure to ask for **Bickmore's** Gall Cure when you go to buy and do not take a substitute. Farm Account Book is ready. Send today.



WINGATE CHEMICAL CO., Canadian Distr's, 8100 Notre Dame St. W., Montreal, Can.

In-Foal Mares INSURANCE

OF ALL the losses owners are liable to, none can be **less prevented or modified** in any manner whatsoever **than loss by foaling.** Notwithstanding the best care and attention, although a mare **may have foaled** many times successfully, she is always a cause of worry and anxiety to the owner through the fear of **losing by death** the often very **high cash value of the Beast,** not to mention service fee, care and expenses incurred for no avail. **Why risk such loss** when a payment of a few dollars in premiums would **cover you** should it happen. Reduce the amount **of the RISK** by insuring, only risking thereby the **loss of the Premium** if the mare foals allright. We issue 30 days, 6 months and 12 months policies with or without cover on foal.

Write for address of nearest agent. **All kinds of live stock insurance transacted.**

THE GENERAL ANIMALS INSURANCE CO. OF CANADA, Head Office: 71a St. James St., Montreal, Que.

trips to the old country." "That is right my dear boy," said Mrs. Brown "and is very thoughtful in you and will be a nice tribute of respect ta their memory." "Come Jessie," said her father, "we are waiting for some music."

Noble Charlie Thorpe! No wonder the Browns as well as all his friends loved him as they saw the many noble traits in his beautiful character.

"Mr. Brown," exclaimed Charlie at breakfast the following morning, "I saw Mr. Woodworth again yesterday. You know he is the man who is putting a crew in the woods on the head of Keswich and he will give me twelve dollars a month to go cookee for them, he says it will be an easy job for me, just cutting wood, carrying water and washing dishes and work like that. I am well now and anxious to get to earning money for myself, you know, I want to buy a farm just as soon as I can. You have all been so kind to me, that Iwould not hire until I had consulted you. Are you willing for me to go?"

"I am glad you are willing to be advised by me, Charlie," said Mr. Brown, "and I want to see you get along as fast as possible; but I am not willing for you to hire out this winter,you are not yet equal to the hard work you would have to do for a large crew as cookee and I am not much in favor of this Mr. Woodwoth anyway,they say he is a hard man to work for or give him that name. So I hope you will stay with us this winter, and I think you will be as far ahead. What do you say?"

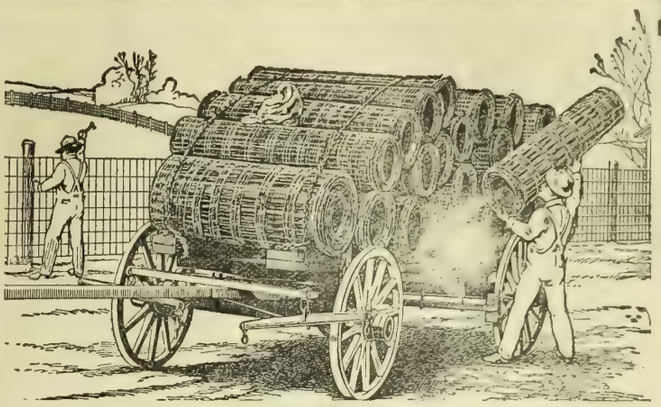
A shade of disappointment passed over the boy's face, but he replied: "Alright sir, I will stay if you think it best."

"That's right, Charlie," said Mrs. Brown, "how would we ever get along without you. I could never consent to have you go and leave us all for awhile at least." "And I could not get along without my youngest brother," exclaimed Jessie with a happy laugh. "Nor I either" said Frank. "Well" said Charlie with a laugh, "I am glad you are not all anxious to be rid of me, and I assure you it will be like leaving home when I do go, but you know I can't always stay here, I must get to earning money as soon as I can." "No you must always stay here for we can't farm without you," said Jessie.

A happy look came into Charlie's face as he looked at the beautiful girl just budding into womanhood. "I wish I always could," he replied with a blush. And none of the Brown family knew how devotedly he loved the only daughter.

"Did you tell Charlie that we had bought the lumber land, father?" asked Frank. "No I didn't," Mr. Brown answered, and turning to Charlie he added, "I bought that lumber land that Frank and I were looking over a short time ago, and we are going to get what lumber we can this wfnter. We can stay home here nights, but we want you to look after the stock for us, drive Jessie to school in stormy weather with the colts, you know they will have to be exercised, as I will not work them at yarding. I will give you five dollars a month and your clothes, of course. Then after we start hauling, will want you to drive them and help us haul a little and I will begin paying you twelve dollars a month and when farming begins will pay you sixteen dollars until another winter, and we can then make further arrangements. You are young and must not go into the hard work too quickly. What do you say to my plan?" "Say," exclaimed Charlie "I just can't say anything I am so pleased. I have been feeling down-hearted at the thoughts of leaving you, and the colts too," he added with a laugh. "I think a

I H C Quality Shows in Service



WE could sell wagons for less money, but we don't care to sell that kind of wagon. We want your second order, and your third, and every order you give for a wagon. We can't be sure of getting those orders unless the first wagon you buy from us proves so satisfactory that you would not think of going anywhere else for the second. We have to tell you how good our wagons are to get your first order. After that, we expect the wagon itself to do the selling. I H C wagons

Petrolia Chatham

are made of selected, high-grade material throughout. Come with us to the works where these wagons are built, and see the tremendous sheds where the lumber is air-dried—seasoned out of doors—for three years or more before it is used. Do you know the difference between air-dried and kiln-dried wood? One process takes years of time, and leaves the fibres of the wood filled with and cemented together by the natural resinous residue of the sap. The other requires only a few days' time, drives out all the sap, resin and all, and leaves the wood brittle and weak. Air-drying produces elastic lumber, wagon parts that bend and give under loads and strains, but that come back to their original position when the strain is removed. Try for yourself some day the difference in breaking strain between an I H C wagon axle and a piece of kiln-dried wood a third larger. Then you will know why we can hardly keep up with orders.

The I H C local agent knows which wagon is best suited to your work, and will give you catalogues and full information about the wagon he sells. See him, or, if you prefer, write

International Harvester Company of Canada, Ltd
EASTERN BRANCH HOUSES

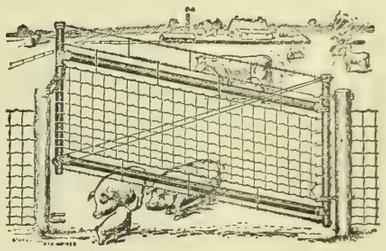
At Hamilton, Ont. Ottawa, Ont. London, Ont. St. John, N. B. Montreal, P. Q. Quebec, P. Q.
Built at Chatham and Petrolia, Ont.

I GUARANTEE every Clay Gate to be free from defects in material or workmanship. I will replace free any parts, or the entire gate, giving out for such reasons.

H. RALPH STEELE
Manager.

Canada's Best Stockmen Buy This Gate ---

ASK any prominent stockman in Eastern Canada which is the best Farm Gate made, and it's almost certain that he will reply "The Clay Gate." The chances are that he has "Clay" Gates on his own farm, and so *knows from experience* how good they are.



Clay Steel Farm Gates

are liked by every farmer who has used them because they (1) positively keep back breechy cattle; (2) raise (as shown) to let small stock through, yet keep back large stock. (3) won't sag, bend, break, burn, blow down or rot; (4) last a life time; (5) are positively and fully guaranteed; (6) solve every Gate problem and every Gate worry.

CLAY GATES are made of tubular steel of large diameter (far stronger than gas pipe or tee or angle iron) and heavy wire mesh fabric. Five men can stand on a Clay Gate without injury to the "hang" of the gate or to the gate itself.

Clay Gates are made in a great variety of sizes—a gate for every purpose. Send today for illustrated Price List. Read our guarantee and the terms of our free trial offer.

60 Days' Free Trial

One or a dozen Clay Gates sent without expense or obligation for 60 days' free trial, in order that you may try them before buying them. 30,000 Clay Gates sold in 1912.

The Canadian Gate Co., Limited, 54 Morris Street, GUELPH, Ont.

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RU-BER-OID

TRADE MARK REGISTERED

RU-BER-OID is the original prepared roofing, and the first RU-BER-OID roofs, laid 22 years ago, are still weatherproof and good for years to come. RU-BER-OID gives longer service per dollar of cost than any other roofing.

KA-LOR-OID Roofing (Colored RU-BER-OID), in Red or Green, is the **only** prepared roofing made in permanent colors. By our patented process the color forms an integral part of the exposed surface, and so cannot wash off or fade.

For Samples and Booklets write **Standard Paint Co., of Canada, Limited.** 108

286 St. James St., Montreal — Keewayden Block, Winnipeg — 424 6th Ave. East, Calgary — Hamilton and Davie Streets, Vancouver

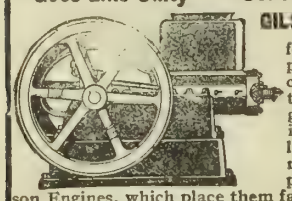
ROOFING

Quickly restores gray or faded hair to natural color, removes dandruff, stops falling hair and itching scalp. Grows new hair and makes the hair of man, woman or child heavy and beautifully glossy.

Send your name and address with this advertisement to the Foso Company, 3835 Foso Bldg., Cincinnati, Ohio. Enclose ten cents in stamps or silver, as an evidence of good faith and to help cover packing, postage, etc., and a full $1.00 package will be sent you at once by mail, prepaid, free of charge and duty free.

"Goes Like Sixty"—"Sells Like Sixty"

GILSON ENGINES



for all power purposes. You cannot afford to buy an engine until you investigate the latest improvements incorporated in Gilson Engines, which place them far in the lead. Send for free catalogue.

GILSON MFG. CO. 210 York Street, Guelph, Ont.

Don't be surprised if you have an attack of rheumatism this spring. Just rub the affected parts freely with Chamberlain's Liniment and it will soon disappear. Sold by all dealers.

lot of them." "I have nearly two miles to walk to school, and I don't care if it is stormy every day, for I will make you take me to school and come after me at night," said Jessie with a laugh. They all laughed heartily at that, and Charlie looked as though that part of his winter work would be a pleasure, and the matter was satisfactorily settled for all.

During the following week Frank and his father went to work yarding lumber on the recently purchased land. They engaged a Frenchman to help them. They went at an early hour every morning taking their dinners and not returning until after dark. Charlie was kept busy attending to the stock and work in general around the place. He had to feed eighteen steers besides the other stock. The steers were to be sold in March for spring beef. He generally had a couple or three hours in the afternoon, and he went to the woods to cut fire wood, occasionally taking the colts out to yard it. He, Mrs. Brown and Jessie kept it a secret from Mr. Brown and Frank, as they expected to take a week just after Christmas to get up the years wood for sawing. So with all his chores and cutting wood when he could Charlie was as busy as any of them, Mrs. Brown insisting that he was working too hard. Often he drove Jessie to school or went for her in the evening. These drives were a source of pleasure to both and strengthened the bond of love between them.

Christmas day dawned clear and bright and the roads were in excellent condition several inches of snow having fallen a few days before. Charlie received a present from each of the Brown family, and also gave each of them a remembrance. He also received a box of nicely bound books from Captain and Mrs. Hammond, St. John. A concert was held in Keswick Ridge Christmas night which they all attended, and enjoyed the programme very much. So Charlie's first Christmas in Canada passed very pleasantly.

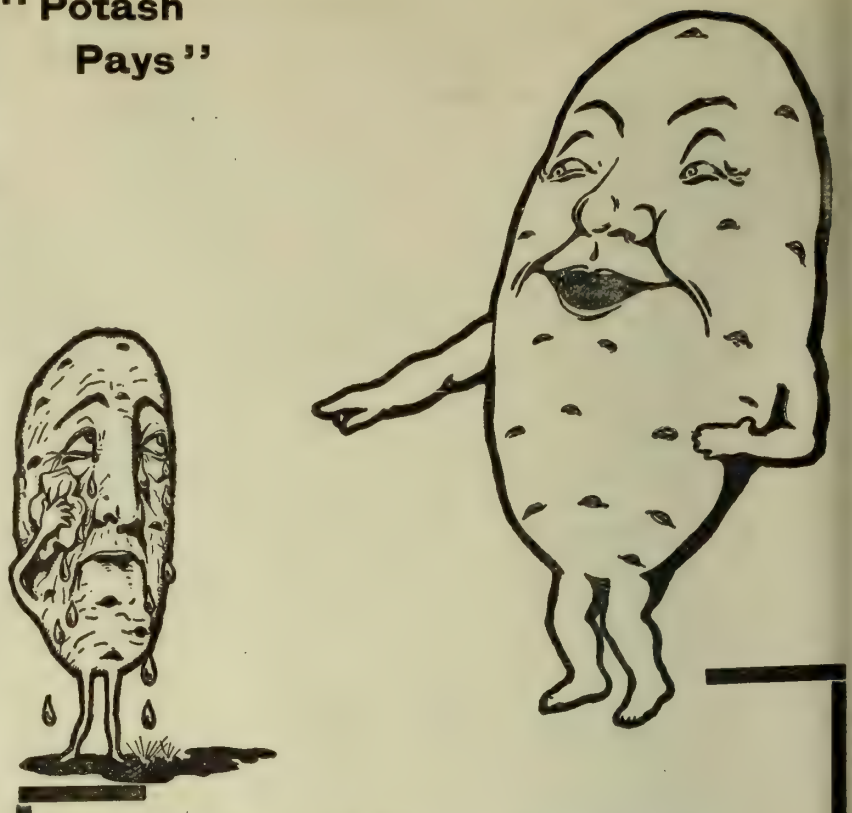
After Christmas Mr. Brown proposed they, (he, Frank, Charlie and the Frenchman) go out to cutting and hauling wood before resuming their lumbering operations, then Charlie told them the wood was all cut and yarded ready to haul, and begged them to go on with their lumbering and let him haul it with the colts, as it was small wood. Mr. Brown and Frank were delighted and very much surprised. They wanted to get their logs all yarded before the snow got too deep. "Why, when did you ever do it, Charlie," asked Frank. "Oh, a little every day," said Charlie "But you must have worked very hard to do it," said Mr. Brown. "No, not very" Charlie replied, "you forget that I have been at it nearly two months, and it is just yarded up a few loads in each place." "But perhaps you have not enough," said Frank. "Well, perhaps not," said Charlie laughing. "But let me haul what I got, and if it isn't enough I will get some more, you can be the judge."

"That's good enough my Englishman," laughed Mr. Brown, "you're a hustler. The new sleds I ordered are done so you can go to the shop and get them and haul away; but you are only to haul two loads a day, which is enough for you to do besides your other work. It will forward us with our work at least a week. Be careful the colts don't get away from you, Charlie." "I'll be careful, sir," he replied.

CHAPTER V

So the winter passed profitably and pleasantly to Robert Brown and his family and Charlie Thorpe. In fact,

"Potash Pays"



The Wail of the Starved Potato

Look at that poor, shriveled-up, good-for-nothing potato.

He is wailing because he is starved to death, and the man that grew him is wailing because he is not making the money he should out of his farm.

What is the reason? Simply because this potato IS starved. Look at Mr. Potash-Raised Potato. See how jolly and fat he is! He and hundreds of his fellows are growing fat and clean and shapely to bring his grower a good profit, and all because of POTASH. The poor, skinny potato is starved to death because his grower uses a low-grade fertilizer. This grower does not understand that every crop, say of 300 bushels of potatoes, eats from the soil approximately 60 lbs. Nitrogen, 40 lbs. Phosphoric Acid and 105 lbs. of POTASH. Note that this is 3 times as much POTASH as Phosphoric Acid.

The low-grade fertilizer contains but 2 per cent. POTASH and 6 to 8 per cent. Phosphoric Acid. Surely this is not three times as much POTASH. Any agricultural expert in the country will tell you that it is far better to use a 10 per cent. POTASH fertilizer.

This Applies to All Crops in Canada

It makes no difference what crops you raise, you'll find the ordinary fertilizer does not contain the amount of POTASH necessary to secure the largest possible crops from your farm lands.

Here is what you, Mr. Farmer, should do, if you wish to make more money from your crops.

When buying fertilizers insist that your dealer give you a 10 per cent. POTASH fertilizer. If he has not got it, and you have to use a low-grade fertilizer, use enough POTASH to increase the amount to 10 per cent. of POTASH. Our Agricultural experts will tell you just how to do this free. It is simply, easily and quickly done and will bring you many, many times the first cost in a larger harvest. Ask the Agricultural Department at Ottawa if this is not so. Or, if you so desire, you can mix your own fertilizer at your own home. Our experts will tell you how, free.

You can buy POTASH from your dealer. If your dealer has not got it, give us his name and we will sell to you direct, as we have POTASH ready for immediate delivery, stored in storehouses in Montreal, St. John, N. B., and Toronto. Write today for free booklet and prices.

Don't starve your crops. Feed them and they will feed you and your pocketbook. "POTASH PAYS." Write us to-day for free booklets.

German Kali Works, Inc.,
Temple Building, Toronto

Charlie was as much a member of the family as any one of them, and I verily believe he was regarded by Mr. and Mrs. Brown with as much affection as if he was their own son, and by Frank and Jessie as if he was their own brother. And Charlie loved them all. He always consulted Mr. and Mrs. Brown in all matters of importance as if they were indeed his parents. He was ever ready and on the watch to help them and do the many little acts of kindness that a child can always do for a parent. He looked on Frank as a brother and they never quarrelled. They enjoyed working together, Frank always giving Charlie the lightest part as to a younger brother. And Charlie regarded Jessie as a much loved sister. He loved her more than he realized for years, it was her presence he always sought, and her merry voice or laughter he missed if she was away. Often he paused in his work to listen to her singing or her merry laugh, as she went about her work. And how did Jessie regard Charlie? She loved him as she did Frank if not more.

When Charlie had been with them a year Mrs. Brown proposed that he should go to St. John and visit Captain Hammond and his family before the rush of spring work came on. Charlie liked the idea, as he had had a letter from Mrs. Hammond two days before saying the Captain would arrive home that day and was to remain a week. "But can I leave," he said. "There are so many chores to do and no person knows as well as I how to do them since I have been doing them so long." Mr. Brown "Poor boy," he said "you're awfully tied but we will try and manage them for a few days, and send you off for a vacation." "I wish Frank could go," he said, "he needs a vacation more than I do." "Father," exclaimed Mrs. Brown, "can't they both go for a few days. Jessie and I will help you with the work?" "Just the plan if he wants to go," exclaimed her husband, "they both need a vacation. Would you like to go Frank," turning to his son. "Yes sir, I should very much," he replied. "It would be fine to go together."

So preparations were made at once and the next morning the boys set off in great glee on the trip, Mr. Brown taking them to Keswick Station. The day being Tuesday they were to return on Saturday.

"You may like city life so well that you may give up the idea of farming" Mr. Brown remarked to Charlie on their way to the station. "No danger of that," laughed Charlie. "I would not go at all only I feel it my duty to go and see the captain. City life may be alright, but it has no attractions for me. I wish I was on my way back instead of going." This made Mr. Brown and Frank both laugh, and Mr. Brown said, "I hope you don't get home-sick."

On reaching St. John they took a car for Captain Hammond's. Frank wanted to go to an hotel, but Charlie insisted that he should go with him to see the Hammonds first, then they would both go to the hotel and put up, so Frank agreed. Charlie remembered the house and the servant who answered their ring told them Captain Hammond was at home and showed them into the drawing room.

Presently Captain came in. Charlie knew the kindly face at once. "Good afternoon," said the captain, "you wished to see me?" "I do" replied Charlie smiling. "I guess you don't remember me, Captain Hammond." "Well I can't recall you, no," he replied, "though like enough I have met you, I see so many strange faces, you know." "I was here with you several days just about a year ago," Charlie answered. "Then you got me a chance in the country for my health, and to learn farming."

The Basis of Oliver Success

THERE is one point about Oliver plows which gives them peculiar value in the plowing of Eastern Canadian fields. Each type of Oliver plow is manufactured for a certain section of the country, and can be depended upon to do good work under the conditions obtaining in that section. Before offering a type of plow for sale in any locality, Oliver plow manufacturers always send their expert plow designers to the place where the plows are to be used. These men study the conditions of climate and soil, learn the likes and dislikes of the people who are to use the plows, and when they return to the factory, they are able to superintend the manufacture of a plow which meets all the required conditions in the place where it is to be used.

Oliver Plows for Eastern Canada

The group of Oliver plows built for Eastern Canada includes walking plows of the famous Oliver No. 40 series, sulky plows, gang plows, and walking gang plows. Each of these is built for a certain purpose, and is the best plow obtainable for that particular purpose.

Back of the whole group is the fifty-seven years of successful plow experience of the Oliver Plow Works. This experience eliminates everything in the way of chance. You do not have to experiment with Oliver plows. Go to the I H C local agent and tell him what kind of plowing you have to do, and he will show you a plow built to do that kind of work and do it in the best possible manner. You can get catalogues and full information of the entire Oliver line from him, or, if you prefer, write the nearest branch house.

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EASTERN BRANCH HOUSES

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.
These machines are built at Hamilton, Ont.

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A BROAD statement—Yet literally true. The aim of man from the beginning has been to make his building materials as nearly like natural stone as possible. The great labor required to quarry stone led him to seek various manufactured substitutes. The only reason he ever used wood was that it was easiest to get and most convenient to use.

Wood is no longer easy to get. Like most building material, its cost is increasing at an alarming rate.

The cost of concrete is decreasing. So, from the standpoint of either service or economy, Concrete is the best building material.

Canada's farmers are using more concrete, in proportion to their numbers, than the farmers of any other country. Why?

Because they are being supplied with

Canada Cement—

a cement of the highest possible quality, which insures the success of their concrete work.

The secret of concrete's popularity in Canada lies in the fact that while we have been advertising the use of concrete, we have also been producing, by scientific methods, a cement so uniformly high in quality that the concrete made with it gives the complete satisfaction our advertisements promised.

Concrete would not have been in such universal use today, had an inferior grade of cement been supplied. Insist upon getting Canada Cement. It is your best assurance of thoroughly satisfactory results from your concrete work. There is a Canada Cement dealer in your neighborhood.

Without this label it is not "Canada" Cement.

Write for our Free 160-page book "What The Farmer Can Do With Concrete" —No farmer can afford to be without a copy.

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Does it acquire a bitter taste in a few days?

Are you receiving any complaints about the butter not keeping well?

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WINDSOR DAIRY SALT

It is always the same in purity and strength. It won't cake—dissolves evenly—and makes the most delicious butter you ever tasted.

The prize-winners at all the fairs, used Windsor Dairy Salt—that's why they won all the prizes.

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TRADE MARK

Ploughs—Wilkinson

REGISTERED

U. S. S. Soft Centre Steel Moldboards, highly tempered and **guaranteed** to clean in any soil. Steel beams, steel landsides and high carbon steel coulter. Clevises can be used either stiff or swing. Each plough is fitted especially with its own pair of handles—rock elm, long and heavy and thoroughly braced. The long body makes it a very steady running plough. Shares of all widths—specials for stony or clay land. The plough shown turns a beautiful furrow, with minimum draft and narrow furrow at finish. Ask for catalogue

The Bateman-Wilkinson Co., Limited
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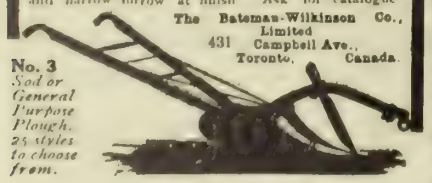

No. 3 *Sod or General Purpose Plough. 25 styles to choose from.*

"What" exclaimed the captain, "is that so, you are never Charlie Thorpe?" "Yes sir, that's my name" replied Charlie laughing, "and this is Frank Brown." "Well, well!" cried the good-natured captain as he shook hands. "I should never have known you, never, why you are a stout healthy looking farmer." Charlie flushed with pleasure. Of all callings he regarded farming as the highest and looked eagerly forward to the time when he would be one indeed.

"And this is cousin Robert's only son?" he said, shaking hands kindly with Frank. "Well, hardly," laughed Frank. "He calls Charlie his son too." "He is fortunate to have two sons, I haven't any," said the captain smiling.

After a few enquiries about Mr. and Mrs. Brown, he brought his wife and daughters in and introduced them. Many were the exclamations of astonisnment from the ladies on regarding Charlie's changed appearance. "Why!" exclaimed Mrs. Hammond, "you could scarcely walk when you started for up river a year ago. I was afraid to have you go alone."

"Had I been a month later, I am afraid I should have been done for" replied Charlie.

"To what do you owe your recovery?" asked the captain, "do you think." "First, to your kindness in befriending a poor, homeless, sick boy; then to the kindness of Mr. and Mrs. Brown and family, the wholesome food, and last, but not least, to the pure, bracing New Brunswick air which I inhaled day and night. I slept in my tent nights, took an afternoon nap and ate my meals on the veranda for six months. Even all winter after I began sleeping indoors, I always kept my windows open as much as the weather would permit. I was ill just as my parents and brothers were and they died of consumption, but I believe that I have been completely cured. My only regret is that my parents could not have reached here years ago, they might have been living now," said Charlie with tears in his eyes. "Most wonderful!" exclaimed Captain Hammond. "The doctor we called in to see you the day after your arrival told me privately that you were going into a decline. "If he stays in the open air and has good care, there is one chance in one hundred for him" were the doctor's words to me. The cure is certainly a remarkable one."

"Thanks to my good friends," replied Charlie. Frank told them of the work he had done. "Why," he continued, "Father says that boy's a hustler, he can do any work about the farm, and knows more now about raising stock than I do." They all laughed and the captain said: "Well done, my boy, you have conquered an almost incurable disease and learned farming in a year."

After conversing a short time on other topics the boys arose to go

"How long do you stay in St. John," asked Mrs. Hammond. "Until Saturday morning," replied Frank. "Well you are going to stop with us are you not?" she asked. "Why, of course, they are," said the captain. "But sir" replied Charlie, "we intended calling on you and then going to an hotel, we were afraid you might go away before we could see you." "No, I sail again next Thursday and you are to stay with us while in St. John. Where are your grips?" "We only brought one between us," laughed Frank, "and it is here in the hall." "Very well, I will show you your room" he said.

The boys stayed with the Hammonds who did their best to make their visit a pleasant one. Charlie immediately told Captain Hammond of his wish to buy a monument and send it to England by him, if he would be kind enough to take it, and have it erected at the graves of his

Your Money Back IF

The "if" is big because few want it. But this frank, fair offer shows your dealers faith that the rare richness of this tea's flavor will delight you:—

All you have to do if you do not like the flavor—yes more than like it—is to return the broken package and receive your money back.

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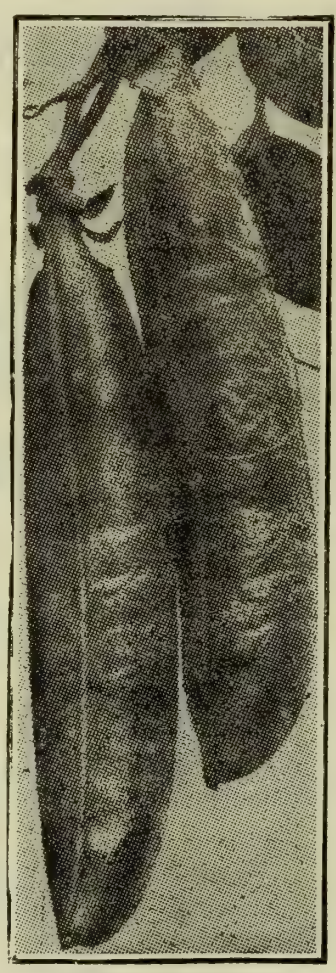

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The most desirable variety up to date

Lb. $2.00, ¼ lb. 75c, oz. 25c, pkt. 10c

New Early Cabbage

COPENHAGEN MARKET.— Undoubtedly without a rival as the finest round-headed Cabbage in cultivation.

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True DECARIE Selected Strain.—¼ oz. $1.00, Pkt. (with special cultural instructions).... 25c

A New Garden Pea From New Zealand

RICHARD SEDDON.—We can say with confidence that there is no better all-round early variety than this. By express or mail, at buyer's expense, 10 lbs. $3.00, lb. 35c; by mail, postage paid, lb. 40c, ¼ lb. 15c, pkt..... 10c

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"The Best"

For Potatoes For Grain For Fruit

The base of our formulas is Bone-Blood and Tankage-- with Chemical Salts added to give the crops an early and vigorous start.

Our fertilizers will not cake and will run in the planter.

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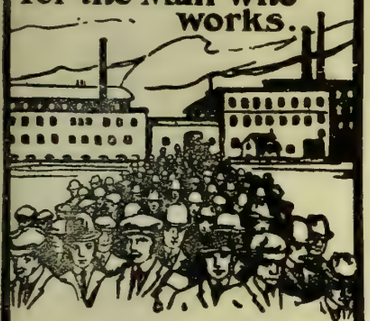
Buy a "Made in Canada" Fertilizer

CHALLENGE BRAND WATERPROOF COLLARS

Look like linen—feel like linen, but outwear a dozen linen collars. No laundry bills—a little soap and water only required to keep them fresh and clean.

Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

For the Man who works.



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HOW TO CONQUER RHEUMATISM AT YOUR OWN HOME

If you or any of your friends suffer from rheumatism, kidney disorders or excess of uric acid, causing lameness, backache, muscular pains; stiff, painful, swollen joints, pain in the limbs and feet; dimness of sight, itching skin or frequent neuralgic pains, I invite you to send for a generous Free Trial Treatment of my well-known, reliable Chronicure, with references and full particulars by mail. (This is no C. O. D. scheme.) No matter how many may have failed in your case, let me prove to you, free of cost, that rheumatism can be conquered. Chronicure succeeds where all else fails. Chronicure cleanses the blood and removes the cause. Also for a weakened, run-down condition of the system, you will find Chronicure a most satisfactory general tonic that makes you feel that life is worth living. Please tell your friends of this liberal offer, and send today for large free package, to MRS. M. SUMMERS, Box B. 309—Windsor, Ont.

For rheumatism you will find nothing better than Chamberlain's Liniment. Try it and see how quickly it gives relief. For sale by all dealers.

parents and brothers, for him. "Certainly my boy" replied the captain. "I go direct to Liverpool this voyage and will have a couple of days to go up to London and have it done." "Thank you very much" returned Charlie. "The caretaker of the cemetery is an old man whose name is Ezra Cooper. If it is the same one he was a friend of father's and was very kind to us. He will show you where the graves are, and he is paid to keep them all in order. What do you think it will cost, Captain, to have it erected?" "Not very much," replied the captain. "I will attend to it." "I will give you ten dollars and if that is not enough, will make it alright on your return," said Charlie. "No, it won't cost that much and we don't know the amount and I won't take a cent any way" replied the captain. "You buy the monument and I will do the rest." "Thank you sir. I am troubling you too much I am afraid." "Not at all my boy. Won't you go to England with me this trip and do it yourself? I will give you a free trip" said the captain. "No thank you, I shall never see England again if you will do this errand for me and," he continued with a laugh "I had a free trip out."

The next morning the boys went to the marble works and Charlie selected a heavy marble slab and had the name and ages of his parents and brothers engraved, and a short text. He called again before leaving the city and found the monument all finished and packed for shipping. This cost him forty dollars. They all visited Rockwood Park one afternoon, Captain and Mrs. Hammond and the Misses Hammond, Frank and Charlie. Then Captain Hammond took them to the harbour where his vessel, among others, was in port. They went on board the Captain's ship and Charlie showed Frank the very place he had concealed himself on the lower deck in order to get to New Brunswick. Frank especially was much interested in the scenes of the city which was all new to him.

One afternoon while the captain was attending to some business, the young ladies and the boys took the street car and went all over the city.

"So you are going to cast your lot with the farmers are you Charlie?" asked Mrs. Hammond the last evening of their visit. "By all means," answered Charlie. "Don't you think I was cut out for a farmer?" "Well, I guess you must be by the good accounts they give of you" she replied.

The boys returned home on Saturday greatly pleased with their visit and loud in their praises of the hospitality of the captain and his family. "Why," said Frank when describing the city, "my head was almost dizzy with the bustle, there is a lot more stir than in Fredericton, still I like Fredericton best." "I was in the bustle of London too long to let it affect me that way," laughed Charlie. "And," he continued, "I honestly thought I was in the country when I first landed at St. John. I do hate city life, give me the quiet country, the pure air and the freedom of the farm. Fredericton is the pretties little town I was ever in; the air is almost as pure as in the country." "Well said, my boy," laughed Mr. Brown. "You have seen a lot of the world for a young fellow so you ought to know. And you really prefer farming, raising the calves, pigs, etc., and driving horses?" "Yes sir I do. I must look around now and see if you have taken gokd care of everything," said Charlie with a laugh.

CHAPTER VI.

So farm life at the Brown homestead and for Charlie Thorpe contin-

DICKESON'S TEA
THE BEVERAGE of the OLD COUNTRY.
PURE FRAGRANT & DELICIOUS.
RICHARD DICKESON & COMPY., LIMITED. LONDON, ENGLAND.

THE FINEST TEA YOU EVER TASTED

Breakfast, Dinner and Supper taste better when you drink

DICKESON'S TEA

1-2 pound and 1 pound Packages also Bulk

25c., 30c., 35c., 40c., 50c. per pound according to grade you desire

Try it today and you will use no other

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Bowker's Fertilizers

They enrich the earth and those who till it. Fertility plays such an important part in profitable farming that no farmer ought to take chances with his fertilizer. A reliable company and a high grade brand mean full value for the money, a full ration for the crop, and a full return at harvest time.

Bowker's Fertilizers are soluble, active, sure. They are backed by forty years of experience, the best materials, the best facilities and prompt service. Suitable for every crop and adapted to every pocketbook.

We want Agents in unoccupied territory. Write today for prices and terms; this may mean a good business for you if you act at once.

Write anyway for our illustrated catalogue and calendar before you buy your spring fertilizer. We want you to know what we can do.

BOWKER FERTILIZER COMPANY

76 Lyman Street, Buffalo, N. Y. 42 Chatham Street, Boston, Mass.

Original and largest manufacturers of special fertilizers.

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and sena them in

FELL AWAY TO A SHADOW.

All Her People Thought She Had CONSUMPTION.

Mrs. Wm. Martin, Lower Ship Harbor East, N.S., writes:—"I am sending you a testimonial of my cure by Dr. Wood's Norway Pine Syrup. Last May I took a cold, and it settled on my lungs. I got so bad I could not rest at night. I had two doctors to treat me but got no relief.

"All of my people thought I had Consumption. I had fallen away to a shadow. I had given up all hopes of ever getting better again until my daughter went to a store one day and bought me a bottle of Dr. Wood's Norway Pine Syrup. After taking half of it I felt better, so I got two more, and thanks to them I am well to-day, and able to do my house work. I cannot say too much in its praise, and I shall always keep it in the house."

Dr. Wood's Norway Pine Syrup contains all the lung healing virtues of the famous Norway Pine tree which makes it the very best preparation for Coughs, Colds and all Throat and Lung Troubles.

See that you get "Dr. Wood's" when you ask for it. There are many imitations on the market.

Price, 25 and 50 cents.

See that the name, The T. Milburn Co., Limited, is on the yellow wrapper.

Have City Conveniences

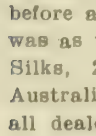
REPLACE the pestilent, draughty, dangerous and offensive out-of-doors closet with an in-doors closet which requires no sewer, no plumbing and no flushing system Have city conveniences in your home.

Safeguard Family Health by installing a

"TWEED CLOSET" SANITARY and ODORLESS

"Tweed" Closets can be installed in the bathroom, cellar, or any other convenient place indoors, merely requiring to be connected by a pipe for ventilation with a chimney hole. "Tweed" Liquid Chemical, used in connection with Tweed Closets, is both a deodorant and a disinfectant. Many hundreds of Tweed Closets have been sold in Canada. Send for illustrated price list. Sold on 30 Days trial.

STEEL TROUGH & MACHINE CO., Ltd.
9 James Street, TWEED, Ont.



Seldom See

a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE

Before After will clean them off without laying the horse up. No blister, no hair gone. $2.00 per bottle delivered. Describe your case for special instructions and Book 8 E free.

ABSORBINE, JR., liniment for mankind. Removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores. Allays Pain. Price $1 and $2 a bottle at druggists or delivered. Manufactured only by W. F. YOUNG, P.D.F., 124 Lymans Bldg., Montreal, Ca.

"My little son had a very severe cold. I was recommended to try Chamberlain's Cough Remedy, and before a small bottle was finished he was as well as ever," writes Mrs. H. Silks, 29 Dowling Street, Sydney, Australia. This remedy is for sale by all dealers.

ued for the next five years in almost the same groove. Charlie worked steadily for Mr. Brown two years longer, then he bought the colts he was so fond of, now a handsome full-grown team. After that he took his team in the woods in winter, and on the river drives in summer. In fact, he got work wherever he could and laid up considerable money. When out of work he was always welcomed home by the Browns, and he helped them until he got a job. His leave taking on going away was always a cause of sorrow to them as well as to him, and his return a time of rejoicing.

In June, 1910, the valuable property known as the Albright Farm was offered for sale. It was a valuable property containing two hundred acres including some intervale land, a fine new house and two good barns, in short, an up-to-date farm in every respect, and adjoining the farm of Robert Brown.

The farm complete with machinery and stock was offered for five thousand five hundred dollars for quick sale.

"Why don't you buy that farm Charlie?" asked Frank when they heard of it. "It is certainly a good bargain at those figures." "I have been thinking about it but I can't rake up even that much myself and I dislike going in debt." "And," continued Charlie, "It would just suit me because it is near you people. I should never feel like settling far from home." "Well you can make a pretty good payment likely, and mortgage for the balance. You could easily clear it in two years anyway, its a pity for you to let a bargain like that slip, if you want a farm. The place cuts lots of hay and has a large crop growing this year and that is included with the farm, and you can sell off some stock too, and help make up some more money that way. Go talk it over with father," said Frank. "Yes I will go and talk to your father about it, I am tired of living out for a living and I want a home of my own," replied Charlie. "Where is your father?" "He is just below the road there, hoeing cabbage." answered Frank. So Charlie took his hoe and went down to talk the matter over with Mr. Brown and help him in the meantime. That gentleman gave him some sound advice regarding the matter. " Why" he said, "it is just the palce for you. The buildings could hardly be put there for that price now. I can't see what possesses Albright to sell, but he has got the western fever like lots of others and will go West if he has to sell for half price, he is that kind of a man. He told me this morning that eleven head of cattle, one horse, one yearling colt, twenty sheep and the crops were included for quick sale. You will buy it, won't you Charlie?" "The only stick is the cash," said Charlie, well pleased that Mr. Brown was anxious for him to have it. "I have two thousand dollars and by selling off some stock and most of the crop should bring close on to another thousand. Then there is some standing lumber I would get this winter. Don't you think I could get some good man to advance me some money Mr. Brown? If so I shall buy it at once." asked Charlie. "Yes you can get a man to let you have the money but I don't know if he is a "good" one" laughed Mr. Brown, "for I will help you myself." "Oh, thank you," laughed Charlie, "I have every proof that you are good. When shall we make the purchase?" "To-morrow," said Mr. Brown. "No delays, for the place will go soon, it might be well for you to go over now and tell him you will buy it."

So Charlie Thorpe bought the Albright farm and was very proud of his possession and well he might be, as it is one of the best rural homes

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Save all inter-mediate profits

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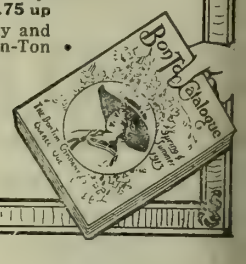
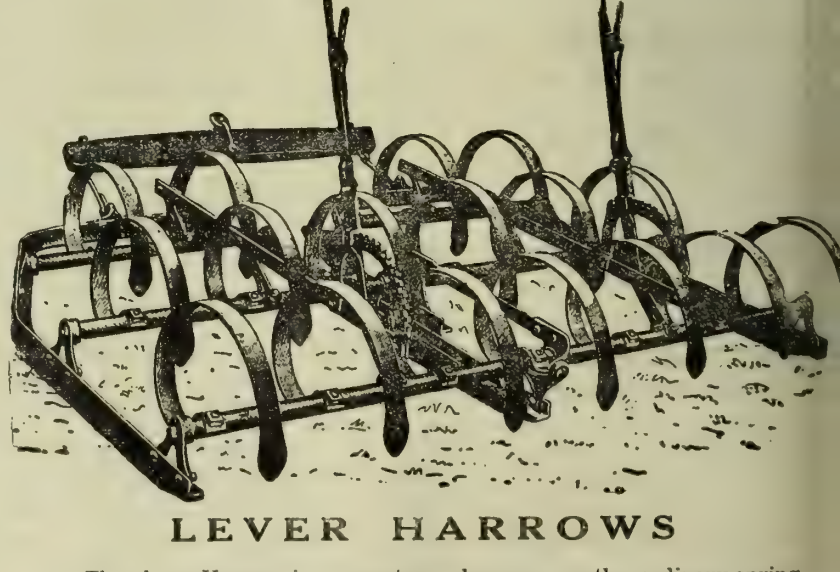
NEW SPRING MODEL 932—Ladies' Tailored Suit, illustrated above, is one of the newest Bon-Ton designs. Made of fine quality, all-wool, fancy fine silk serge. A suit no tailor can improve on at anything like the price, which delivered to you is only **$21.95**
Other styles shown in Catalogue range in price rom $8.75 up

Send your name and address on a post card today and receive by return mail the 1913 Spring and Summer Bon-Ton Catalogue and join the thousands of ladies all over Canada, who are buying all their clothes from us, and whose satisfaction is our best advertisement.



THE BON-TON COMPANY,
435 St. Joseph Street - - Quebec, P. O.



LEVER HARROWS

The above Harrow is as great an advance over the ordinary spring tooth harrow as the latter was over the old home-made drag harrow. It holds to the work steadily, and cuts at a great rate as deep as you want to go, showing results which would surprise you.

The teeth can be thrown deep or shallow by a movement of the levers, and the work regulated just as required.

In these days of high priced labor you can't afford to waste time. Our lever harrow will cut your time and labor of harrowing in two.

Made in sizes 9 and 11-Tooth Single Section. 15 and 17-Tooth Double Section.

Bailey-Underwood Co., Limited, New Glasgow, N. S.

Apply Fertilizers In Early Spring

To insure the full benefit of fertilizers to the first crop the POTASH and Phosphatic fertilizer materials ought to be applied as soon as possible after the land is workable.

Where Nitrate of Soda is used as the source of Nitrogen this may be given as a top-dressing at the commencement of growth.

POTASH in the highly concentrated forms of

Muriate of Potash and Sulphate of Potash

may be secured from all leading Fertilizer Dealers and Seedsmen.

Write us for FREE copies of our illustrated Bulletin, prepared by agricultural experts.

If you send us the names of five (5) or more of your neighbor farmers, we shall send you and them a colored Wall Placard, illustrating the "After Effects of Fertilizers."

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Before owner's death this 210-acre farm was valued at $9000; the low price is to quickly settle estate; 100 acres very valuable wood and timber, estimated to pay for property; 600 fine apple trees and grand good chance to make large commercial orchard; 75-acre machine-worked tillage; pasture watered with trout brook; 2-story house, 50-foot barn; part cash, easy terms takes it; for all details and traveling instructions to see this and a rich valley farm for only $1900. Write Box D. Sussex, N. B.

in York County. So that winter he lumbered on his own place. "No more living out for me," he often used to say, and began work on the farm in earnest the following spring.

CHAPTER VII.

Early in the winter of 1912 a music teacher came to the Macnaquac and Queensbury neighborhood, and was successful in securing a large class. Her name was Irene Cooper, she was a farmer's daughter and her home was in Carleton County N. B. She was a tall, dark, brilliant looking girl, a skilled musician, and full of fun. She boarded with the Brown's, and Jessie was one of her pupils. When Frank Brown first met the beautiful girl, he was charmed, and as he afterwards confided to Charlie, he met his fate. Miss Cooper was equally interested in Frank, for indeed, he was a handsome manly fellow, an intimancy which later ripened into love. They seemed only happy in each other's company, and before six months elapsed, the brilliant young music teacher was the promised wife of Frank Brown. During the court-ship of Frank and Miss Cooper, Jessie and Charlie were left more than ever to each other's society and were very, very happy. Charlie had realized for years that Jessie was his ideal, but he was not sure if she regarded him in the same way, or only loved him as a brother. One beautiful June evening as they sat conversing side by side on the veranda, in the twilight, he resolved to tell her of his love and ask her to be his wife. He felt himself a coward for the first time in his life, as he realized that the happiness of his future depended on her answer.

"Jessie" abruptly exclaimed Charlie, "I want to tell you a secret, will you hear me?" "Why, of course, I will," said Jessie gaily, "that is, if you can trust me, you know they say "if one wants to spread news just tell a woman; but perhaps you don't believe in that saying, do you?" "No I don't," returned Charlie, "but don't jest, for it is a serious matter, to me, at least." "All right Charlie I will listen to you," she said soberly." "I am soon going over there to my own home to live," he said, pointing to his own beautiful residence on the adjoining farm, "and I am in love with the dearest little girl in the world, but I don't know if she returns it or not. Had I better run the risk and ask her or wait a while longer, the happiness of my life depends on her answer?"

Jessie remained silent for some time after Charlie stopped talking. She never thought of him being in love, and who could the girl be, and what would she (Jessie) do, when some other possessed the love of this noble, young hero. These thoughts flashed through her mind in a few moments, and she realized for the first time that Charlie Thorne was all the world to her, and that her own life would be a blank without him. Nevertheless she put aside her own feelings in the matter and said slowly: "She must be a nice girl or you could not love her so dearly. A love like yours should win a love in return, and in all probability she loves you more than you are aware of. What is her name, Charlie?" "Jessie Brown," returned Charlie. "The prettiest name in the world to me, can you love me in return?" and he put his arm fondly around her waist, and imprinted a first kiss on her rosy cheek. "Oh, Charlie" she said as she laid her head on his broad shoulder, "is it really me that you love so much? I was nearly broken-hearted when I thought it was some one else." And she put

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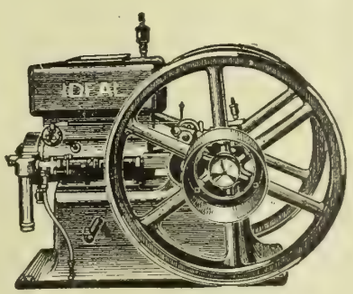

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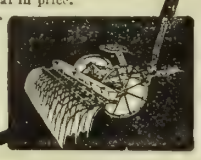

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her arm around his neck and returned his caress. After a little more talk of their glad happiness and the bright prospects of the future Charlie said, "you have not told me yet if you will be my wife, dear?" "Because you did not ask me," returned Jessie with a happy laugh. "You will, darling," he asked, and Jessie answered softly, "Yes." "Come let us go in said Charlie. "Miss Cooper and Frank have returned and I must tell them all how happy you have made me."

They went into the cosy sitting room where the rest of the family were assembled and leading Jessie to her parents Charlie said: "Your daughter has promised to be my wife, all we want is your consent to make our happiness complete." "You have mine," said Mr. Brown kindly shaking hands. "And mine too," said Mrs. Brown kissing Jessie and shaking hands with Charlie. "God bless you both."

After Miss Cooper and Frank had tendered their congratulations the latter said: "So we are to be brothers indeed, Charlie?" "Yes," replied Charlie. "I am pleased to say we are." And it would be hard to find a happier household in all Canada than Robert Brown's. Miss Cooper accompanied by Frank returned home two weeks later.

"On the 25th of September, 1912, the residence of Mr. and Mrs. Robert Brown was the scene of an interesting event when their only daughter, Jessie, was united in marriage to Charlie Thorpe. Miss Irene Cooper, of Carleton County, was bridesmaid and Frank Brown acted as best man. The ceremony was performed on the veranda, which was beautifully decorated for the occasion, in the presence of over two hundred invited guests, among them being Captain and Mrs. Hammond and the Misses Hammond, St. John. The presents received by the happy couple were numerous and costly which testified to the high esteem in which the happy couple were held. The groom's present to the bride was fifty dollars in gold. From the bride's parents a handsome parlour suit, and the bride's brother a substantial check, and from Captain and Mrs. Hammond and the Misses Hammond a silver tea service. The happy couple left on the evening train on a honeymoon trip to Grand Falls, N. B."

The above is an extract from one of Fredericton's leading papers.

On their return Mr. and Mrs. Thorpe took up their abode on their farm and there they are living happily today.

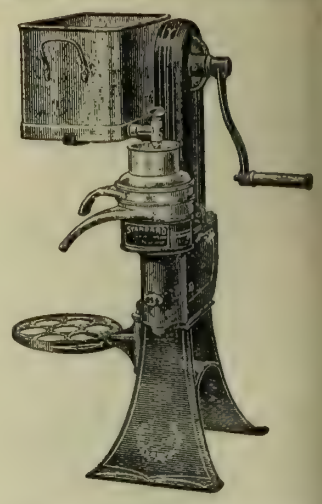
Charlie is considered one of our most prosperous young farmers of Queensbury, following all the latest methods of farming, that he has learned by reading and observation. He says there is as much or more in good management as there is in hard work. Around his farm and buildings inside and out is an example of neatness. This winter he is fattening some beef, and intends to go into raising and improving his stock.

In conversation with Mr. Brown recently he said. "I thought I had learned all about farming the first year I was with you, but I have got that idea out of my head long ago. I find there is something to learn every day, and I never expect to know it all." "Another winter," he continued, "I am going to plan to take a course at an agricultural college, for I expect to be out of debt long before that if I have my health."

Charlie Thorpe's home is a pleasant one. It is always a pleasure for any of his many friends to visit him, and the stranger is always welcomed and hospitably cared for.

And now just a glance at the personal appearance of our hero again and our story is done. He is now

The Record-Breaker



THE Standard Cream Separator has justly been named "The Record-Breaker" by creameries and dairymen. It has certainly made some remarkable skimming records at Ontario Agricultural College, Guelph, at Dominion of Canada Experimental Farms, Ottawa, at Wiarton Creamery, at Stratford Creamery, and others. The report of the records made by the

Standard

at the Eastern Dairy School at Kingston, and at the Kerwood Cheese and Butter Factory, were published a short time ago. They proved conclusively, that the Standard Cream Separator was unequalled for close-skimming. They go to show that right here in Canada is made the "World's Greatest Separator"—a fact, we believe, all Canadian dairymen will be proud of. If you are not familiar with the skimming records established by the Standard Cream Separator write us We will gladly send you particulars. But the best record of all, will be the record the Standard will make for you in everyday use in your dairy. It will do the same for you as it has done at Experimental Farms. All Standard Separators, of the same capacity, are identically alike. One Standard is as good as another, no matter who owns it.

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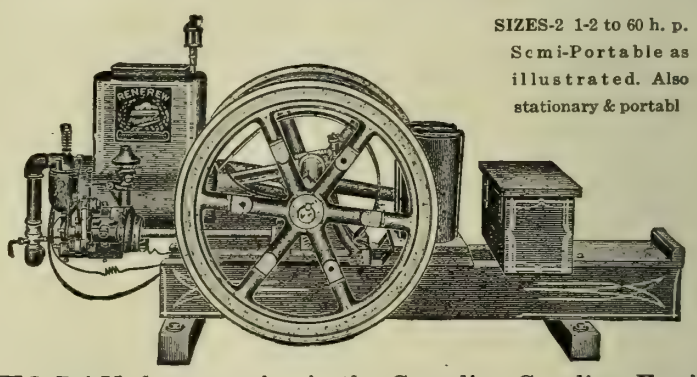

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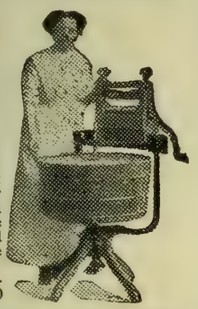
Cleanse the System

THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.



So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking,

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address me personally;

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nearly twenty-five years old, five feet ten inches tall and tips the scales at one hundred and seventy pounds, broad shouldered, muscular, with thick, black, curly hair, black mustache and black eyes, the picture of healthy, happy manhood and no taint of the dread consumption that drove him, nearly ten years ago, from England to seek his health in Canada, the land of promise. Loved and honored by all who know him, he and his wife are happy in each others love to the present day.

Why We Raise Good Fruit on Deer Island, N. B.

Editor of Maritime Farmer:—The reason why we grow good fruit on Deer Island, N. B. is because climate, soil, fertilizer and market are all in our favor.

Nature has bestowed upon us a perfect climate for raising apples and small fruits. During the winter season the thermometer seldom goes below zero, and never more than 15 degrees below zero, owing to the fact that we are surrounded by salt water and the damp atmosphere effects the frost and enables us to raise tender varieties such as Kings which do not thrive well in any other parts of the province. Also in the spring the damp air from the sea affects the frost so there is no danger to the blossoms.

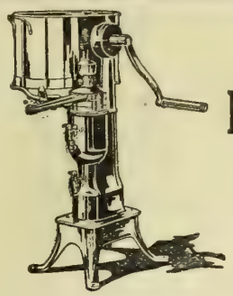
In autumn the season closes ten days later than in the interior of the Province which gives the fruit a good opportunity to colour and makes it a better price bringer in the market.

The soil varys from a gravel to a clay loam. On the shores of the Island it is rough and rocky but the interior of the island has rich and fertile valleys covered with a second growth of spruce, fir and hardwood. As the greater part of the population derive their living from fishing there is little done in the way of agriculture but this land cleared offers great opportunities to settlers raising apples and small fruit.

As a fertilizer and cultivator we raise hens in part of the orchard, having it enclosed in wire netting. The hen does her work thoroughly and the poultry and eggs are sold at a high price to the summer hotels. The other part of the orchard is ploughed and cultivated, using fish waste as a fertilizer. We believe strongly in spraying which is the only way to have clean fruit and fruit trees, spraying three times during the season with lime sulphur and arsenate of lead. We also prune the fruit trees every year and in some varieties thinning the fruit is necessary to get a large percentage of No. 1's.

In regard to varieties, the Astracan, Gravenstein, King, Bethel, Baldwin and Stark thrive here with care and compare well with fruit raised in the other parts of the province in size, color and flavor, having taken 3 first prizes on King apples in 1912 at the St. John Fruit exhibition including prizes on several other varieties.

Our market is among the best as thousands of barrels of apples are shipped into the country from Nova Scotia. Having raised 250 bbls. of apples the past season they found a ready market among the fishermen and town places at a price from $2.25 to $3.50 per bbl. We have communication by steamer with St. Andrews, St. Stephen and St. John. We store our fruit during the winter in a building made of concrete block ceiled inside and filled with saw dust. In regard to small fruits they succeed well here having raised 1500 quarts of strawberries from 1-3 of an acre the past season. —Edgar Martin, Fair Haven, Deer Island, N. B.



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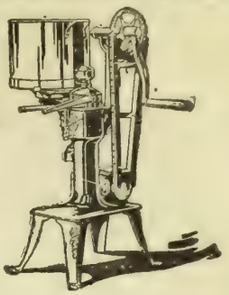

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Encouraging the Fruit Buds.

Every fruit grower is interested in fruit bud formation. However, the subject is so comprehensive that investigations into the causes which bring about the formation of fruit buds, or means by which it can be controlled leads one into deep water. The New Hampshire experiment station has an experiment which promises more in this connection than any other, reaching the attention of the editor. The work has been in progress since 1908, 11 plots receiving different treatment, fully described in a bulletin from the station, written by Prof. B. S. Pickett.

While Prof. Pickett believes it too early to lay down hard and fast rules, he announces a few general observations which are very suggestive. Thorough cultivation throughout the season, May 15 to September 1, without the addition of cover crop or fertilizer, resulted in the production of three times as many blossoms or fruit buds, and somewhat more than three times as much fruit as no cultivation or sod culture provided.

Clean cultivation throughout the season produced considerably fewer buds, and a noticeably smaller amount of fruit than cultivation until July 10, with a cover crop of crimson clover sown with the last cultivation and plowed under the following spring. This indicates that while cultivation through the entire summer is far superior to sod culture, still better results are secured by stopping the cultivator and using a cover crop.

THE COVER CROP COMBINATION.

The results indicate that clean cultivation until July 10, followed by a cover crop of crimson clover, alternating every other year with a stand of mixed clover and grass, sown early in the spring, may produce a sufficient number of fruit buds for a satisfactory crop. This cannot be conclusively shown until the experiment has progressed at least one more season.

Cultivation and cover crop one year in three produced only two-thirds as maky fruit buds and half as many apples as cultivation two years in three. Cultivation and cover crop one year in three doubled the production of fruit buds and increased the crop of apples three times, compared with no cultivation at all. Cultivation and cover crop two years in three gave almost as good results as cultivation and cover crop yearly.

The use of fertilizers in addition to cultivation and cover crops failed to result in an increased production of fruit buds. The use of fertilizer relatively rich in phosphoric acid (in the form of acid phosphate) resulted in the lowest production of fruit buds among the fertilized plots. The number of fruit buds was not increased by the excess applications of nitrogen and phosphoric acid over normal applications. The number of fruit buds appeared to be slightly increased by the application of an excess of potash but the difference was hardly noticeable in the crop. The number of fruit buds was noticeably greater in a plot to which was applied agricultural lime, than in a corresponding check plot.

Continuing his description, Prof. Pickett says: "It has been clearly and completely proved that apple trees are unable to produce fruit buds when grown in sod as compared with cultivation. A general review of results for 1910 indicated that a plentiful supply of moisture (as a result of conservation by cultivation was the most influential factor in stimulating the production of fruit buds. The addition of nitrogen in the form of a cover crop appeared to be the second most important factor in stimulating the production of fruit buds."

While fertilizers failed to stimulate

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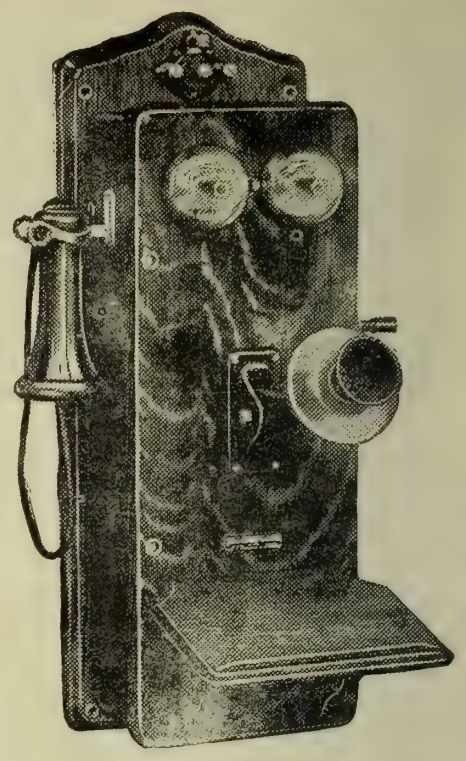

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a greater production of fruit buds, they clearly improved the size and quality of the fruit, the largest quantity of No. 1 fruit per tree being produced in the limed plot. This plot was fertilized, each section receiving fertilizer treatment of the plot which crossed it. The next largest quantity of No. 1 fruit per tree was produced in the plot which received the excess of potash.

The fewest No. 1 apples were produced by the sod plot, but the same plot produced the most highly colored fruit. Among the fertilized plots, the excess phosphoric acid piece produced the smallest apples, though the fruit ran uniformly of good quality. All plots were sprayed alike; the relatively small number of buds produced by the sod plot would indicate that spraying had only an indirect influence on fruit bud formation.

Summing up the whole work, Prof. Pickett says: "The summary of three years' work indicates a startling effect in increased productiveness under cultivation, cover crop and fertilization. When the experiment started, the sod plot produced more apples to the tree than any in the orchard. Hence, we conclude that portion must have had at least equal and perhaps superior advantages to start with. However, immediately after cultivation, fertilization and cover cropping were practiced in other plots in the orchard, the production of the sod plot fell far behind."

Rhubarb a Good Crop.

Rhubarb pays as well as any other garden crop in winter and spring and sometimes in summer and fall. Perhaps better. The grower can enjoy it even in the middle of winter, with little trouble and expense. All that is needed is a warm cellar, or a space under a greenhouse bench, where some clumps of roots dug up at the beginning of winter may be planted. It will grow in the dark and make most brittle, most appetizing stalks and a lot of them in a very small and crowded space. It requires only a very moderate temperature, from 40 to 50 degrees up to 60 or 65 degrees.

The one thing most necessary, in order to grow it for sale on a large scale, is a corresponding number of clumps of roots, and provisions for them to give a crop next winter should be made now. Plant at once a good-sized new bed, so that the old clumps or a part of them can be taken up at the beginning of next winter for forcing.

If the new bed is started from good, strong roots, even if a little late, it will make growh enough under good culture to give a full crop next spring and summer. The stalks will be fewer in number, but much larger and fatter and more valuable.

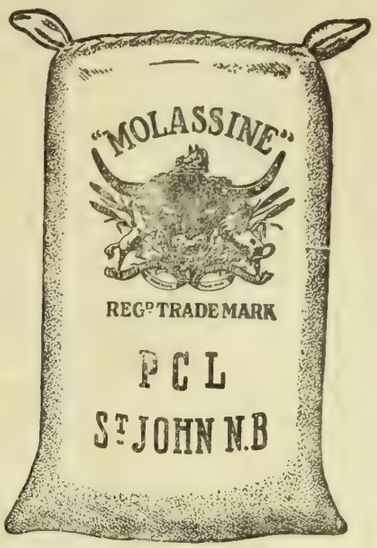
Who Will Win.

F. W. Short, proprietor of Orchard Hill Farm, Brown's Flats, N. B., is offering a special prize of $2.00 at the 1913 Maritime Winter Fair for the best pair of Columbians hatched during 1913, from eggs purchased from his yards. This should be an extra inducement for Columbian breeders to purchase a setting of eggs from Orchard Hill Farm.

You will look a good while before you find a better medicine for coughs and colds than Chamberlain's Cough Remedy. It not only gives relief—it cures. Try it when you have a cough or cold, and you are certain to be pleased with the prompt cure it will effect. For sale by all dealers.

GOVERNMENT ANALYSIS

Send to the Department of Inland Revenue, Ottawa, and ask for Bulletin No. 241 on Registered Stock Foods. It will be sent you FREE of all costs. In this Bulletin you will find the analysis of the different livestock preparations. You will also find that MOLASSINE MEAL, referred to on pages 6, 7, 12 and 13, is found to be 50% above the guarantee in protides and fat—and below its allowance of fibre or waste matter.



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So FIVE ROSES must be awfully thirsty, don't you see.
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Your flour lasts *longer,* doesn't it?
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That's how FIVE ROSES saves money.
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Use this *economical* flour.

Five Roses Flour

Not Bleached — Not Blended

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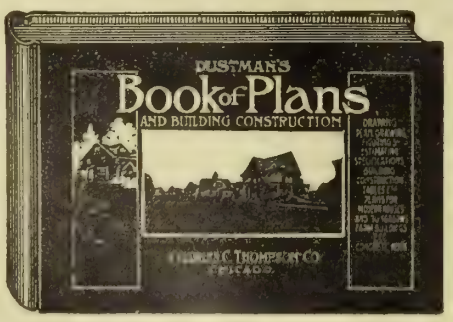

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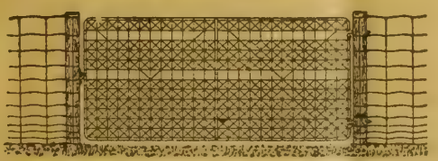

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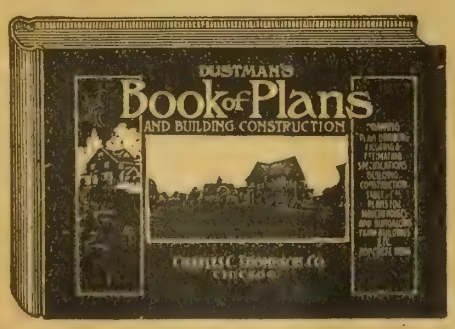

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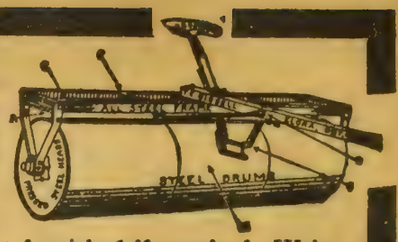

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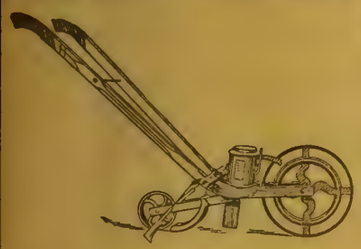

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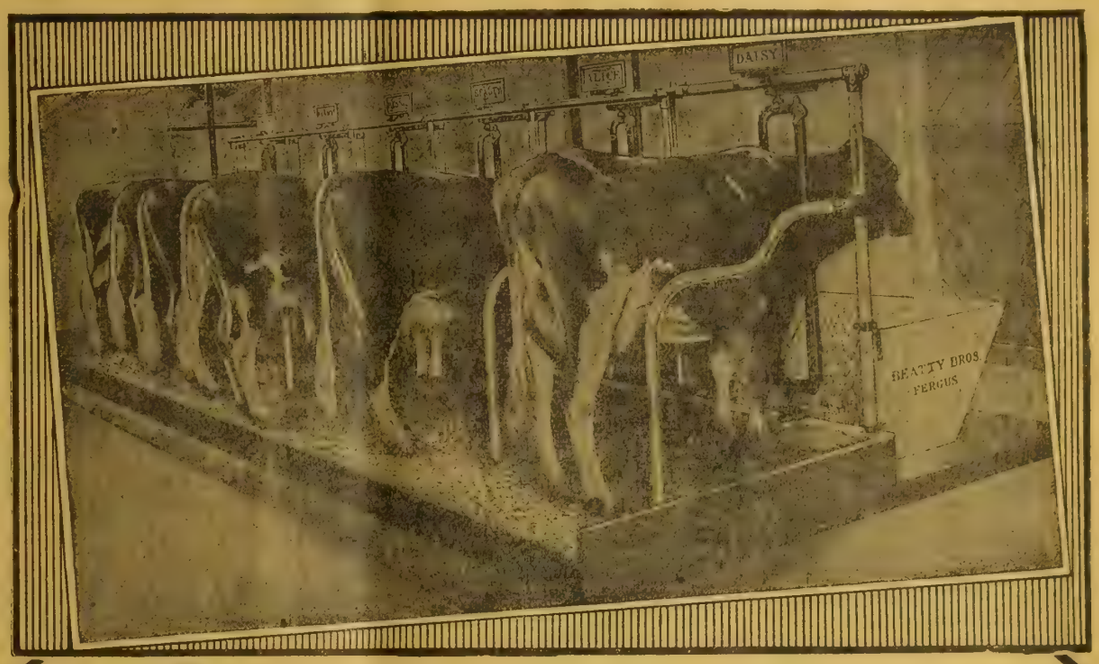

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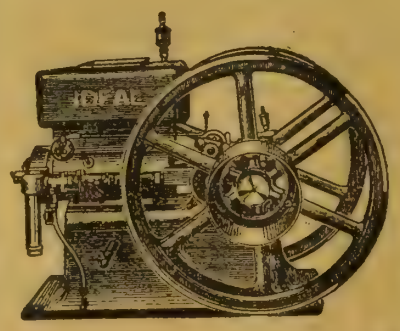

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AND

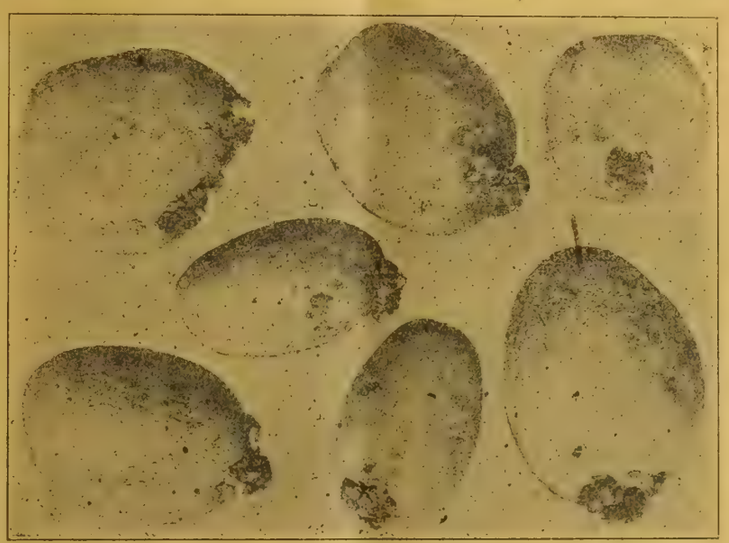
CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 18. SUSSEX, NEW BRUNSWICK, APRIL 29, 1913. Number 14.

Illegal to Use, For Seed Purposes, Potatoes Imported From Europe

THE potato harvest of the Dominion in 1911 was considerably below the mark, and as a consequence importations of potatoes from abroad became a universal practice. The total imports into Canada from European countries during the year ending March 31, 1911, was 720 bushels. But from October 1, 1911, to March 31, 1312, as many as 200,000 bushels and more have been imported into Canada from Europe. It has been repeatedly pointed out that there exist in several European countries potato diseases new to this country, and owing to the fact that Liverpool is practically the centre of the exportations, and incidentally the centre of a badly infected area, the importation together with the potatoes of one or more diseases into Canada became very probable. The general prohibition of the importation of potatoes from Europe would have been advisable under ordinary circumstances, but partly because our crop was deplorably short, and partly because the imported potatoes were primarily intended for consumption, the question of prohibiting the entire importations, though carefully considered, was decided to be inadaisable. But when the planting season approached and inquiries concerning the use for seed of imported potatoes became more and more numerous, it was realized at once that the planting of diseased imported tubers would almost certainly be the means of establishing the one or the other of these undesirable diseases. For this reason the following order in council was passed without delay: "It shall be illegal to sell, offer for sale, dispose of in any way, receive or use, for seed purposes, any potatoes imported from Europe."



Potato Canker (Chrysophlyctis Endobiotica Schilb) as it Occurred on Potatoes Imported Into Canada from England.

The use for seed of such potatoes has been prohibited mainly because of the danger of introducing into the Canadian soil two new potato diseases, Potato Canker (Chrysophlyctis endobiotica Schilb.), and Corky Scab (Spongospora subterranea Johns.) The former of these two diseases hbs been actually discovered in a shipment from England. Hence, it will be obvious that the repeated warnings have been necessary. Besides, experiments have shown that in our climate and soil European potatoes do not yield satisfactorily. We reproduce herewith photographs of diseased tubers taken from the affected carload of potatoes imported into Canada, showing plainly the peculiar warty outgrowths from the neighborhood of the eye or eyes so characteristic of Potato Canker. Muco attention is necessary to establish the identity of the disease in this condition. We have examined a large number of tubers where the primary shoots growing from the eyes have become crushed and mutilated, resembling very closely the appearance of canker. Here microscopical evidence can only reveal the true nature of these growths. This being out of the question where farmers are concerned, from whom one cannot expect the necessary technical knowledge to determine accurately the nature of the trouble, the prohibition of the use of imported tubers for seed purposes became the only alternative. To facilitate this precaution, the following order was also passed by Order in Council:—

"Every person using for seed other potatoes than such as have been raised by himself must obtain, preserve and exhibit on demand, previous to planting, a certificate from the seller or his agent stating that the potatoes to be used for seed have not been imported from Europe."

The following provisions have been copied from the Destructive Insect and Pest Act and should be carefully studied, as any farmer or grower on whose land this Potato Canker or any Corky Scab disease is subsequently found will be asked to furnish evidence of the origin of the potatoes used for seed. Anybody found to have contravened the Act or any regulation will not only render himself liable to a fine or imprisonment provided under the Act, but will also forfeit the entire crop without any compensation.

"Compensation not exceeding two-thirds of the value as assessed by the inspector, of the vegetation or vegetable matter or containers thereof destroyed by the instruction of an inspector, shall be granted by the Governor in Council upon the recommendation of the Minister, except in cases where these regulations are carried out under the direction of the government of a province not granting compensation, or in the case o potatoes or potato crops."

"Every person who contravenes any provision of this Act or any regulation made thereunder, shall be liable, upon summary conviction, to a fine not exceeding one hundred dollars, or to imprisonment for a term not exceeding six months, or to both fine and imprisonment. Any vegetable matter imported or brought into Canada contrary to this Act, or to any regulation made thereunder, shall be forfeited to the Crown,"

"The owner, occupier or lessee of any premises or place where any of the insects, pests or diseases specified herein shall be found, shall immediately notify the minister, and shall also send to him specimens of such insects, pests or diseases."

Any one desiring further information about this Potato Canker is referred to Bulletin 63 of the Experimental Farm series (Division of Botany), and Farmers' Circular No. 1, obtainable free of charge from the Experimental Farm, Ottawa.

"CORKY" SCAB OF POTATOES.

(Spongospora subterranea Johns.)

No record regarding the occurrence of this disease on this side of the Atlantic has become known up to date of writing. Although the disease has part of its name in common with the ordinary potato scab it is in no way related, nor does it even closely resemble the common potato scab. Probably the name 'Powdery Scab,' or incrustations on the surface of potatoes in this disease are filled with a powdery, olive-green mass composed entirely of the spores of the fungus Spongospora. They are often present in such dense masses as to appear like the spore powder of smut fungi. The common potato scab does not alter the shape of the tuber, whereas the powdery scab frequently produced

gnarled, knobby tubers covered with deep sores, almost totally unfit for any purpose. The fungus, or more correctly speaking, the slime fungus (Myxomycete) belongs to the same group of organisms as that causing Club Root)Plasmodiophora) in turnips and other related plants. It produces millions of perforated spores which infest the soil and any sound tubers that may come into contact with diseased ones. The disease is widely spread in Europe, hence it affords one more reason to abstain from using imported potatoes for seed purposes. The great danger of introducing new diseases into any country should be fully realized. The examples afforded by the ravages of the Late Blight of potatoes (Phyto. phthora infestans), which disease has also been introduced from abroad, should suffice to impress any sceptical person of its serious importance and the responsibility of any grower who commits 'an error of judgment.' To spray potatoes, as they should be sprayed, to prevent any losses from Late Blight, costs, inclusive of labor and material, twenty-four dollars per statute acre. This expenditure, however, may save every cent of loss, while spraying to prevent Potato Canker and Corky Scab has been found of no value whatever.

A large quantity of imported tubers have been examined. While it must be said that some were of remarkably fine quality, there were whole consignments that showed Dry Rot, Rhizoctonia, Scab, Late Blight, Sprain and Bacterial Rots to such an extent as to be useless for any purpose.

The risks involved from the introduction of new diseases are far more serious than may appear. It is not a question of injuring the crops and purses of one or more growers, but the whole industry of a nation may be seriously compromised. The sooner this question receives international attention the better, for only by international agreement will it be possible to prevent the wholesale exportation of diseased vegetation, and thus the distribution all the world over of diseases against which every country spends thousands of dollars annually in its efforts of control, but which it shows no concern about when exporting into any other country.

'RHIZOCTONIA' DISEASE OF POTATOES.

(Corticium vagum B. & C. var Solani Burt.)

Very frequently there may be found firmly adhering to the surface of potato tubers, small, dark-brown bodies of varying form, and ranging in size from a pin's head up to ¼ of an inch or so in diameter. They are usually comparatively inconspicuous when dry, but on wetting the surface of the tuber they show up distinctly. These bodies are masses of resting mycelium—commonly, but in this case perhaps, not quite correctly, termed sclerotia—of a fungus. Under the right conditions of temperature and moisture, these 'sclerotia' give rise to a characteristic mycelium which was long supposed to be incapable of producing spores (i. e., a sterile mycelium) and placed in the form genus Rhizotonia. In comparatively recent years, however, it has been demonstrated that this Rhizoctonia on the potato is identical with the Basidiomycete Corticium vagum Bl & C., the latter being the spore-bearing stage. This latter name is therefore given above, as the correct scientific one, while the name Rhizoctonia is also retained as being the one under which the disease is best known.

Fungi similar to the Rhizoctonia stage of the fungus attacking potatoes are also known to cause serious diseases of many cultivated plants, for instance a form of the 'damping off' of seedlings, and various root and stem rots of beets, beans,, lettuce, tomatoes, etc. Whether many or all of these belong to the same species or not remains to be proved, but there stems considerable likelihood of this being the case.

While the 'selerotia' adhering to the potato tuber are quite superficial and not associated with any rotting or other injury of the tuber, the conditions which have just been mentioned, as leading to the production of mycelium from them, are fulfilled when the tubers are planted. This mycelium which now develops is capable of causing quite a serious disease of the potato crop, attacking the underground stems and roots and also the stem above ground. The effects of this infection shows themselves in a variety of ways. Commonly a brown, sunken 'cankered' area may be found extending along the stem just above the level of the ground. In bad cases this may go right around the stem, 'girdling' it and causing it to dry up. This mode of attack frequently destroys large numbers of young shoots as they make their way above ground. When the tops have reached a fair size, but the underground parts which normally bear the young tubers have been attacked and destroyed to a considerable extent, a cluster of small tubers

Potato Plant the whole field of which is Affected by the Canker.

is often formed at the base of the stem just below the level of the ground. This form of the disease is designated 'little potato'; it is often associated with the formation of the small leafy, green or purplish tubers in the axils of the leaves above ground (aerial tubers). Both phenomena in fact are due to the same cause, a surplus of food substances manufactured by the leaves aad not used up in the usual way. Sometimes the disease manifests itself in a shortening of the shoot, the leaves being close together. The appearance resulting from this has suggested the name 'potato rosette' commonly applied to it.

The spore-producing or perfect stage of the fungus according to our experience does not seem very abundant. Some very good examples, however, were observed in British Columbia, some have been sent in during the past season from the Province of Alberta, and others were found on the Farm here. It appears to be restricted to the living host plant, and forms an adherent gray very delicate and easily removable layer for a distance of two or three inches or more along the stem or branches above ground.

Diseases due to species of Rhizoctonia as 'soil diseases.' By this is meant that once the organism has been introduced into the soil, it has the power of persisting there from year to year, waiting the opportunity, so to speak, to attack any susceptible crop that may be planted therein. If, as seems probable, the Rhizoctonia diseases affecting a considerable number of plants are due to one and the same fungus, the danger of introducing the disease into uninfected land is obvious. It is quite true that sometimes the fungus may be present in considerable amount, and yet the resulting disease may only be slight, but this is simply because, as with all fungus diseases, other factors, of which for the most part we know little, influence the virulence of the parasite or the resistance of the host. It is at least equally true that when conditions favours the fungus, serious results may follow, and therefore if the fungus be present there is always the danger of such results. Hence it is most important to avoid introducing the fungus into uncontaminated soil. Although mention has just been made of a spore-bearing stage, yet there is little doubt that the parasite is mainly disseminated by the 'sclerotia.' It would greatly reduce the danger of infecting healthy soil if only tubers quite free from disease were used for 'seed.' As, however, in practice this is almost impossible to carry out, tubers which appear to be free from disease should be selected and subjected to some treatment that will kill any sclerotia adhering to them. For this purpose the treatment so widely used against potato scab is generally recommended, but does not seem to have given uniformly satisfactory results. In this connection an experiment conducted at the Central Experimental Farm this season yielded some interesting results. Two lots of potatoes, both badly and about equally affected with sclerotia were taken. One lot was soaked for three hours in formaldehyde solution of the strength usually employed against potato scab, viz., ½ lb. in 15 gallons of water. The other lot was soaked the same length of time in a solution of 1 part, by weight, of corrosive sublimate in 2,000 parts, by weight, of water. This is half the strength and twice the time usually employed against potato scab. The tubers at the expiration of the treatment were removed from the solution, spread out till dry cut and planted in beds in the same plot of ground. At harvest time it was found that the tubers grown from the 'seed' treated with formalin were almost as badly covered with sclerotia as those originally planted, while those from the tubers treated with corrosive sublimate were practically clean. It would seem, therefore that treatment with corrosive sublimate in the manner indicated is much the more effective measure against this disease, while it is certainly just as reliable as the formalin against scab. The chief objection to the use of this chemical is its deadly nature as a poison if taken internally, so that all reasonable precautioms should be taken in using it. It should also be mentioned that the solution corrodes most metals and should therefore be prepared in a wooden vessel.

Apart from treating the 'seed' in the manner indicated there is little to be done. No remedy is available for plants once attacked, and applications to the soil seem to have little valhe. In some Rhizoctonia diseases applications of lime to the soil have been found useful, but such alkaline dressings have a marked tendency to increase the severity of potato scab, and if this disease be also present the amount of harm done in this way would likely more than counterbalance any possible good in checking of the Rhizoctonia.

The question of distributing this disease by means of affected tubers became very prominent at the time of sending out small samples of seed potatoes from the Farm, when it was found almost impossible to secure sound smooth tubers. For the purpose of preventing this disease it was suggested to treat the tubers in the above manner with corrosive sublimate before sending them out to the farmers. The objection, however, was raised that the quantity of poison adhering to the surface of the tuber might have fatal or injurious results, should any of these potatoes be used for food, instead of for planting as intended. To ascertain whether a quantity sufficiently large to cause inury to persons consuming treated potatoes, the Dominion Chemist, Mr. Frank T. Shutt, M. A., kindly undertook to investigate this matter, and the results of his labors are herewith incorporated, with his kind permission:—

RE TREATMENT OF POTATOES BY MERCURIC BICHLORIDE Corrosive Sublimate.)

We have carried out a series of experiments to determine the amount of mercuric bichloride that might be absorbed or retained by any given weight of potatoes on treatment for Rhizoctonia.

The treatment considered in soaking the tubers for three hours in a solu- of mercuric bichloride of the strength 1—2000, removing them from the solution and , without rinsing, allowing them to dry by exposure to the atmosphere at room temperature. The potatoes analysed were examined 24 hours after treatment.

Two methods were adopted; the first, a direct one, in which the amount of mercuric bichloride in or on the potatoes was determined, the second, an indirect one, in which the amount of this compound removed from the solution by the potatoes was ascertained. It is satisfactory to note that the results by both methods were closely concordant.

Omitting the details of the various methods used in the analysis of the tubers and the solution; it will suffice to state that we found 3 pounds of potatoes (13 tubers) after treatment to contain, approximately .052 grams mercuric bichloride. By analysis of the solution used in their treatment it was found that its content of the fungicide, i. e. its strength had been reduced 10 per cent, which on calculation showed that 3 pounds of potatoes had removed approximately, .05 grams bichloride.

The usual dose of mercuric bichloride is between 1-32 and 1-16 of a grain, and the maximum official dose is 1-8 grain. There are apparently many cases on record of fatal poisoning by this chemical, but it is stated by an eminent authority on toxicology that .19 grams (approximately 3 grains) have proved fatal.

The amount of mercuric bichloride, according to our findings, contained on or in 3 pounds of treated potatoes is approximately .05 grams or 3-4 grain, an amount equal to 6 maximum official doses. This, in my opinion, would render it highly desirable that the treated potatoes sent out should be accompanied by a statement that the tubers had been treated and are in consequence non-edible.

A fact of some interest that has been brought to light in connection with this treatment is that the strength of the solution is materially reduced by the potatoes. This, I think, points to the necessity of rejecting the solution after it has been used three or our times, and a freshly prepared one substituted.

(Sgd.) FRANK T. SHUTT,
Dominion Chemist.

From the above analysis it is quite evident that serious consequences may be entailed from the consumption of potatoes treated with so weak a solution as 1 in 2000 corrosive sublimate.

The analysis brought out, however, another very interesting fact, i. e., the material reduction of the strength of the solution. This point has to my knowledge never been exposed,

and it seems reasonable to deduct that the removal from the solution of the ingredient used to kill the fungus no doubt accounts for the often limited success in preventing the reappearance of diseases, which might have been assured by employing a fresh solution after treating a quantity of tubers. An experiment will be undertaken with the view of observing the action of the solution by using it over and over again.

Potato Growing on Hill View Farm.

Editor Maritime Farmer:

In response to your request for photos of farm scenes I am enclosing two snap shots. One is that of a sixteen months old hog raised on my farm which when killed and dressed, weighed 614 pounds. The other photo is a potato harvesting scene on my farm in 1912.

The piece of land that the potatoes were grown on contained one acre, from which was dug and stored at digging time 412 bus. Perhaps it will be of interest to some to know how I raised them. I make it a rule to grow buckwheat, to lighten the soil, on the piece of land I ntend to raise potatoes on the next year. The land was plowed in the fall after the butkwheat was gathered in, and disced in the spring and leveled off with a springtooth harrow. It was then furrowed out into rows 30 ins. apart. The manure hauled direct from the manure cellar and put in the rows and leveled, about fourteen ton to the acre.) Then some complete fertilizer was dropped in the row and a little ground covered over it and the sets put on it, 14 ins. apart in the row, with the eye up, two eyes cut to a set. The sets were then plowed in, and in about a week or a little more I harrowed down the piece to cut and kill all the weeds that had started to grow by that time. The fertilizer used was 200 cwt. of my own mixture, consisting of dog-fish scraps, Potash and Slag, which I find much cheaper than any fertilizer on the market that would carry the same amount of Nitrogen, Phosphoric Acid and Potash, and 300 cwt; of "Stockbridges Best." Then as soon at the potatoes were up 4 or 5 inches I started to cultivate. In a dry season I cultivated once or twice a week. If wet, I do not cultivate so often. I keep on cultivating until I cannot get through the rows.—F. W. Grant, Barss Corner, N. S.

Methods of Improving the Supply of Field Root and Vegetable Seed.

It is estimated that 250,000 acres are annually devoted to field root and garden vegetable crops in all of the provinces. The areas devoted to field roots have materially decreased during the last 20 years. Ensilage corn is a succulent fodder, that is probably more economical of production and has largely supplanted field roots. The records of the census enumerator would indicate that the areas annually devoted to garden crops have increased with our increase in population; especially areas adjacent to our principle centres of population.

Hog Raised on the Hill View Farm.
16 Months Old When Killed and Dressed 614 lbs.

Potato Digging on the Farm of F. W. Grant, Fall, 1912

¶ **Mr. J. H. Wright will travel through the counties of Digby, Annapolis and Kings during the Summer of 1913 in the interests of the *Maritime Farmer*. He is authorized to take ad. orders, new subscriptions and collect for renewals.**

CULTURAL METHODS IMPORTANT

There are several factors that make for success in the production of these crops, some of which are equally, if not, more important than the quality of the seeds used. High class seeds will not produce a satisfactory crop unless the cultural methods and the quality of the soil is also superior for the particular kind of crop that is grown.

From a personal inspection of these crops in different provinces during the last two years, it is my opinion that crop failure is generally to be attributed to the want of good cultural methods, due sometimes to ignorance on the part of the grower, but mainly, to the great scarcity, the high cost, and, to the inefficiency of farm labour.

CAAADIAN SEED SUPPLY OF AVERAGE QUALITY.

The supply of field root and garden seeds in Canada is on the whole of about average quality, better in fact than the average care that is given of the crops produced from the seed. As a rule where superior intelligence and care as to the culture of crops is employed, a superior quality of seed to produce the crops is also obtained. The results of our trial plot tests with field roots make clear that whether the seed is superior or inferior to the average quality depends, so far as the Canadian farmer is concerned, largely on the seedsman, but even our most competent seedsmen occasionally fall short of their average standard of excellence with some varieties of their seeds. Some of our seedsmen procure supplies, that on the average for all kinds, are superior in quality to that of the average imported and sold by other seedsmen. From a careful study of our trial plot test with field root seeds, one would be forced to the conclusion that the seed stocks imported by some seedsmen had been purchased by them with a greater consideration to the matter of immediate profit, than to building up, and maintaining a reputation for selling good seed. Doubtless trial plot tests with garden vegetable seeds would show similar results.

WHY ROOT AED GARDEN SEEDS ARE IMPORTED.

With the exception of sweet corn, beans, peas and tomatoes, practically all of our seed supplies for field root and vegetable crops are imported. The great bulk of them come from Europe. They are grown in France, Germany, Scandinavia, and England, under soil and climatic conditions actually less favorable for the development and maturing of seeds than the varying conditions of soils and climates in the different parts of Canada. The result of experiments conducted at Waterloo, Ont., combined with individual effort on the part of a few farmers and gardeners scattered over the country who have grown a few kinds of root and garden seeds for many years, demonstrates beyond any reasonable doubt, that the necessity for importing our supplies of field root and garden seeds is not because they cannot be grown to perfection in many localities in Canada. France was formerly said to be the seed garden of the world. During recent years Germany and Scandinavia have made rapid progress in the seed growing industry, and perhaps because the climatic conditions of central Germany and Denmark more nearly approach those in Canada, we have been getting a lesser proportion of our seeds from France than we did a quarter of a century ago.

In the production of field root and garden seeds, a great deal of skilled labour under the direction of competent technical experts in plant and seed selection is required. An abundance of such labour is available in Europe at 50 cents per diem or less; the work entailed in seed growing is considered to be an ideal occupation for women in the principal seed growing countries. Having an abundance of labour experienced in the work of seed growing, is really the greatest factor to be considered. The cheapness of skilled labour in Europe is almost, if not quite neutralized, from the view point of the Canadian seed grower, by the cost of transportation and the relative cheapness of land.

GERMINIBILITY.

Field root and garden seeds of good quality should give strong germination, be true to kind, and have had careful breeding and selection.

Investigations conducted from 1902 to 1908 showed that partial crop failures were comparatively common because of the unwitting use by farmers and gardeners of root and vegetable seeds of very low peccentage vitality. Three years ago Parliament inserted a clause in the Seed Control Act that nas been reasonably effective in correcting this source of danger.

(Continued on page 554)

The New Superintendent of the Nappan Experimental Farm.

W. W. Baird, B. S. A., the new Superintendent of the Dominion Experimental Farm, Nappan, N. S., was born and brought up on his father's farm in Cumberland Co., N. S.

He graduated from McDonald College of McGill University in 1912. During his college career he spent a number of summers working in the various departments of the college. He spent one summer in a nursery at Rouginol and two summers working for the Commission of Conservation in the province of Quebec. He also did considerable work in judging standing field crops in the province of Quebec.

He also took an active part in college organizations and at the same time filled prominent positions in the various athletic meets and sports.

After graduating from McDonald College he accepted the position of Superintendent of Sir William Van Horne's Estate, Coven Hoven, at Minister's Island, N. B. which position he resigned to take the position which he now holds.

Mr. Baird is a young men's man and like his predecessor, Mr. Robertson, will do his utmost for the cause which he represents and on which he will strive to throw additional light by the results of carefully conducted experiments.

W. W. Baird, B. S. A.
Supt. Experimental Farm, Nappan, N. S.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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APRIL 29, 1913.

DATES OF ISSUE.

May 13-27
June 10-24

PREPARATION OF THE SOIL.

A thorough preparation of the soil is one of the chief factors in successful management of the soil. As a practical farmer put it at a farmers' meeting'—"Soils that are badly run down by continuous cropping may be restored to their original state of productiveness by the use of fertilizers, but the cause of small returns is not always due to a lack of fertility. Many conditions may prevail which prevent the plant attaining a healthy development. Better conditions, obtained by drainage, liming, &c., may be necessary before the plant can avail itself of further additions of plant food. The more perfect the condition of the soil is made, the better will plants be able to attain the highest development; there will, then, be greater conversion of food into crops. Our soils are the medium in which we can at pleasure convert potash, phosphoric acid, nitrogen into crops; therefore, it is not advisable to keep the medium in the highest state of efficiency? Feed your crops as you do your animals, not merely to appease hunger, but that the highest returns may be obtained. Give them a rich, palatable, well-balanced ration that they will readily take, and be, in consequence, invigorated and developed.

CO-OPERATION.

We hear and read so much about co-operation nowadays that we sometimes wonder if it isn't a waste of time to mention the subject. However, if we judge the amount of discussion which the subject receives by what it deserves we would say that it will be a long time before it receives its just share of attention.

A man who has had years of experience in co-operative work said recently in a speech that the business of farming offers more opportunity for its successful operation than any other occupation or business. From the success which the movemnet has attained in Denmark and other foreign countries and even in certain places here in this country, we believe that this man has hit the nail on the head.

Farmers,get together and organize co-operative associations for doing your work and transacting your business. When once started by all means stick together and you will have an institution with the strength of Gibraltar which will make the Trusts look like drops of water in the Gulf of Mexico.

ASTRAY NOTICE.

"Strayed from my place, one roan heifer with star in face, etc, etc.—Reward for return."

Did you ever read a similar notice in the local paper? Of course you have. It has been a horse, cow, pig, or other domestic animal that has taken the liberty to wander from the home yard—and what a fuss it creates. All the folks of the household hunt far and near. Every neighbor in the country is asked to keep an eye open for the stray. You finally see the above notice in the paper—

Well, what of it? O, nothing much. It is natural that a man should want his property back. Natural that all should worry lest the animal should not fare well away from the tender care of home, worry lest the wanderer should be doing mischief somewhere and the damages charged to the owner.

But we don't care about that. What we are most concerned in is the strays that receive no astray notice whatever—no one goes out to hunt for them and bring them back—the stray boys and girls that become dissatisfied with the humdrum life on the farm and strike out to see the world.

Parents, where are the boys and girls? Are they all safe—every one? Or is one like the prodigal son out in the wide world somewhere? Maybe a cross word, a quarrel, or just lack of paternal interest in him has caused him to cast his lot with the outside world.

All work and no play may be the cause of many a boy or girl leaving the farm. Or perhaps a too tight rein was kept on him at an age when manhood was asserting itself—or no doubt not rein enough to influence and guide one whose tendency was towards waywardness. As Uith colts so with boys and girls, there's a happy medium between over-strictness in training and a woeful lack of discipline at the proper age.

At every revival meeting mothers come to the evangelist and ask his aid in the saving of a wayward son or daughter. What would the anxious mother not gladly give for the return to righteousness of that one?

Estray! Almost as heartrending a word as Lost! A little more hope in it, that's all. Estray—how about the boys and girls that are safe at home? Good boys and girls with no waywardness in them. But do you take them into partnership and help them to become interested in your work or are they secretly thinking of a life in the city—their thoughts and ambitions going astray?

How about the schooling they are getting? Has that a tendency to make your boys and girls stray from the farm in after life? One may be going astray in his secret plans long before father or mother dreams of the truth. One may be best suited for agricultural pursuits yet the mind straying off to the green-looking fields of city clerkships. Whose fault is it? Can you not tack on many a country school this notice—Strayed—a school system that fulfills the requirements of country life. Strayed with it many an ambitious boy and girl who had no fitness for city life.

Be as anxious over the occupants of your homes as you are over the animals within your barn yards. Make as great effort to prevent their going astray and search as diligently for their restoration should it come to pass.

WASTEFUL SHABBINESS.

One can tell the difference in personal character by looking at the houses and other buildings owned by differet men. The thrifty self-respecting man keeps his buildings in repair and well-painted; the thriftless, happy-go-lucky man makes his repairs after a rain has come through his roof and spoiled his hay and loosened the paper on his ceilings, he reapints after his lumber has rotted so that the nails begin to let go.

In painting, the old saying that "an ounce of prevention is worth a pound of cure," applies with peculiar force. There is no form of wastefulness more absolute that the sparing of paint that produces chronically shabby buildings. Every dollar injudiciously saved in paint means many dollars lost in lumber and carpenter work. And this form of waste is so inexcusable! Paint is to-day so good, so cheap and so convenient that a man must deliberately prefer shabbiness to neatness if he fails to use it when needed.

Ready mixed paint intelligently designed for beauty, durability and economy, in almost endless variety of tint and size of can, is found in every stocked village store. You choose your colors and the painter puts them on. This is brings the painting problem down to its simplest terms; but like all the simple conveniences of modern civilization, that gallon can of ready mixed paint has behind it a pedigree of which royalty might be proud; celebrated chemists have labored to produce its pigments; engineers and inventors have designed and perfected the machinery that made, canned and labeled it; competent artists have designed its label and the color cards that accompany it, and a thousand women in mine, laboratory and factory have labored to bring together its constituents and to perfect it.

Now, more than ever before shabbiness in the matter of paint is wasteful, because lumber is becoming ever scarcer, dearer and poorer, while paint is becoming always better, more plentiful and relatively cheaper.

RESPECT WHAT YOU DO.

Never depreciate the importance of your vocation. If you are a farmer and are talking with a senate or a governor, do not say' "I am only a plain farmer and have not had much experience." Donot apologize for it, and tell him that if you had had a chance to go to college, as other boys had, you would not have remained on the farm. You would have done something worth while.

Your business is just as important as his. No matter how high a position the man holds, make him feel by the superb way in which you do your work and by your manly bearing that you have made a profession of farming, that you have lifted it into great dignity by your scientific methods, that you have mixed brains with the soil.

You may be sure that there is always some lack, some weakness in people who are always depreciating the importance of their work. These are the earmarks which show that a man is an artisan instead of an artist in his line—that he has not made the most of it.

Every man should have a superb pride in his voaction. It should be something which he loves to dwell upon, always a subject of absorbing interest to him, because it is really a part of himself. The atmosphere which surrounds his vocation indicates what is in himself. His business or profession is but his self-expression. There is an air of refinement or coarseness, of harmony or discord, of order or system, or slovenliness and slipshodness, a quality of honesty and square dealing, or of trickery and fraud, just according to the quality of his ideal which he has worked out in his specialty.

BEST CROP ON THE FARM.

The boys and girls of the farm interested in farm life and agriculture mean more to the country than profitable crops of wheat, oats and live stock. If the young peoule are interested in farm life it means they will take charge of the work of the farm and become useful and valuable citizens. They have no desire to move to town and lose themselves in the city. They recognize the beautiful side as well as the profitable side of farm life. Too much attention cannot be given to the boys and girls. They should be made partners with mother and father, and their every question relative to plant and animal life answered. In this way they will see deeper than the surface, and will take pride in the work they are doing.

WILL STAND BY THE FARMERS.

"It is the duty of the Government to serve the interests of the man who goes on the land in this province and brings up a family and lives and dies here, rather than the man from the United States who rushes through the province in a day or two on an automobile trip. I stand for the man on the farm who is trying to bring up his family and upbuild our country." The Maritime Farmer concurrs heartily with Premier Flemming on the above mentioned policy embodied in his reply to the good roads Association delegates before a recent meeting of the Executive Council in Fredericton.

For the farmer who will milk 20 good cows, produce the feed on the farm and do the work himself, there is good money in the farm dairy. In this business the farmer sells his own produce to himself, employs himself and his family at good wages to do the work, and removes little fertility from the farm.

The Need of Cheaper Money for Farmers

Editor Maritime Farmer:—

Farming is said to be now the only "one man" industry left, almost all others having been brought under some order of consolidation. At the present time we hear the gospel of intensive farming preached in every farming district, which is well and good providing we have a convenient home market to consume the products.

But it is my opinion that the future will see larger instead of smaller holdings, as the present system on the one hundred acre farm is much too costly to operate.

I have often thought that if ten one hundred acre farms were brought under the direction of a capable, hustling superintendent, with only the one set of machinery and buildings to keep in repair, that this large farm could be made to earn each of the ten families a better living or salary than is possible under the present system of ten separate expensive plants.

The cost of necessary machinery on a one hundred acre farm is about half the cost of what would be necessary to work a one thousand acre plant.

This is where most of the profit in Maritime farming is going. Each machine is used in season for only a few days work. We must have them but they are expensive and hired help is still more costly and uncertain. These machines could be made to do much longer service each season. rust out as fast as they wear out, anyway.

Joint ownership could help rem this trouble to a certain extent, if we could all use the other fellow the way we are sure he should use us. But as human nature is now constituted the other fellow is always trying to impose on us, and few farmers have any satisfaction with a jointly owned machine.

The question is often asked, why is it that farmers cannot afford to pay the wages paid by manufacturing industries for their help to say nothing of giving as short hours? I sometimes think it may be partly because farming has not kept pace in improved and progressive methods with the other industries. A man doing business in town is forced to make his business pay or quit. He has to do as his most enterprising competitors do and is ever watchful for any improved method, in his business, whereas, a farmer occupying cheap land can grub and grumble along on very little. His wants are often few, and if he is not naturally ambitious and enterprising there is nothing to stir him to make any extra effort to improve his condition.

Many men can work better for another man than for themselves and a small percent. would make real good foremen. You can readily see the difference between the men who push their work and those whose work is always driving them. One does every thing at the proper time the other is always wondering what he can put off longest.

It is easy for enthusiasm to overbalance good judgment and as the slang phrase goes, "bite off more than we can chew." This is a mistake often made by young enterprising farmers, but many more entirely underestimate what is possible for them under their particular circumstances, to accomplish.

In a northern climate, such as ours, with a short growing season we must of necessity hustle our work and plan carefully to do everything possible during the winter season. If we are stock raisers we can plan our work so as to grow one crop in summer and manufacture it in winter, and have everything possible in readiness at the first opening of spring so as to take full advantage of every hour. It has been my experience that, usually, most of our crops are not sown or planted quite early enough for the heaviest growth. We can also err in this respect, but usually crops are sown a little too late.

There are many jobs, such as getting the year's supply of fire wood ready for the stove, cleaning and grading seed, making any necessary repairs to machinery, cleaning harness, and doing all hauling possible. In many cases it is only laziness that causes farmers to leave such work undone until spring or summer. Nothing disgusts me more than to see two able-bodied men in mid-summer on a crosscut saw working up wood for the stove as they use it. That is enough to show how the rest of their work is handled. Thrift is a virtue that should be cultivated. We often hear men loafing around a village in winter say that they have nothing to do at home. Perhaps they haven't but it would certainly pay them to arrange matters so they would be kept busy. If it ever paid in the past to occupy Maritime farm lands, properly farmed, it must pay now when such greatly advanced prices are obtainable.

It is said of farmers that they are the only men who do not arise to meet the increased demand for their products. If any manufacturer finds the demand for his goods increasing he invariably tries to increase his output by increasing his working capital and employing more labor. But although there is an advance in almost every article grown or raised on the farm we find very little effort on the part of the majority of farmers to increase their prodution above what they can do single handed. A great cry is raised in the land over the scarcity of farm help, yet hundreds leave our country every season in search of work. Many of these would not work on farms, it is true, but the majority would if the wages were in proportion to the work and if steady work were guaranteed for the entire year. Twenty dollars, at most, in summer, and no job at all in winter will not hold young men here. As far as I can see farm help is sufficiently plentiful in this Province, what is scarce is the money to pay for it. I think every farmer on one hundred acres should feel it a duty to himself and his province to so handle his farm that he can employ at least one man with family during the entire year. Even if he cannot make any more clear money for himself than when working single handed.

The farm lands of the Maritime provinces do not carry the population they should. Our conditions are much more favorable than many countries that support ten times our population.

Our governemnts, both Federal and Local seem to be endeavouring to do everything possible to stimulate agricultural production. The latest announcement being for an expenditure of $1,000,000 a year for this purpose. In just what manner the money will be spent we are not yet acquainted; but with all the short courses and long courses, lectures, demonstrations and instructions of one kind and another which are being fairly driven into the farming population one would imagine that about every farmer had more instruction now than he could absorb or, at least, are not yet burdened with an over supply of knowledge of our business.

Much of the labor of the poor is lost for want of knowledge is a statement found in proverbs or some other part of the good book, I can't remember which. Anyway, it is pretty true and applicable even to this enlightened day.

I would like to see some system of cheap loans for farmers put in operation. I think this would benefit agriculture more at the present time than anything the Government could do. The poorer sections of the country would benefit most as they now must pay excessive interest on all they purchase. Many farmers will pay almost any price for an article on hire rather than borrow money on interest from the bank although they could often save greatly by doing so, as everything bought on time is paid for at a high rate of interest.

I think if a system could be worked out so a farmer could secure money at the lowest possible rate of interest and make all payments on the instalment method it would probably be the best plan as it always stimulates men to meet purchases and is a check on further investments while payment is pending. A payment of this nature is often met with money that otherwise would not be saved at all, in the same manner as the money often put aside to meet a payment on an endowment policy and which is usually the means of teaching men to lay something aside for future use. Those loans could be advanced by the Commissioner of Agriculture or his Secretary, who should be capable of advising the recipient as to the disposal of the money or the necessity of making any loan and he could always be as well secured as is required for any other credit loan. With this assistance many improvements could be made that would greatly increase the production of farms, that cannot now be undertaken for want of capital. Cheap loans and co-operation in buying and selling are now the two greatest needs of the majority of Maritime farmers. Some favored sections are working co-operation out for themselves but usually this is almost impossible.

I have been told by one who studied the Danish system of co-operation that to co-operation alone the Danes owe their success, as farmers and statesmen. They have not prospered in other parts of the world, where they have emigrated better than any other class, individually the Dane is not a wonderful agriculturist. It is their good co-operative business, along with their natural industry that is responsible for their success.

It seems hard to get Maritime farmers to practice co-operation to any extent. Only in the dairy industry has it been attempted in this province and in this it has proved a great success. Co-operation could be greatly extended, and the departments of agriculture have a great field for labor in this respect.—W. M. Lea.

What is the Soil?

Editor Maritime Farmer—

Many forces have been at work in the unknown past in the breaking up of the road and the making of the soil as we have it, principal amongst those are water and air. Weathering is the great agent in accomplishing this work. Rain, snow, frost, ice have broken down the rocks and worn away the mountains leaving the fragments in the valleys. The passing of the iceberg over the rocks during the glacier period ground the rocks into powder which forms the basis of the soil of today.

Much of the fertile soil of the western prairie is the result of the weathering and washing of the great chain of mountains to the west; much also of eastern Canada is the great erotions of prehistoric times. New Brunswick may be said to be all of this character, slowly but surely the elements are wearing away the rocks and converting them into fertile soil.

Changes of the earth's surface are also brought about by the action of the streams which annually carry millions of tons of the finest soil and deposit it on lower levels. Much of our lowlands, islands and intervales have originally been formed in that way, and, are during every freshet being changed either added to or taken from. We see the rounded hills and knolls in the valleys. These have been formed either by the eddies in streams or by having the surrounding material washed away leaving them often of grotesque appearance.

The rock, ground into powder by the action of glaciers, disintegrated by water, air, frost, etc., forms the basis of all soils. Besides this, however, all productive soils contain organic matter, decayed and decaying remains of plants and animals or what is called humus.

The humus contents of soils is the basis of their ability to grow crops. Many soils are said to be worn out that are only robbed of their humus, on that account becoming hard, dead and unproductive rather than wanting in plant food.

Humus is furnished by the decaying roots, stubble and trash, by green crops turned under and by barn-yard manure.

Land that is under constant crop is rapidly deprived of its humus and will soon fail to produce even under the stimulus of artificial fertilizer.

A short rotation of crops is valuable in furnishing this humus especially if clover and other legumes are included in the rotation.

In applying barn yard manure it is better to apply a light dressing often rather than a heavy coat at longer intervals. Much better is it also, to apply the manure fresh when made rather than allow it to lose much of its value by rotting in the pile. The fact of having that manure decaying in the soil is that there is less waste, and that during its decay it stimulates the soil bacteria to do its work of breaking down the soil and preparing plant food for the plant. The great principle of maintaining and increasing the soil fertility is to have something growing on the soil, and something decaying in the soil at all times. Plants grow to maturity and then pass into decay and in their death and decay make a still larger growth possible.

Let us never forget that the soil contains life. "The soil is no mere dead inert mass; it is a scene of life and activity. This is the new teaching; soil that is inactive is unproductive movements of air and water, actions of heat and evaporation, liferounds of countless organisms bringing about decay and breaking down of plants and soil particles. Those are some of the activities of the fertile soil. Did we possess hearing of sufficient delicacy we could hear the thread of the workers. The beating of their hammers breaking down the soil particles, the roll of the tiny machinery. All things begin with the soil and at last all things come back to it."

"The soil is the cemetery of ages, and the resurrectian of life."—Andrew Elliott, Woodstock, N. B.

WHY HE WAS LATE.

"What made you so late?"

"I met Smithson."

"Well that is no reason why you should be an hour late getting home to supper."

"I know, but I asked him how he was feeling, and he insisted on telling me about his stomach trouble."

"Did you tell him to take Chamberlaio's Tablets?"

"Sure, that is what he needs." Sold by all dealers.

HORTICULTURE.

Bitter Pit or Fruit Pit of Apples.

A number of inquiries have again been received regarding this trouble, an account of which was given in the report for last year. While not nearly of the same importance in Canada as in some other countries, for instance in South Afcica and Australia it is of special interest from the fact that, notwithstanding a great deal of attention having been given to its study, it has so far received no satisfactory explanation. In Australia it has been considered of so much moment that Mr. D. McAlpine, the leading Australian plant pathologist, has been commissioned by the Commonwealth Government to devote himself entirely to the study of this disease at a salary of $10,000 per annum for a period of years or until a solution is found.

During the past year also two important papers have been published by Australian investigators which record the results of experiments undertaken to demonstrate that the cause of the disease is to be found in the poisoning of certain cells of the fruit by absorbed mineral poisons.

In the first of these papers, by Dr. Jean White, it is shown that spots quite similar to the more superficial ones of bitter pit can readily be produced by rubbing the sarface of mature apples with such substances as chloroform, corrosive sublimate and arsenate of lead. It is suggested therefore, that under orchard conditions 'pitting' is probably due to local poisoning following the entrance of some of the spray material through the lenticels of the fruit.

Bitter Pit or Fruit Pit of Apples.

In the second paper Prof. Ewart, of Melbourne University, shows that the pulp cells of the apple fruit are more sensitive to certain poisons than 'any other known organisms;' corrosive sublimate for example being toxic in any solution of greater concentration than 1 in 10,000,000,000. At the same time, the uninjured curicle and bloom are remarkably impermeable to such solutions. Young apples were found to be more readily penetrated by dissolved poisons than old ones, but, on the other hand, their pulp cells are more resistant, so that an apple at this stage may absorb a quantity of poison insufficient to cause immediate injury but yet capable of killing a group of cells as the apple reaches maturity. This is suggested as one possible cause of the deep seated spots, but it is also believed that in this case, as also where bitter pit occurs in unsprayed orchards; sufficient poison may be absorbed by the roots and circulated in the sap to cause the death of the fruit cells. While the results of these recent investigations do not furnish all the data necessary in making specific recommendations for the control of the trouble, the advisability of adding enough lime to spray mixtures, whether fungicides or insecticides, to reduce the soluble compounds to a minimum is emphasized. Aside from this particular factor, if it be really the case that the affection may result from the absorption of naturally occurring mineral compounds in the soil control may still remain difficult or impossible, and further work along this line will be awaited with much interest by plant pathologists. —Dominion Rept.

Mr. S. B. Chute Testifies.

The methods and advantages of co-operative selling as practised by the fruit sellers of the Annapolis Valley were explained to the Standing Committee on Agriculture by S. B. Chute, of Berwick, N. S., president of the United Fruit Companies of Nova Scotia. Mr. Chute claimed for the system that it eliminated all unnecessary expenses and gave the producer and the consumer full value. Forty to eighty members constituted a local company and put in all their product, all sales being made through the central office of the Association.

The apples were packed in packing houses in three grades, the prices for Gravensteins running from $2.07 for number one to $1.73 for the second grade and 80 cents for the third. As it cost a dollar a barrel to raise these apples, Mr. Chute said that the third grade was sold at a loss. He told the committee that the Nova Scotia growers were badly treated by the railways as to rates, cars and the inability to obtain clean bills of lading. Even with the co-operative system, said Mr. Chute, there were two middlemen who handled the fruit. The grower in Nova Scotia got a fair price, but the price paid by the consumer was enormous.

As to markets he thought the Western Canadian the best, though the cost of carrying was $1.24, as against 90 cents to England. The fruit was laid down in Winnipeg at $3.24.

Mr. Chute said only about three per cent of Nova Scotia apples went West; 80 per cent went to Great Britain. Two years ago 200,000 barrels went to Germany, and it was a most satisfactory trade. Apples were sent from Nova Scotia even to South Africa.

Mr. Chute said ordinary apple pickers were paid $1.50 a day; barrels cost 25 to 28 cents each. This figure surprised Ontario members, who instanced that in their province barrels cost 45 cents each.

"Why, I bought barrel stock in Ontario and brought in coopers and made up barrels at forty cents," said Mr. Chute. He said that scarcely any apples are shipped from Nova Scotia to the New England market. "They have a surplus of apples themselves," he said.

Cheap wages, young orchards and a low rate to the steamship, 17 cents a barrel, were advantages the Nova Scotia growers have over Ontario growers, according to Mr. Chute. In the past the Nova Scotia barrel has been 130 pounds of fruit but he thought there should be uniformity of boxes and barrels, and the Nova Scotia growers were adopting the Ontario barrel, which is larger in size.

The importance of culling and the shipping of No. 3 grade apples was emphasized by several members of the committee. Mr. Chute agreed Grade 3 apples should not be shipped, he said. Hon Mr. Burrell thought that in the long run No. 3 should be left at home, and as few as possible of No. 2 shipped. The opinion was expressed that shipments of poor apples were ruining the market for the Canadian product.

Cost of Caring for Orchards.

In the management of a farm which is run primarily for experimental purposes and as a laboratory adjunct to the Maine experiment station it is obviously impossible to keep in dollars and cents the cost of operation of any one line of work and the profit or loss arising therefrom. In selecting the cost of handling a single item money values are likely to be misleading. If only the time actually used by the men and the teams upon special lines of work is charged up it will be found at the end of the year that there are very considerable items of cost that have not been charged to any department, but are borne by the farm as a whole Furthermore, it is not possible to estimate how much of the salary of the director and his associates in scientific work should be charged up against the management of the place.

There are times in the year when it is necessary in the management of Highmoor Farm to have quite a large crew. Obviously they cannot be employed merely at the time when they are wanted for orchard or other special work, but work has to be found for them at other times that is not directly profitable. How much of that time and labor should be charged against orchard management no one can figure. It is possible, however, to give pretty clearly the cost of the management of the orchard in hours of labor, pounds of fertilizer and spraying materials, etc., for the trees that are in solid blocks. Obviously, the cost of management of the trees not in solid blocks is greater than that here named. It costs as much to cultivate an acre that has a few trees as one that is fully set.

Outside of the orchards that are run for special experimental purpose, the orchards are plowed as early as possible in the spring, are cultivated about five times, are pruned, are sprayed three times for insects, and fungi, are carefully looked over for insect enemies such as borers, and at the last cultivation are seeded with rye for a cover crop.

One-half ton of fertilizer carrying 4 p. c. nitrogen (one-third of which is from nitrate of soda and the other two-thirds from high-grade organic matter), 8 p. c. available phosphoric acid, and 7 p. c. of potash soluble in water are used per acre. One man and a pair of horses will apply this in one hour.

In plowing two men and one pair of horses will plow three acres of 69 trees each in a day's time. A pair of horses and one man will harrow six acres a day. With the tractor engine and two men we have harrowed 18 acres in one day, doing far better work than is possible with horses.

The trees were sprayed three times in 1912 with lime-sulphur and arsennate of lead. The lime-sulphur used was made by the Geneva formula. Owing to the size of the cooking vessel 20 pounds of quicklime, 40 pounds of sulphur and 25 gallons of water were used for each batch. The lime was slaked in the kettle. The sulphur was made into paste, with a little of the water and then together with the remainder of the water was added to the lime in the kettle. This was boiled for about three-quarters of an hour, allowed to settle and the clear amber-colored lime-sulphur solution of a strength of about 24 p. cl Baume was decanted. To make this 25 gallons of concentrated lime-sulphur takes one man about two hours. Four gallons of this strong lime-sulphur solution added to 96 gallons of water make the dilute lime-sulphur as used in spraying. To this is added three pounds arsenate lead paste, or 1½ pounds of dry arsenate of lead powder. One batch of the strong lime-sulphur will make about 600 gallons dilute lime-sulphur.

The cost per acre for the care of orchards, exclusive of pruning, fighting borers and harvesting the fruit, is summed up as follows: One-half ton fertilizer, 10 pounds quicklime, 20 pounds sulphur, 1½ quarts gasoline, one bushel rye, 15 hours of a pair of horses, and 23 hours' labor of a man. The yield of apples in 1912 was 2950 barrels of No. 1 and fancy fruit from less than 2300 trees or about 90 barrels per acre. There were practically no No. 2 apples and about 100 barrels cider apples.—C. D. Woods, in Maine Farmer.

Goosberries.

The second earliest fruit ready for market is the gooseberry. It is principally a pie fruit and is usually preserved for such purposes. Its market is more limited than that for the strawberry, but it is not nearly as perishable and can be picked and used at various stages of maturity. At present the demand does not equal the supply. More of this fruit is being commercially preserved every year and this use should take care of an increasing supply for many years. However, due to the high price of plants comparatively few gooseberry plantations have been planted during the past few years.

The care of the gooseberry is not as exacting as the strawberry, but good care pays and the profits are good, sometimes being as high as several hundred dollars per acre. A well drained, moderately rich soil or one that will grow good corn will be suitable for gooseberries. The location should be sunny and there must be a good circulation of air on account of the susceptibility of the fruit and foliage to a fungous disease known as the mildew. The ground should be well fitted and fertilized before the plants are set out. But fertilizer can be applied more easily to gooseberries after the plants are set than can be done with strawberries.

PLANTS AND PLANTING.

Two year old plants are generally planted and usually sold by the nurserymen but one year old plants that have made a good strong growth will do. The plants are usually set in rows six feet apart and four feet in the row. If the roots are very long, it is advisable to trim them back slightly. The plants should be set slightly deeper than they were in the nursery, especially on a light soil and the roots spread out as much as pos-

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sible and then the soil firmed about them.

CULTIVATION.

The cultivation of gooseberry plants should be thorough and started early in the spring and continued until about the first of August when a cover crop, preferably oats, should be sown. An application of well rotted stable manure before cultivation starts will undoubtedly pay well and this might be supplemented with an application of one hundred to two hundred pounds of muriate of potash and two hundred to five hundred pounds of acid phosphate per acre.

PRUNING.

The pruning of the gooseberry plant is important. When the plants are set the tops should be cut back slightly and the bush balanced up as much as possible. A good bush should have about six bearing canes. The tops of each cane should be cut back slightly each year and the season's growth cut back a little, depending upon the growth made. The young shoots not needed should be cut out every year. A few of the stronger ones should be left to replace the older bearing canes. The gooseberry bears its best fruit on canes from two to four years old and by leaving one or two of the stronger young shoots each year and cutting out one or two of the old ones, the bearing wood can be kept in the best condition.

In pruning it is highly important ling of a European variety. It is vigorous, productive and hardy. The fruit is pale green, smooth and attractive, nearly as large as that of the Chautauqua and probably averages about half way between the Downing and the Chautauqua. It is practically as free from mildew as the American varieties.

RAISING PLANTS.

Gooseberry plants are not difficult to raise by the following method:

$10,000 Apple Farm, $6500.
Last year's Income $2322.

115 acres; one of the finest farm houses in the Annapolis Valley, overlooking Minas Basin; only 1 mile to depot and best village advantages; 85 broad acres in rich machine-worked fields; brook-watered pasture for 14 head; splendid 9-room house; barn ties up 18 head stock; stable and piggery; aged owner cannot wait to secure full price for this property; his affairs must be settled immediately; if taken now price is only $6500, part cash; for traveling instructions to see this and a 220-acre farm for only $3200, see page 57, our "New Mammoth Farm Catalogue No. 36," just out; beautifully illustrated and filled with a wonderful assortment of money-making farms; send today for your free copy, it will save you lots of time and money. Box D., Sussex, N. B.

to keep on the lookout for the cane borer which is a little worm that bores in the centre or pith of the cane. This worm almost always works downward. A cane with a black centre and somewhat hollow indicates the work of the borer and such a cane should be cut back until the sound healthy pith is reached.

CONTROLLING INSECTS AND DISEASES.

Gooseberry bushes should be frequently inspected for San Jose scale or the European fruit scale, especially in localities where these insects are known to be common. They can be destroyed by spraying the bushes early in the spring before growth starts with the strong lime sulphur.

The mildew (a common and serious fungus disease especially on the English varieties) and leaf spot diseases and "worms" can be controlled with the dilute lime sulphur or bordeaux to which is added 2 pounds of arsenate of lead to every 50 gallons. Make the first spraying just as the leaves are expanding and again when the fruit is about one-fourth grown.

If the mildew is serious or the varieties are English use the dilute lime sulphur without arsenate of lead every 10 or 12 days.

If worms are found after the fruit is one-fourth grown poison them with pyrethrum or hellebore.

Leaf bugs or aphids may appear. When they do spray with nicotine or strong tobacco water while the bugs are red and wingless and before the leaves have become curled.

When pruning, if a cane is cut that shows discolored pith, it may indicate the cane borer. Cut back to sound pith. Burn trimmings.

Wilted foliage at any time indicates the cane borer. Cut out and burn.

VARIETIES.

The following American varieties have been found to be comparatively free from the mildew:

Downing is the most valuable variety grown for commercial purposes. It is vigorous and productive. The fruit is of good size and of yellowish green color. It will not stand neglect as well as some other varieties.

Houghton is second in value on account of its vigor, freedom from disease and ability to withstand lack of care. Its growth is more slender and spreading than that of the Downing. It is very productive but the fruit is not as large nor as attractive as that of the Downing.

Red Jacket and Pearl are two varieties quite commonly planted. Red Jacket is vigorous and prolific, its berries are good sized and red when ripe. The Pearl is a cross between the Downing and English variety, and so nearly like the Downing that it is difficult to distinguish between them.

The English varieties are not grown very extensively in this country on account of their extreme susceptibility to mildew. They are often shy bearers, but the fruit of most of the varieties is large and of attractive appearance. Where there is a market for fancy gooseberries they will bring a good price. The following varieties are considered the best.

Chautauqua.— The bush is vigorous and productive, fruit very large, pale green in color and of high quality. Valuable for home use.

Columbus.—Bush vigorous, fruit somewhat like that of the Chautauqua. It is not as susceptible to mildew as some of the other varieties.

Industry.—Bush vigorous, most productive of the English varieties. Fruit is very large and dark red when ripe and quite hairy. One of the best English sorts, although the reddish color is somewhat against it.

Portage is one of the newer varieties. It is an American raised seed-

OUR VALUES

are summed up briefly under the following captions:

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Our goods are made to suit you no matter what your occupation may be or what they are needed for.

We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited
HALIFAX, N. S.

YOU'LL almost believe that pails and tubs will never wear out if you use

Eddy's

Fibreware

Lightness and durability are combined to an astonishing degree in Eddy's Fibre Utensils. And their low cost and long life make them economical in the extreme

At all Good Grocers

$200.00 IN GOLD GIVEN AWAY FREE

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CPAHE	RCYREH	YBRAPRSRE	ERPA

Can you arrange the above sets of jumbled letters into the names of eight well known fruits. If so, YOU CAN SHARE IN THE DISTRIBUTION OF THE ABOVE PRIZE. It is no easy task, but by patience and perseverence you can probably make out 5 or 6 of them. To the person who can make out the largest number we will give the Sum of One Hundred Dollars. To the person making out the second largest number the sum of Fifty Dollars. To the person making the third largest number the sum of Thirty Dollars. To the person making the fourth largest number the sum of Twenty Dollars. Should two persons send answers equally correct, the first two prizes will be divided between them, (each receiving $75.00) Should three send in equally correct answers, the first three prizes will have to be divided, (each receiving $60.00). Should four persons send equally correct answers, the whole sum of $200.00 will be equally divided (each receiving $50.00), and so on in like proportions, provided they comply with a simple condition about which we will write as soon as answers are received. WE DO NOT WANT A CENT OF YOUR MONEY WHEN YOU ANSWER THIS ADVERTISEMENT. If you can make out anything like a complete list, write us at once enclosing 2-cent stamp for our reply. DO NOT DELAY. WRITE AT ONCE. Address, CANADIAN MEDICINE CO., Dept. 81 MONTREAL, QUE.

Make cuttings of the past season's wood, either in fall or early spring, about eight inches long and of well ripened wood. If cut in the fall, they are most easily handled by tying them in bundles, labeling and packing them in damp sand or moss in a cool cellar. Early in spring, they should be planted in nursery rows, leaving two buds above the ground. It is essential to get the cuttings planted before the growth starts and good cultivation should be given them during the season.

ROCKVIEW FARM, THE HOME OF CLASSY HOLSTEINS

W. S. HARDING, PROPRIETOR, WELSFORD, N. B.

Among the coming young men of New Brunswick who are accomplishing results on the farm is our young friend, W. S. Harding, of Rockview Farm, Welsford, N. B.

Mr. Harding moved from the old homestead Wish-ton-Wish Farm, which is located about four miles from his present holdings which he purchased from Mr. Jas. Corkle in the spring of 1913.

At the time of purchase five scrub cows were thrown in with the farm and immediately he began to grade up his small herd by the use of a pure bred Jersey sire. In a few short years the heifers produced by this mating were averaging over 300 pounds butter fat per year. One cow gave over 10,000 milk, testing 4.78 per cent. fat in one year. Truly this record should be an incentive for young men wno are working away with very ordinary cows to turn their attention to the possibilities that lie in store for the person who pays proper attention to the grading up of their herds by the judicious use of a pure bred sire.

Noticing the heavy demand for pure bred Holsteins and believing that there was a bright future in store for breeders of the Black and Whites as the demand was likely to continue for some time, Ms. Harding decided to try his luck at the business.

With that purpose in view, Mr.Harding purchased in March 1911, the heifer calf, Gay Lad's Minnie Rooker, from Harding Bros. In June of that year he went to Ontario and bought a three-year-old cow from R. F. Hicks, Newton Brook, and a senior yearling heifer from A. E. Hulet, Norwich. The followinb January he again visited the Tillsonburg sale in Ontario, and there purchased four more head.

A Maritime Farmer representative visited Rockview Farm last February and had the pleasure of seeing the trim little herd in its home quarters.

Although the Rockview herd has only been founded during the last two years, as already stated, when one who is conversant with Holstein qualities enters the stable he perforce sits up and takes notice, for there he finds more gilt edge quality than he would naturally look for.

It was a bright balmy day and as the herd was turned out to water and for a little exercise in the open air we viewed them one by one.

Netherland Sarcastic Girl, now five years old, the cow purchased from R. F. Hicks for $300 is of the low set type and is a grand daughter of Johanna Rue 4th Lad, a bull with more daughters in the R. O. M. than any bull in Canada. He was a son of Sarcastic Lad, champion bull at the St. Louis Exposition. Netherland Sarcastic Girl is a great milker and has given over 9000 pounds milk since September 1st, 1912. Shortly after her introduction to the Rockview herd she dropped a heifer calf sired by Farforit Posch De Kol, a bull of considerable merit. She dropped another fine heifer calf last August which was recently sold to Harding Bros' fos $157.00.

Next came Fairy Favorite, a daughter of Faforit 5th Gamey, son of Faforit 5th, a cow that made 26 pounds butter in seven days when 26 pound cows were not so numerous as they are today and which was afterwards sold to H. A. Moyer, Syracuse, N. Y. for $1,000. Fairy Faforit is a great breeder. Several of her calves have been sold to British Columbia parties for sums ranging over $400.00 She has a good standing in the record of merit. Delegates to the recent meeting of the New Brunswick Farmers and Dairymen's Association had the opportunity of seeing Fairy Faforit and her ten months old, exceedingly promising heifer calf, in tne ring.

Faforit was bred by R. H. Hicks, who sold her to M. L. Haley, Springford, Ont., who in turn offered her in the Tillsonburg Sale, where she was purchased by Mr. Harding.

Kate Abbekirk, the next in line, is a fine, large, straight, two-year-old that was also purchased at the Tillsonburg Sale. She also is a grand daughter of Johanna Rue 4th Lad and was second as asenior yearling in a class of over twenty at the Toronto Exhibition in 1910. She is by Grace Fayne 2nd Colu...bia. The next calf dropped by her dam was grand champion female at Toronto in 1911 and was afterwards sold to Colony Farm, B. C., for $1,000.00. Kate Abbekirk dropped her first calf when she was but twenty-one months old and is proving a heavy and persistent milker. She has given as high as forty-five pounds milk per day, two milkings. Her bull calf by Haley Bros. famous stock bull, Grace Fayne [illegible] was sold for a good figure to Fowler Bros. the enterprising young farmers of Amherst Point, N. S., in whose hands he will be sure to give a good account of himself.

A Herd of High Grade Jerseys at Pasture.

Scene on the farm of Chas. P. Bull, Northampton, N. B. A splendid example of what may be accomplished by the persistent use of Pure Bred Sires in the Herd.

If You Have Two Or More Cows

it will pay you to use the Standard cream separator instead of skimming cream by the old method. By using the

Standard

you will get **$15.00 more profit** from each cow per year—and this is a low figure. Most dairymen do much better than this with the Standard. You can thus readily see that it takes but a short time for the Standard cream separator to pay for itself. And by taking advantage of our EASY PAYMENT PLAN you can pay for your Standard out of the extra profits it earns for you. You've heard a lot about the Standard It's the separator that has made new world's records for close skimming at experimental farms, cheese and butter factories, and on the farm. Write for folder, entitled "Skimming Results." It gives the proofs. Also ask for our catalog.

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If you want a durable hand machine for the purpose of destroying weeds—spraying orchards, potatoes and row crops—one that you can also paint with—you want a

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1911 was a triumph for Windsor Dairy Salt. Practically every prize for buttermaking was won by someone who used Windsor Dairy Salt.

Those, who make their living out of their dairies, say that Windsor Dairy is their old standby. They always rely on it because they know it is pure—because it makes the richest, most delicious butter — because they win the prizes and get "Top prices" for their butter—when they use WINDSOR DAIRY SALT. 66D

While the World Sleeps EMPIRE

Cream Separator Factory Is Running

Elderly people who read this will think of their first EMPIRES, purchased more than a generation ago —and since replaced with modern EMPIRES.

The recommendation of our old friends is making a vast army of new friends.

Dairying is certain. Wheat and other crops are uncertain. This is turning Canadian farmers to dairying and to EMPIRES.

At night, while the world is sleeping, the EMPIRE factory is kept running to meet the demands of our customers.

Quiet, light running has made EMPIRES world renowned.

While turning a properly cared for EMPIRE at speed, with one hand, you can hold your head close to the EMPIRE, place your watch to your ear with your other hand and hear your watch tick very plainly.

See, try and know our splendid separators.

Catalog 131, and Full Information Sent Promptly On Request.

The Empire Cream Separator Co. *Limited*

Toronto Winnipeg

If You Have Live Stock For Sale Advertise it in the Maritime Farmer.

Daisy Posch Abbekirk, the next to saunter along, is a large three-year-old which was purchased from A. E. Hulet, Norwich, Ont. She was second prize winning calf at Toronto, in 1909. In 1910 she was first in senior yearling class at Halifax, Chatham, Fredericton, and last fall, after being in milk for over a year, she was second at St. John and third at Halifax.

Next to come along were the two large, rugged, two-year-old heifers, Nell's Canary and Lady Tensen Canary, purchased from A. E. Hulet. They are both promising heifers and give indications of being heavy producers when they are fully developed. Lady Tensen Canary is out of the same dam as J. D. Irving's Count Tensen A., champion at St. John and Halifax in 1912.

Gay Lad's Minnie Rooker, now coming two years old is a grand daughter of Logan Bros.' old prize winner, Minnie Rooker. She is a good thrifty youngster and is now springing a finely developed udder.

Netherland Faforit DeKol, the first dropped by Netherland Sarcastic Girl after her arrival on Rockview Farm is now a large white heifer fast approaching maturity.

The choicest plum in the whole collection is the eleven months old Fairy Faforit Grace Fayne Colantha, that was so much admired by the farmers at Fredericton. She is by Haley Bros' Grace Fayne 2nd Colantha and he by Colantha Johanna Lad a son of Sarcastic Lad and out of Grace Fayne 2nd, whose record was

(Continued on page 557)

A Carleton County Farmer's Experience With Jerseys.

The accompanying cut is a pastoral scene on the farm of Chas. P. Bull, on the Eastern side of the river, at Northampton, about three miles from Woodstok, Carleton County, N. B. All the cattle shown in the photo were raised on the farm. For several years Mr. Bull had Ayrshires and Shorthorns, but about twenty-five years ago he purchased a pure bred Jersey bull from Mr. C. E. Grosvenor, Meductic, N. B. This bull was of St. Lambert strain. Another bull, a descendent of the Hood Farm, was bought later. Then a Golden Lad bull was purchased from Mr. E. B. Elderkin, Amherst, N. S., and as time went on new blood was introduced until the herd was brought up to what it now is

The cows receive only ordinary care feeding hay, straw and turnips, and some grain in spring before and after freshening. In summer they graze on ordinary pasture. In October last, when the Woodstock Creamery closed down, the herd was making over 100 pounds butter per week on aftergrass feed which was none too luxuriant as on account of the wet season the hay was cut rather late.

The herd tested an average of 4.5 per cent. butterfat in May. The lowest testing cow tested 4 per cent. and the highest 6.3 per cent in the month of August.

Mr. Bull patronizes the Woodstock Creamery from the time it opens in the spring until it closes in the fall. He has private customers that he supplies throughout the winter months. Mr. Bull says the Jersey cow is good enough for him and is a strong advocate of the use of a pure bred sire in the herd. He believes a farmer should select the breed that suits his conditions and fancy the best and having chosen his breed let him stick to it and build up a high-grade herd by the introduction of new blood as often as is necessary to avoid inbreeding.

He has tried this method and he has found it gives good satisfaction.

FREE A BOOK THAT EVERY COW OWNER NEEDS

In this 72-page book has been gathered together a fund of valuable information covering very fully those questions which are of vital interest to every owner of cows.

Some of the subjects interestingly discussed in this book by the best known authorities in America are as follows:

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Illustrations of representative cows of each of the well-known dairy breeds are shown and the special claims for each breed are set forth by the various cattle association secretaries.

The book also contains a series of illustrations showing the desirable points in selecting a dairy cow and much general information of value to dairymen.

While the De Laval Dairy Hand Book covers the various phases of dairy farming most completely it is in no wise technical, but is **written in plain every-day language so that even the children can understand it.**

Free to Cow Owners.

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Maritime Farmer

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LIVE STOCK.

Ringworm on Cattle.

This disease is known by various names in different districts such as "Tetter," "Scruff," and "Itch." All the domeseic animals are liable to be attacked by it, and it should be noted that it can be transmitted from animals of one species to those of another, and that human beings can take the disease fsom animals. Owing to the fact that death does not usually result from its attack, the disease is too often disregarded when it appears amongst the live stock on a farm, though there is no doubt that much loss in condition and growth result from the presence of this disease among young stock, says a leaflet of the Irish Department of Agriculture.

SYMPTOMS.

The symptoms vary somewhat in the different species of animals; and since there are several forms of the affection, the appearance of the affected parts may vary even in animals of the same species. The most comman form is that met with on young cattle, the disease here showing itself in the form of rough grey "crusts" on the skin of the head and face, sometimes appearing also on other parts of the body and limbs. The "crust" frequently occurs as a patch surrounding one or both eyes. On horses ringworm generally appears as circular patches, at first covered with a grey crust, which after a time may be rubbed off, leaving a smooth bare patch. Other animals usually show much the same symptoms as the horse, but it is well to remember that cats are liable to a form of ringworm on the head which is so severe as to cause their death, and which, if communicated to a human being, may have very serious results.

SPREAD OF THE DISEASE.

The actual cause of ringworm is infection from an animal sufiering from the disease, but the disease is favored by dirt and neglect. It may be carried by brushes and currycombs, and may be contracted by animals rubbing against posts which have been contaminated by affected animals. Horses sometimes become infected by harness which has been worn by an animal suffering with ringworm.

NATURE AND CAUSE.

It must be remembered that this disease is simply an affection of the skin and hair or wool, the "crust" being composed of dried discharge from the skin mixed with dead hair or wool and the fungus which causes the discharge by irritating the skin while growing upon it. This fungus under a very powerful magnifying glass is found to grow in fine threads with small round objects known as spores, which may be called the seeds of the disease and which cause the disease if conveyed by any means to the skin of a healthy animal.

TREATMEET.

Treatment is not usually difficult if the stock owner makes a really determined effort to banish the disease. Owing to the extremely contagious nature of ringworm, it is necessary to take steps for its suppression immediately it is noticed, and this is all the more necessary since human beings when infected with it from animals take the disease in a particularly unpleasant form. The affected animals should be at once separated from healthy ones and confined in a place which can readily be disinfected to prevent further contagion later on. Since the fungus which causes the disease requires air, it is often found sufficient for a cure to smear the affected parts with something which excludes the air. Thus, a simple application of lard or oil frequently repeated is sometimes sufficient to effect a cure; but the owner of animals suffering with ringworm should adopt stronger measures. One of the most useful applications is made by thoroughly mixing half a pound of lard with two ounces of sulphur and four ounces of oil of tar, a small quantity of this mixture being smeared on the patches daily. Any good reliable sheep dip will be found efficacious as a cure, but must be applied daily for a few days, one application being seldom sufficient. A solution of four ounces of sulphite of copper (bluestone) in one part of water may be used if the number of patches is not too great, but care must be taken to prevent this or other irritating fluids from getting into the eyes, and also to avoid using poisonous substances extensively therefore, be kept clean; and ponds where animals are likely to lick themselves or one another. Mercurial ointment is sometimes used with great success, but it must be remembered that cattle are very liable to be poisoned by it. If used it should only be applied about the head and neck moderate quantities, the animal being kept by itself. Whatever dressing is chosen for use, a cure will be hastened if the patches are first thoroughly soaked with hot water in which washing soda has been dissolved in the strength of four ounces to one quart. This softens the crust and allows the remedy to penetrate.

PREVENTION.

The remarks with regard to isolation of affected animals must not be forgotten. All bedding used by them should be burned or otherwise destroyed. Woodwork and walls, etc., against which they may have rubbed should be washed with some strong disinfectant such as crude carbolic acid, one pint to five gallons of water. Currycombs, brushes and harness which may have been contaminated should be treated with this or some other disinfectant. Liberal feeding, with shelter from inclement weather, will assist the animal to resist the inroads of this and other diseases. The walls and fittings of cowhouses and stables should receive a coat of fresh limewash at least once a year, the floors receiving a soaking with a solution of sulphate of copper, five pounds to ten gallons of water. Freshly purchased animals, if exposed to infection at fairs or elsewhere, should, on arrival, be washed with a weak solution of sheep dip.

Ringworm attacks lean, half-starved animals more readily than those well cared for; and since it pays better to keep young animals thriving than to allow them to get into low condition, there is thus a double reason why stock-owners should devote special care to young cattle, particularly calves during their first winter. By doing so they will enhance the reputation and value of their stock, and secure for themselves greater profits. It is a very bad sign when the young stock reared on a farm have to be annually treated for ringworm.

At Lambing Time.

Be sure to to put each ewe in a little pen by herself when she lambs. She will get along better than when other ewes are jostling her and her lamb can not get lost from her. If you need to give her any attention, you can manage her better here than in a larger pen.—Farm, Stock and Home.

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This great tonic is for all live stock—to make cows give more milk—to keep the working horses in prime condition—to fatten pigs and keep the "winter" pigs strong and vigorous.

We guarantee that it will make your colts, calves, pigs, shoats and lambs grow rapidly, and keep them healthy and thriving all the time.

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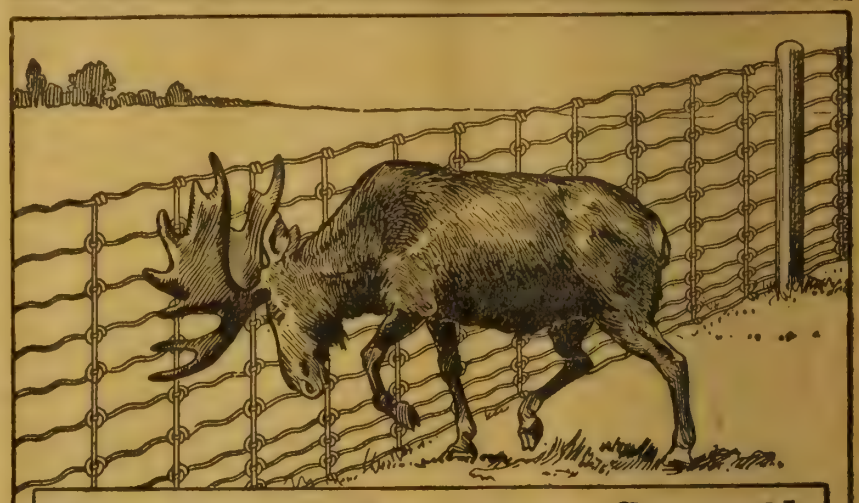

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• • • • 11

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You can bank on the strength of this fence Make the test for yourself and your neighbors. Then get the agency—it will pay you well. Address

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115 Acres, 800 Apple Trees

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I have a few sets of the famous "MAC" Firefighters and I am clearing them at Five Dollars per set of six. Here's a bargain to farmers—get a set while they last. Truly the farmer's friend.

Dominion Chemical Bureau,

Farmer's Dept., 426 Dirks Bldg., MONTREAL

Buying and Caring for a Dairy Bull.

Many a farmer who does not keep pure-bred cattle is considering the question of buying a pure-bred dairy bull, for the purpose of breeding up a better herd of cows. The proposition should be given much thought. These suggestions are based on many years' experience in dairy farming, and observation of the practice of some of the most successful breeders in the country. Dairy farmers want most in their cows capacity for large milk production, or the inherent power to convert food into the maximum quantity of milk or butter-fat. They also need vigor of constitution so far as compatible with symmetery and beauty of form.

The bull's dam should have a large yearly record for milk production. There should also be back of the bull a line of dams having large records. The law of breeding that the male transmits its characteristics to the female, and vice versa, should govern in the selection of animals, and the more high-producing mothers the pedigree of the bull shows, the more dependable is the bull to transmit the qualities of his mother to his progeny.

The mother of a bull we wish to buy, being more accessible, it is desirable to see her that we may judge as to the other qualities we want, namely, vigor and conformation. If we cannot see the cow the next best thing is to see her photograph. If we buy a young bull or calf, we have little else to guide us but the known qualities of its parents.

Next we come to the question as to whether we shall buy a young or mature bull. I put this question to a well-known breeder: "At what age can the farmer with small capital most economically buy a bull?" He answered: "I would say, from six months to one year old. If the calf has good dams back of him, you would expect to get mostly good cows." The breeder referred to stated that he would prefer a strong vigorous calf with a good canformation, but these would be only secondary considerations. He would feed and care for the calf about the same as the heifer calf that he wanted to develop into a good cow. He should have milk until about one year old, with linseed meal, oats and bran, both hay and grain in summer and roots and hay in winter. He should be kept in clean sanitary stalls and sheltered from storms and cold.

I have visited some of the largest breeding farms to learn how they care for and feed the service bull, and they recommend that the farmer's bull should be kept in a concrete paddock where he can exercise at will, but cannot possibly break out. A bull should be kept in the nose. It is a good plan to cut the door of the paddockor stall in halves. Then one can open the upper half and call the bull to him and fasten the staff to the ring in his nose. Have a chain attached to the sihe of the stall and snap it in the ring when working in the stall to clean it. Begin to handle the bull when young and accustom him to being handled, for as one breeder told me a man should "always be larger than the bull." He must never give him any chance to attack one. One must take the safe course with him; he is in no danger at any time. Bulls are more liable to attack one when turned out loose with cows. Generally the bull should never be allowed to run with the cows. A possible exception to this rule is in case of an old bull known to be safe to handle without a staff. If one wishes to maintain the full vitality of the bull, so he will be vigorous in old age, he must keep the bull nearly all the time in the paddock and have serving stalls in the barn.

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The ration for the herd bull should be about what one would feed a cow for largest milk production—a liberal, fairly well-balaned palatable succulent ration. The only difference in the ration for the bull is that he should have less of the concentrates as cottonseed meal and corn meal, and perhaps more of the succulent laxative foods like silage. He should be fed well, so as to keep him in full vigor and strength, but one must not overfeed him. The average farmer underfeeds the bull. One I know fed his bull only hay and grass and used him on a tread power lor churning, and the vitality of the animal was so low that he was unfit for service. Using the bull a short time on the tread-power every day may economically utilize surplus energy, and the bull will be the better for the exercise, but he should be fed well and not overtired.

The best solution of the problem of economically getting the use of the best bulls is for focal dairy men to organize a combined cow-testing and breeders' association, and jointly own and use the best bull obtainable.—W. H. Jenkins in Breeders' Gazette.

Profits in Early Maturity.

One of the curious things about body cells is, says the breeders' Gazette of Chicago, that they behave differently at different times. During the youth of animals they are as busy as nailers, and as ambitious as beavers; their business is growth and multiplication. They increase by division. The one splits into two, the two into four, the four into eight, and so on indefinitely. In order to multiply, the cells must attract and assimilate food. By grabbing the substance of digested foods that the blood hurries by, by appropriating food elements and then dividing themselves, these cells make growth.

The body cells are unlike and do not act the same way at different stages of animal growth and development. In the baby pig they are young, enthusiastic, hungry, eager, dividing and dividing again; that is, if they have food with which to build. As the age of the animal progresses, they become less active and are careless of increase. As age creeps on they cease to try to propogate at all; the blood may surge by them laden with food, but thet are indifferent; they increase no more. There is money in understanding this simple scientific truth. There is a lesson; it is "feed the babies." That is the stockman's opportunity. Take advantage of young and vigorous cell-growth.

THE HORSE.

Hints for Teamsmen

Those observant men who have had a wide experience in the feeding of horses, know how considerably these animals vary in their appetite and digestive capacity.

To such an extent do they differ, that the food requirements of one horse, to keep him in good condition, would be quite an inadequate ration to maintain another. In any case, it is obviously the wisest procedure to study their individual temperaments, habits, and constitution in order to be able to apportion to each animal the exact amount of grain and fodder necessary for its upkeep, taking into consideration at the same time age and the particular work it is expected to do. It is essential that teamsmen should take into account the ration suitable for a healthy horse when not working and one necessary to supply the requisite energy when working hard.

If the work is extra hard and continuous the ration should be full and concentrated; on the other hand, when at light work, or if standing in the stable, great reductions in the food are possible. This is a most important point indeed, and if we adopted this plan more generally the horses would be far healthier and there would be no "thick legs" on Monday morning. We cannot have a cut-and-dried system in feeding horses.

The skillful teamsman who is proud of his horses, and actively interested in their welfare, will try to put their food before them in a suitable and palatable form. It would be most useful, though, if he possessed a knowledge of the internal structure and anatmony of the horse; he would know then that the horse has a very small stomach in comparison with his bulk, and would see the importance of feeding horses on scientific principles.

The ordinary farm horse will eat of oats 15 to 20 lb. per day and about the same weight of hay. These are the best foods for horses, but farmers find it more economical to use a more mixed diet, such foods as beans, sharps, maize, bran, straw and roots being used. Some horsemen chaff all the hay, but my experience points to the fact that a portion of it is best given in its long state.

Also I believe in having the oats ground—in fact, I cannot but think that any method whereby we may help the animals to extract easily the greatest possible amount of nutriment from their food is worthy of adoption. Of course, it should be known that "new" oats and "new" hay are not so good for feeding as when they have been kept, say, twelve months. Those who use maize must needs be careful, and although I know it is an economical force-producing food, and very extensively used, yet if given in excessive quantities it makes the animals what I call "soft." They sweat profusely. Maize does not produce a hard condition like oats, therefore I would not give my horses more than 5 lb. per day each. Beans are a splendid food for extra heavy work, but sharps have a tendency to make the horses' legs puffy. Bran is not used in large quantities for horses, but a weekly bran mash is very beneficial. If straw is used it must be sparingly, and, further, it should be sweet and clean, or it will cause trouble. Cut the chaff ¾ in. long, and I would recommend the food to be mixed and given damp, this prevents the horse from separating the grain from the chaff. Feed on the little and often principle, and keep the manger sweet. Don't leave any food in from one meal to another, it becomes stale. Strive to feed regularly. Supply 3 to 5 lb. roots daily, either carros, potatoes, or swedes; also a lump of rock salt in the manger. This will aid the powers of digestion and assimilation, and is preventive of worms and stomach acidity. I notice that a horse will use ¾ oz. of rock salt daily. Water before feeding, if he is not sweating heavily; if so, take the chill off the water.

Personally, I strongly depreciate the use of drugs in the stable, unless it is an aperient on going out to grass in the summer, and when being put on to dry food again. There is nothing to beat thorough grooming for giving the horses a sleek coat, the dandy brush and straw wisp being the best tools to use when grasped in willing hands.

The stable should be well constructed and properly ventilated. Many that I have been in are, unfortunately, neither. In conclusion, possibly I may have missed a few points, but if teamsmen would follow the direction given above I am confident they would obtain excellent results.—Horseman.

Don't be surprised if you have an attack of rheumatism this spring. Just rub the affected parts freely with Chamberlain's Liniment and it will soon disappear. Sold by all dealers.

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Changing the Coat in Spring

Horses which have been left unclipped during the winter are usually the first to commence changing their coat in the spring; that is as regards those which are stabled. Horses that lie out generally cast the winter coat very late, because the fact of their being exposed in the open retards the change of coat materially. The warmth of a stable and warm rugging, on the other hand, cause the coat to be shifted sooner and more quickly. Frequently unclipped horses which are well fed and warmly stabled will commence to lose their old coat towards the end of February, but the process is of course very gradual at first so early in the season. The fact of a horse having been clipped for the last time very late in the winter will always cause it to be late in growing its spring coat, and in extreme cases under these circumstances a horse may remain broken-coated (that is, with some portion of the old coat still on and the spring coat only partially through, so that the animal has a patchy appearance) until June. And when it finally is completed, the summer coat will not look particularly well, but will be more or less coarse, and not as glossy as it might be. For these reasons it is always a bad policy to have horses clipped again much after the turn of the year. The most satiny coat certainly is produced when a horse is left unclipped in winter time. Unless there is some special and good reason for desiring to have the winter coat off at the earliest possible moment, it is not advisable to seek to hasten the coat-changing process in the spring unduly by artificial means, for that will not tend to improve the appearance of the new coat, but the reverse. The best way is to allow nature to take her own course in the matter. The old coat will come away of its own accord in due course, the hairs dropping out as soon as they are dead. To force them off before they are quite dead means exposing the growing spring coat underneath prematurely. As it is always a somewhat trying time for horses when they are shifting their coat in spring, and they are apt to lose condition somewhat in consequence, it is advisable to give them a little extra corn then. A few handfuls of split peas or pea meal may also advantageously be added to the daily food ration at this period in the case of horses doing steady and fairly hard work, peas being an eminently strengthening food.

Digestive Trouble in Young Foals

An important detail in the management of young foals is to watch the action of the bowels. Ordinarily this will be regular enough, but there are not infrequently cases in which scouring sets in, while constipation also sometimes occurs. A useful and perfectly safe remedy to administer in either case is castor oil, a dose of which will generally put matters right when the trouble is not too serious. Castor oil has a very gentle action, and is free from any irritating or upsetting tendency, this being well suited to the delicate organization of the young foal. The first milk secreted by the mare after foaling is of a special nature, and contains the so-called colostrum, which exerts a certain purging effect on the digestive tract of the newly-born foal, and this normally serves to bring about the evacuation of the faecal matter, usually more or less hardened, which has accumulated in the foal's bowels before its birth. It may, however, happen that the colostral milk is not sufficiently potent in its effect to ensure this, so that the bowels remain stopped up, which may have a very serious result, unless the constipation is successfully relieved in good time. One should therefore always be careful to note whether the newly-born foal duly evacuates itself, and should it fail to do so some castor oil must be given, while it may further be advisable to put some glycerine into the bowel, in order to soften the hardened faeces which may be stopping up the passage. Scouring or diarrhoea in young foals is most usually due to indigestion or some upset of the stomach, brought on in various ways. Oftentimes it arises in consequence of the mare's milk being unfavorably affected by unsuitable food or a sudden change in her diet, while not infrequently it is brought on by allowing a foal to suck the mare when she is in a heated state after having been at work. Keeping a mare which is used for work away too long from her foal, so that it gets inordinately hungry, and so is caused to overdrink itself when finally given access to its dam, also often starts the trouble. Another potent cause of scouring in foals during the first week consists in their catching a chill through getting wet or being exposed to cold easterly winds.

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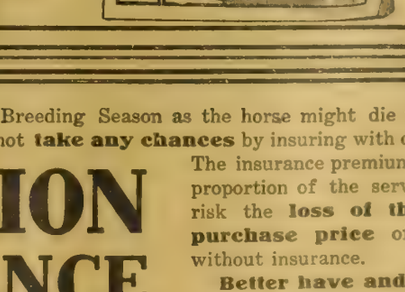

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POULTRY.

Advantages and Disadvantages of Free Range

Free range has its merits and its demerits. To quickly grow young stock there is nothing better; for practical poultry farming—raising eggs and table poultry—it is not advisable.

The young, growing chick, needs a variety of food and it requires exercise. When it can have a combination of both the food is properly assimilated, and the seeds, the bugs, the worms, and the tender grass found on the range grow bone, muscle and feather. The little fellows are on a romp the live long day, and at night their crops are packed hard with the variety they have gathered on their travels; the violent exercise quickly puts them to sleep, and nature gradually digests the food.

The consequence is they grow like weeds. Late-hatched chicks given free range soon forge ahead of their older brothers that from the start have been kept in small, barren enclosures.

Some years ago the writer visited the famous Oakland Farm, Taunton, Massachusettes, which at that time was the home for prize-winning Light Brahmas and Buff Cochins. To our surprise we learned that nearly all the birds on this farm were hatched and reared during summer. We saw July-hatched Brahmas and even September-hatched Cochins, and the latter as large as the former. We were then informed by the manager that all the Madison Square Garden winners were hatched in July. To the writer it was a revelation. Who ever before heard of hatching Asiatics during the hot months? Yet here we had the example. What was their secret? Shade and free range.

But when it comes to hens, we find that for successful egg farming, or market poultry, limited areas are more profitable. If the hens are provided with proper food and care, they will give larger egg yields when confined to runs than if running at large and, besides, there will be no danger of hidden nests and loss of eggs.

Experiments made with table poultry also strongly favor more or less confinement. If fed on meat producing foods, the carcasses of yarded poultry are not only more attractive in appearance, but the flavor is superior.

In free range poultry we find toughened sinews, meat more or less tough, and lacking in juiciness.

It is for this reason that epicures prefer poultry from the yards of expert poultrymen rather than "country chickens," or "farm-raised poultry."

Hens need bulky food. Clover hay or alfalfa hay cut in half inch lengths help to make an ideal ration. If cooked and mixed with bran it makes an excellent breakfast. Clover and alfalfa not only promote digestion, but also largely assist in supplying the elements necessary for the albumen.

A successful poultryman says that he keeps the combs of his poultry brightened by putting corn in a bucket and dampening with water, and then stirring in about a quart of powdered air-slaked lime. He feeds this twice a week as an evening meal.

Fattening poultry on food mixed or moistened with skim milk instead of water, produces whiter flesh and superior flavor. Skim alone is a highly nitrogenous food; the carbo-hydrates have been removed in the butter, so that it is not a complete diet for any animal. The fat of the cream, however, can be cheaply substituted with corn or cornmeal.

A fowl should always be fattened as quickly as possible. Ten days is long enough, but it should be confined either in a coop or a number in a small yard. They must have a continual supply of fresh water, and should be fed four times a day, the first meal being early, and the last one late. A recommended mixture is three parts cornmeal, one part ground oats, one part bran, one part crude tallow, the entire lot scalded and fed for the first three meals, with all the corn and wheat that can be eaten up clean at night, weigh the articles given.

The poultry man who follows the daily cleaning method, is generally the one who looks after the other essentials, considering them equally as important. Cleanliness should be more rigidly enforced in winter than in summer, for the reason that on account of much bad weather, and longer nights, fowls are compelled to spend more time in the houses.

It is a sad commentary on a man's humane ideas to compel a flock of poultry to roost for a week in an odor-laden atmosphere of droppings accumulated during the period. You may strew ashes, road dust, land plaster or what not over the bed of filth each morning, but the odor will grow stronber and stronger. When the weekly cleaning takes place it is not necessary to go inside the house to know what is going on; the fact is smellable some distance off. This odor finds its way into every crack and crevice in the house.

The color of the skin of the fowl can be changed by feed. Sometimes the color of the skin is important, but half of the fowls that are sent to market have anything but a yellow skin. In breeding for market it is important to have a breed that grows rapidly and fleshens up young; the skin should be yellow, and if the feathers are all white both the chicks and old fowls will look much better when dressed than those with colored feathers.

The Houdan is the only French breed that ever gained a stronghold in America. The French people are noted epicures, and the French breeds of poultry are among the very best for table purposes. If the Houdan was better known it would become a still greater favorite, for it possesses the most desirable qualities for a table fowl. The breast meat is plentiful, and of a fine texture, rich and juicy. There is no breed of equal weight that will yield so much meat as the Houdans. They dress with less offal than any other breed.

Broiler raising calls for pluck, grit and perseverance. The parent stock must be strong and vigorous. Care, feed, fresh air and exercise are the essentials for growing a chick to broiler size. The chick must grow from the first day and continue to do so until the marketable weight is reached. Some chickens grow faster than others, and in such cases the weak must be separated from the strong, so that the chicks of only the same development are kept together. Cleanliness is important, especially in the hovers, and sufficient light litter must be kept in the brooder runs in order to induce exercise in scratching for grain.

Post Mortem examinations have shown that the death of chicks, during artificial inrubation and rearing can be laid to four causes; First, to heredity or to environment during the period of incubation. Successive alternate periods of heat and cold during incubation are responsible for a very large proportion of abnormalities. Second, to overcrowding in the brooders, resulting in death by suffocation, trampling, etc. Third, to imperfect sanitation, lack of ventilation, sunlight, etc.; tuberculosis flourishes in the dark, poorly ventila-

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COULD NOT STRAIGHTEN UP.

Many people fail to understand the significance of a lame, weak, sore or aching back.

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Heed the warning, cure the back and dispose of any chances of serious kidney trouble following.

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THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address me personally;

O. G. MORRIS, Manager 1900 Washer Co'p'y.

357 Yonge Street, Toronto, Can.

ted brooders. Fourth, to improper feeding. For the continued maintainence of health there must be a definite proportion between the amount of carbohydrates, fats and the nitrogen—containing proteins. The Rhode Island Experiment Station says that a ration wholly vegetable is almost certain to contain a too-low percentage of nitrogen, while a ration exclusively animal is very sure to be deficient in carbohydrates.

I. K. Delch says the fancier and the poulterer are getting closer together. The latter now raises thoroughbreds, and sells his best pullets to the fancier. In this way both wings of the poultry industry are able to flap together. But even if all the stock is to be for market purposes, it is more profitable to keep pure bred stock than to have a lot of mongrels with all sorts of shapes, sizes, conditions, etc. There must be uniformity of stock as much as uniformity of methods.

Venetian red is an article prescribed as both a preventative of and a remedy for roup. But there seems to be a misunderstanding of the nature of Venetian red, through confounding it with oxide of iron red. Venetian red was called light red. This is yellow ochre calcined, which makes a fine light red. Henry Hale says numerous other reds are now mined in numberless places, and are often sold for Venetian red, and often used, even by painters, who do not know the difference. Venetian red proper contains a little if any, iron probably a very small proportion, while the other mentioned reds are more or less composed of oxide or (more correctly) peroxide of iron; some contain over 70 per cent. of iron, and are known to the trade as oxide of iron paints. This is the article that has the tonic property; is what should be given the fowls.

There is something in the shape of an egg that tells the story. If it is ridgy, long and peaked, unusually large, or if it is "out of shape," it will not tell you whether it will hatch a male or a female, but it tells a truthful story of the condition of that hen. Such eggs come only from hens that have diseased ovaries, generally caused by being in a too-fat condition.

Better sell honest eggs—eggs that you can guarantee fresh. Remember that after three days of age an egg is no longer strictly fresh. It is necessary to date them the day they are laid to be sure of the eggs.

No man can properly attend to more than five hindred hens. It is not only a question of feeding and watering, but it is necessary to closely watch their condition, to keep their houses in repair and make them comfortable, and a long list of little details that dare not be neglected.

Pure Bred Poultry for Profit

Editor Maritime Farmer:—

By reading the Maritime Farmer I get a great deal of good advice and the practical experience of others on poultry keeping, particularly on hens.

I wish to say a few words in favor of the good old hen. Three years ago this spring I settled down on a new farm through which the Pugwash branch of the Oxford and Pictou Short Line crosses. There is a station point at one side of the farm at a distance of only 80 yards from the house in which I live. As the farm was new, with only a small area of cleared land I was puzzled to know how to begin or what to keep that would pay the best for the capital invested. I decided to give hens a trial and as I am a firm believer in pure bred stock of all kinds, each breeder to be governed by his own

(Continued on page 556)

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Into the pockets of the users of The Peerless Way last year went five million dollars made from the poultry these people raised. Yet chickens are scarce in Canada and eggs are the scarcest of all food commodities. That is positively the fact.

To-day there are not enough Canadian CHICKENS or EGGS to go around. Thousands of chickens and hundreds of thousands of dozens of eggs are being shipped into Canada from the United States and other countries to help meet the demand.

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Now is the time to take advantage of this situation and make money out of it yourself. You can raise and sell 600 chickens this next year, and you will find a quick and sure market for every one of them. You can get the top notch price for all the hundreds of dozens of eggs that your poultry lay.

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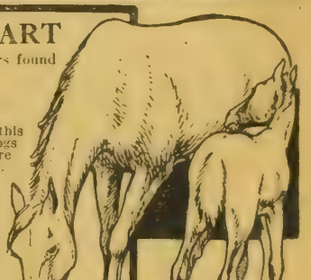

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David Copperfield.

By Charles Dickens.

(Continued from March 25th issue)

"Peggotty dear, you are not going to be married?"

"Me, ma'am?" returned Peggotty, staring. "Lord bless you, no!"

"Not just yet?" said my mother, tenderly.

"Never!" cried Peggotty.

My mother took her hand, and said:

"Don't leave me, Peggotty. Stay with me. It will not be for long, perhaps. What should I ever do without you!"

"Me leave you, my precious!" cried Peggotty. "Not for all the world and his wife. Why, what's put that into your silly little head? For Peggotty had been used of old to talk to my mother sometimes, like a child.

But my mother made no answer, except to thank her, and Peggotty went running on in her own fashion.

"Me leave you? I think I see myself. Peggotty go away from you? I should like to catch her atit! Eo, no, no," said Peggotty, shaking her head, and folding her arms; "not she, my dear. It isn't that there ain't some Cats that would be well enough pleased if she did, but they shan't be pleased. They shall be aggravated. I'll stay with you till I am a cross, cranky old woman. And when I'm too deaf, and too lame, and too blind, and too mumbly for want of teeth, to be of any use at all, even to be found fault with, then I shall go to my Davy and ask him to take me in."

"And, Peggotty," says I, "I shall be glad to see you, and I'll make you as welcome as a queen."

"Bless your dear heart!" cried Peggotty. "I know you will. And she kissed me beforehand, in grateful acknowledgement of my hospitality. After that, she covered her head up with her apron again, and had another laugh about Mr. Barkis. After that, she took the baby out of its little cradle, and nursed it. After that, she cleared the dinner-table; after that, came in with another cap on, and her work-box, and the yard-measure, and the bit of wax candle, all just the same as ever.

We sat around the fire, and talked delightfully. I told them what a hard master Mr. Creakle was, and they pitied me very much. I told them what a fine fellow Steerforth was, and what a patron of mine, and Peggotty said she would walk a score of miles to see him. I took the little baby in my arms when it was awake, and nursed it lovingly. When it was asleep again, I crept close to my mother's side, according to my old custom, broken now a long time, and sat with my arms embracing her waist, and my little red cheek on her shoulder, and once more felt her beautiful hair drooping over me—like an angel's wing as I used to think, I recollect— and was very happy indeed.

While I sat thus, looking at the fire, and seeing pictures in the red-hot coals, I almost believed that I had never been away; that Mr. and Miss Murdstone were such pictures, and would vanish when the fire got low; and that there was nothing real in all that I remembered, save my mother, Peggotty and I.

Peggotty darned away at a stocking as long as she could see, and then sat with it drawn on her left hand like a glove, and her needle in her right, ready to take another stitch whenever there was a blaze. I cannot conceive whose stockings they can have been that Peggotty was always darning, or where such an unfailing supply of stockings in want of darning can have come from. From my earliest infancy she seems to have been always employed in that class of needlework, and never by any chance in any other.

"I wonder," said Peggotty, who was sometimes siezed with a fit of wondering on some most unexpected topic, "what's become of Davy's great-aunt?"

"Lor, Peggotty!" observed my mother, rousing herself from a reverie. "what nonsense you talk!"

"Well, but I really do wonder, ma-am," said Peggotty.

"What can have put such a person in your head?" inquired my mother. "Is there nobody else in the world to come there?"

"I don't know how it is," said Peggotty, "unless it's on account of being stupid but my head never can pick and choose its people. They come and they go, and they don't come and they don't go, just as they like. I wonder what's become of her?"

"How absurd you are, Peggotty," returned my mother. "One would suppose you wanted a second visit from her."

"Lord forbid!" cried Peggotty.

"Well, then, don't talk about such uncomfortable things, there's a good soul," said my mother. "Miss Betsy is shut up in her cottage by the sea, no doubt, and will remain there. At all events, she is not likely ever to trouble us again.

"No!-' mused Peggotty. "No, that ain't likely at all—I wonder, if she was to die, whether she'd leave Davy anything?"

"Good gracious me, Peggotty," returned my mother, "what a nonsensical woman you are! when you know that she took offence at the dear boy's ever being born at all!"

"I suppose she wouldn.t be inclined to forgive him now," hinted Peggotty.

"Why should she be inclined to forgive him now?" said my mother, rather sharply.

"Now that he's got a brother, I mean," said Peggotty.

My mother immediately began to cry, and wondered how Peggotty dared to say such a thing.

"As if this poor little innocent in its cradle had ever done any harm to you or anybody else, you jealous thing!" said she. "You had much better go and marry Mr. Barkis, the carrier. Why don't you?"

"I should make Miss Murdstone happy, if I was to," said Peggotty.

"What a bad disposition you have, Peggotty!" returned my mother. "You are as jealous of Miss Murdstone as it is possible for a ridiculous person to be. You want to keep the things yourself, and give out all the things, I suppose? I shouldn't be surprised if you did. When you know that she only does it out of kindness and the best intentions! You know she does, Peggotty—you know it well."

Peggotty muttered something to the effect of "Bother the best intentions!" and, something else to the effect that there was a little too much of the best intentions going on.

"I know what you mean, you cross thing," said my mother. "I understand you, Peggotty, perfectly. You know I do, and I wonder you don't color up like fire. But one point at a time. Miss Murdstone is the point now, Peggotty, and you shan't escape from it. Haven't you heard her say, over and over again, that she thinks I am too thoughtless and too—a—a"

"Pretty," suggested Peggotty.

"Well," returned my mother, half laughing, "and if she is so silly as to say so, can I be blamed forit?"

"Noone says you can," said Peggotty.

"No, I should hope not, indeed!" returned my mother. "Haven't you heard her say, over and over again, that on this account she wishes to spare me a great deal of trouble, which she thinks I am not suited for, and which I really don't know myself that I am suited for: and isn't she up early and late and going to and fro continually—and doesn't she do all sorts of things, and grope into all sorts of places, coal-holes, and pantries and I don't know where, that can't be very agreeable—and do you mean to insinuate that there is not a sort of devotion in that?"

"I don't insinuate at all," said Peggotty.

"You do, Peggotty," returned my mother. "You never do anything else, except your work. You are always insinuating. You revel in it. And when you talk of Mr. Murdstone's good intentions—"

"I never talked of 'em," said Peggotty.

"No, Peggotty," returned my mother, "but you insinuated. That's what I told you just now. That's the worst of you. You will insinuate. I said, at the moment, that I understood you, and you see I did. When you talk of Mr. Murdstone's good intentions, and pretend to slight them (for I don't believe you really do, in your heart, Peggotty), you must be as well convinced as I am how good they are, and how they actuate him in everything. If he seems to be at all stern with a certain person, Peggotty—you understand, and so I am sure does Davy, that I am not alluding to anybody present—it is solely because he is satisfied that it is for a certain person's benefit. He naturally loves a certain person, on my account; and acts solely for a certain person's good. He is better able to judge of it than I am;for I very well know that I am a weak, light, girlish creature, and that he is a firm, grave, serious man. And he takes, said my mother, with the tears which were engendered in her affectionate nature, stealing down her face, "he takes great pains with me: and I ought to be very thankful to him, and very submissive to him even in my thoughts; and when I am not, Peggotty, I worry and condemn myself, and feel doubtful in my own heart, and don't know what to do."

Peggotty sat with her chin on the foot of the stocking, looking silently at the fire.

"There, Peggotty," said my mother, changing her tone, "don't let us fall out with one another, for I couldn't bear it. You are my true friend, I know, if I have any in the world. When I call you a ridiculous creature, or a vexatious thing, or anything of that sort, Peggotty, I only mean that you are my true friend, and always have been, ever since the night when Mr. Copperfield brought me home here, and you came out to the gate to meet me."

Peggotty was not slow to respond, and ratify the treaty of friendship by giving me one of her best hugs. I think I had some glimpses of the real character of this conversation at the time; but I am sure, now, that the good creature originated it, and took her part in it, merely that my mother might comfort herself with the little contradictory summary in which she had indulged. The design was efficacious; for I remember that my mother seemed more at ease during the rest of the evening, and that Peggotty observed her less.

When we had had our tea, and the ashes were thrown up, and the candles snuffed. I read Peggotty a chapter out of the Crocodile Book, in remembrance of old times—she took it out

A Windsor Lady's Appeal

To all women' I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Uterine and Ovarian Tumors or growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write teday. Address Mrs. M. Summers, Box H. 309 Windsor, Ont.

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of her pocket: I don't know whether she had kept it there ever since—and then we talked about Salem House, which brought me round again to Steerforth, who was my great subject. We were very happy; and that evening, as the last of the race, and destined evermore to close that volume of my life, will never pass out of my memory.

It was almost ten o'clock before we heard the sound of wheels. We all got up then: and my mother said hurriedly that, as it was late, and Mr. and Miss Murdstone approved of early hours for young people, perhaps I had better go to bed. I kissed her and went up stairs with my candle directly, before they came in. It appeared to my childish fancy, as I ascended to the bedroom where I had been imprisoned, that they brought a cold blast of air into the house which blew away the old familiar feeling like a feather.

I felt uncomfortable about going down to breakfast in the morning, as I had never set eyes on Mr. Murdstone since the day when I had committed my memorable offence. However, as it must be done, I went down, after two or three false starts half way, and as many runs back on tiptoe to my own room, and presented myself in the parlor.

He was standing before the fire with his back to it, while Miss Murdstone made the tea. He looked at me steadily as I entered, but made no sign of recognition whatever.

I went up to him, after a moment of confusion, and said: "I beg your pardon, sir. I am very sorry for what I did, and I hope you will forgive me."

"I am glad to hear you are sorry, David," he replied.

The hand he gave me was the hand I had bitten. I could not restrain my eye from resting for an instant on a red spot upon it; but it was not so red as I turned, when I met that sinister expression on his face.

"How do you do, ma'am?" I said to Miss Murdstone.

"Ah, dear me!" sighed Miss Murdstone, giving me the tea-caddy scoop instead of her fingers. "How long are the holidays?"

"A month, ma'am."

"Counting from when?"

"From to-day, ma'am."

"Oh!" said Miss Murdstone. "Then here's one day off."

She kept a calendar of the holidays in this way, and every morning checked a day off in exactly the same manner. She did it gloomily until she came to ten, but when she got into two figures she became more hopeful, and, as the time advanced, even jocular.

It was on this very first day that I had the misfortune to throw her, though she was not subject to such weakness in general, into a state of violent consternation. I came into the room where she and my mother were sitting; and the baby (who was only a few weeks old) being on my mother's lap, I took it very carefully in my arms. Suddenly Miss Murdstone gave such a scream that I all but dropped it.

"My dear Jane!" cried my mother.

"Good heavens, Clara, do you see?" exclaimed Miss Murdstone.

"See what, my dear Jane?" said my mother; "where?"

"He's got it!" cried Miss Murdstone. "The boy has got the baby!"

She was limp with horror; but stiffened herself to make a dart at me, and take it out of my arms. Then, she turned faint; and was so very ill, that they were obliged to give her cherry-brandy. I was solemnly interdicted by her, on her recovery, from troubling my brother any more on any pretense whatever: and my poor mother, who, I could see, wished otherwise, meekly confirmed the inter-

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Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

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Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

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The Maritime Farmer

SUSSEX, N. B.

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dict, by saying: "No doubt you are right, my dear Jane."

On another occasion, when we three were together, this same dear baby—it was truly dear to me, for my mother's sake—was the innocent occasion of Miss Murdstone's going into a passion. My mother, who had been looking at its eyes as it lay upon her lap, said:

"Davy! come here!" and looked at mine.

I saw Miss Murdstone lay her beads down.

"I declare," said my mother, gently, "they are exactly alike. I suppose they are mine. I think they are the color of mine. But they are wonderfully alike."

"What are you talking about, Clara?" said Miss Murdstone.

"My dear Jane," faltered my mother, a little abashed by the harsh tone of this inquiry, "I find that the baby's eyes and Davy's are exactly alike."

"Clara!" said Miss Murdstone, rising angrily, "you are a positive fool, sometimes."

"My dear Jane," remonstrated my mother.

"A positive fool," said Miss Murdstone. "Who else could compare my brother's baby with your boy? They are not at all alike. They are exactly unlike. They are utterly dissimiliar in all respects. I hope they will ever remain so. I will not sit here, and hear such comparisons made." With that she stalked out, and made the door bang after her.

In short, I was not a favorite with Miss Murdstone. In short, I was not a favorite with anybody, not even with myself; for those who did like me could not show it, and those who did not showed it so plainly that I had a sensitive consciousness of always appearing constrained, boorish, and dull.

I felt that I made them as uncomfortable as they made me. If I came into the room where they were, and they were talking together and my mother seemed cheerful, an anxious cloud would steal over her face from the moment of my entrance. If Mr. Murdstone were in his best humor, I checked him. If Miss Murdstone were in her worst, I intensified it. I had preception enough to know that my mother was the victim always; that she was afraid to speak to me, or be kind to me, lest she should give them some offence by her manner of doing so, and receive a lecture afterwards; that she was not only ceaselessly afraid of her own offending, but of my offending, and uneasily watched their looks if I only moved. Therefore, I resolved to keep myself as much out of their way as I could; and many a wintry hour did I hear the church clock strike, when I was sitting in my cheerless bedroom, wrapped in my little great-coat, poring over a book.

In the evening, sometimes, I went and sat with Peggotty in the kitchen. There I was comfortable, and not afraid of being myself. But neither of these resources was approved of in the parlor. The tormenting humor which was dominant there stopped them both. I was still held to be necessary to my mother's training, and, as one of her trials, could not be suffered to absent myself.

"David," said Mr. Murdstone, one day after dinner when I was going to leave the room as usual; "I am sorry

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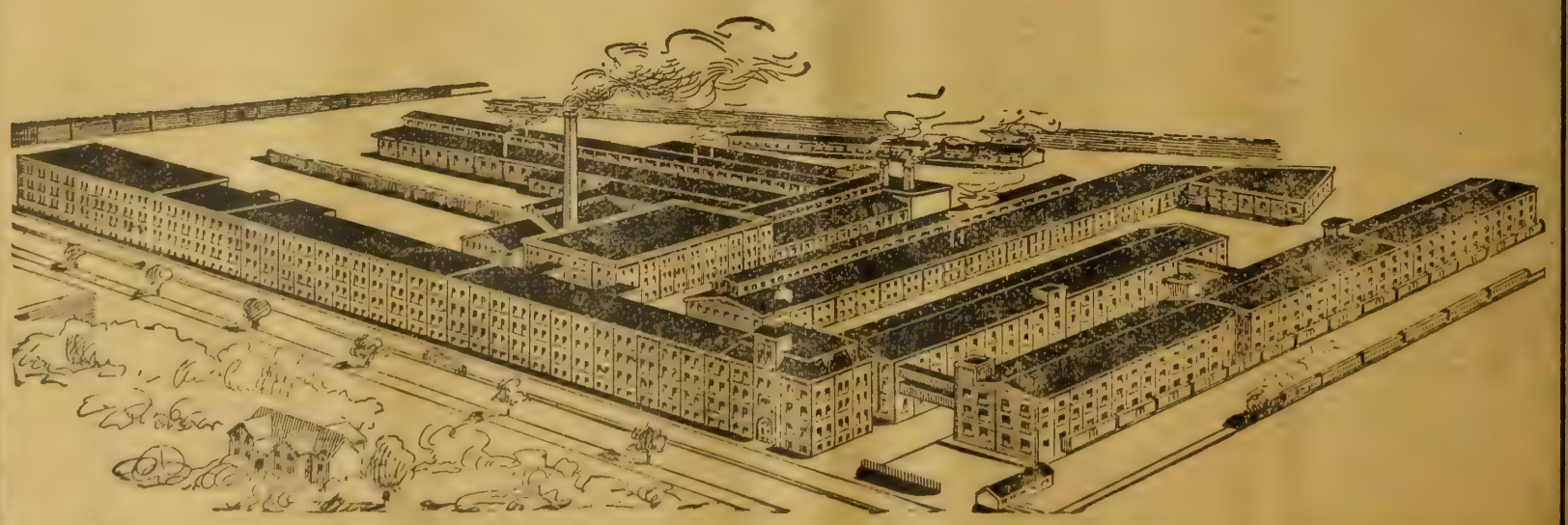

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to observe that you are of a sullen disposition."

"As sulky as a bear!" said Miss Murdstone.

I stood still, and hung my head.

(Continued in next issue)

Training of Children

Never has there been a time when child study and child nature have been so universal. Many of the ablest thinkers of the world are engaged in studying the mind of the child. Many great authors have written columns on the subject. At no time in the history of the centuries has this theme come before the reading public as at present. It is beginning to be considered necessary that teachers should know something of the science of the child's mind. It is to be hoped that in the not distant future it will be considered essential that parents should have a knowledge of child physiology.

Providence in his supreme wisdom has ordained that humanity should be placed in individual homes. So the young man "a wooing goes" often often with as little thought as the birds in spring. It is immaterial whether he is a royal prince who wishes to induce a foreign princess to preside over his palace, or, an Indian brave who is seeking his dusky bride to share his smoky wigwam. The feeling is the same the young man is simply following the dictates of his nature.

At this time in the youthful suitor's career he is willing to sacrifice almost anything for his lady love. Instances have been known when he has even thrown away his beloved tobacco at the request of the young lady. So after a courtship long or short, as the case may be, they twain become one and, are pronounced man and wife. And a new home is established. The dearest spot on earth. All the world shut out and love within.

In due time, after many unnecessary forebodings and misgivings on the part of the young wife the child is born. The most precious gift God ever gave to gladden a home. An immortal soul to train for eternity. Although the young couple were happy before, now, their happiness seems complete. What an influence it has on the father, he who had been careless, thoughtless and perhaps selfish, now with added dignity becomes anxious to do just and right for the sake of his child who will be dependant on him. But what shall we say of the young mother who has gladly gone down to the "Valley of the shadow of death" for her child and now rejoices when the little atom of humanity is placed in her arms, and as the mother love awakensin her breast how she dreams of her child's future and promises in her heart of hearts to make it's life beautiful, as far as in her power lies.

To enable a mother to be successful in her great work of training her child she should have certain inherent qualities. She should be unselfish, cheerful, self-controlled with high ideals, accustomed to look daily to a higher Power for strength and inspiration, also as thorough an education as possible and a good disciplinarian.

The young mother is much better equipped for her work in our times than in the "good old days which were not always good" when it was considered correct for the young girl to marry in her early teens. Owing to the extended time given to education the marriageable age is later. It is reasonable to suppose a person could be more efficient in beginning the work of training a child, other things equal, at from twenty-five to thirty-five years old, than at fifteen or twenty. Although much could be

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Proving by Actual Experiment

This experiment will always interest the children, and will provoke a good deal of thinking. The explanation, of course, is, that the lighted piece of paper which is inserted into the inverted glass drives out most of the air, so that when the mouth of the glass is quickly put down into the water there is very little air, and, consequently, very little pressure above the water within the glass. Hence, the weight or pressure of the air on the water outside the glass drives the water up into the glass to occupy the space from whence the air was driven by the burning paper.

A practical demonstration of this kind is always more convincing than any mere statement. This is particularly true of medical remedies.

The effect of the anti-toxin treatment for diphtheria is noticeable within a few hours, so that everyone must believe in its virtue. In a similar way, the treatment known as ORANGE LILY gives a practical proof of the progress it is making in curing women's disorders, and that, too, within a few days after commencing its use.

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said in favor of early marriages on this point, marriage between more mature persons is preferable.

There was a rich and powerful king who flourished many centuries ago, but whose writings are preserved, who said many wise and witty things but none truer than this- "Train up a child in the way he should go, and, when he is old he will not depart from it." This is logical too, and, has been well illustrated by supposing a person passes over a grassy field, in the same place a few times, it has no perceptible effect, but, let him pass over a great number of times, the path becomes brown and hard. So the impressions made on the plastic brain of the child by repetition become fixed, and, are what we call habit. So the necessity can be easily seen of forming good habits.

It is true that every child is born with inherited tendencies, but, proper training encourages the good and suppresses the evil.

The train of the child should begin at a very early age. Of course, the first days of the infant's life require care rather than training. Persons of moderate circumstanres should not consider it extravagant to employ a trained nurse at childbirth. She can not only safeguard the mother's future health, but can teach her in her inexperience the best methods of caring for her child. For instance, many a person has gone out in the world as born blind when their blindness was caused, simply, by improper treatment of the eyes in infancy.

How quickly the little one who does not seem to know, at first, anything but to get its nourishment begins to use its five senses and soon can think and act for itself. When the child begins to take notice and wishes to have its own sweet way, the mother realizes her great work of training must begin. However, care should be taken not to be too anxious as the fond mother is tempted to be, wishing her child to be so perfect. When it is taken into consideration how much knowledge a child absorbs in the first years of its life, among other things, learning a language, it will be seen the danger of overtraining it.

The first great thing to teach the child is obedience to its parents. This is the foundation that must be insisted upon. The child's will must be brought into subjection to the will of the parent. Not the old-fashioned idea of breaking a child's will by any means, for a strong will properly trained is one of the best traits that a person can possess. By constant care and watchfulness the child can be taught to be obedient. This point once gained, the rest becomes comparatively easy. Obedience in the child might be compared to the helm of the ship, with which the captain can control the largest vessel afloat. But, if the helm is defective, he is at the mercy of the waves.

The next great point in the training of the child is truthfulness. Children have naturally much imagination. As for example, a little girl with some dolls dishes and a few pieces of cake can have a large and delightful tea party with no one present but herself. Imagination should not be condemned but a parent with a particle of discrimination can tell when the real falsehood appears, which should never be condoned, under any circumstances.

It is a most difficult question how to enforce the rules necessary for the proper training of the child, but the mother should not be discouraged if occasional lapses occur. It requires precept upon precept here, a suggestion there, a helpful hint with the greatest patience and love. Remember Rome was not built in one day

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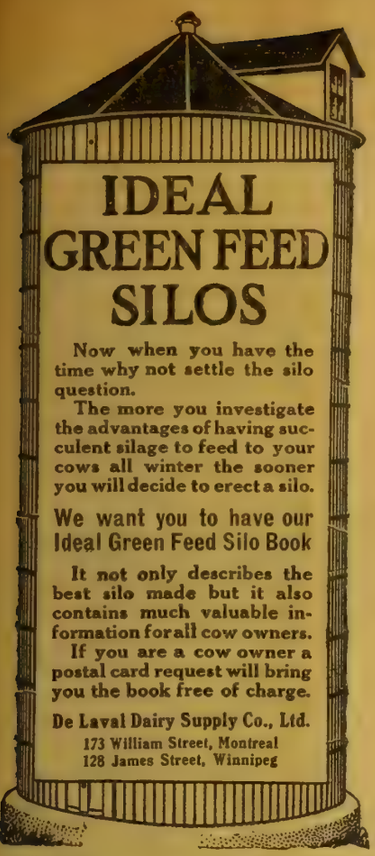

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nor was a child's character formed without some trials. Heaven is not reached with one bound.

It is a question whether children can be trained without corporal punishment. Happily it is not so common as formerly. The best schools have practically abolished it. Of course, when laws are broken punishment must follow for the good of the culprit.

But surely there are other ways of dealing with the child more effectively. Solitary confinement, never in a dark room, for not too loog a time gives excellent opportunity for reflection. A child should never be threatened with punishment which is not enforced. Scolding should not be indulged in. A child should be constantly encouraged to overcome his faults. Tell a child he is a "bad boy" and he will soon try to become one. Teach the reason for doing or not doing a thing and it is surprising how even a young child will grasp the thought and do as required.

In no place is "union strength" more than in the home. Parents should stand united. Although the mother has the most responsibility in training the child the first years of its life she should be ably supported by the father and she in turn should teach the children to obey and respect him.

The atmosphere of the home influences the child unconsciously. Kindness, cheerfulness, praise, and encouragement all help. The home that is kept in order, cleaniness and neatness has an uplifting tendency on the receptive mind of the child. Industry is one of the virtues. The child should be taught to be helpful. To be kept busy is a demand of the child's nature.

With happy days, dark days, and days that are neither happy nor dark the time glides swiftly away and our little hero starts for school. The government has wisely placed the legal school age at six years when it was formerly five. It will make little difference with a child's later education if he does not go until seven. It will not be of much benefit on this auspicious morning as the little fellow marches off so proudly with his book and slate to say, "now son, be sure and be a good boy and mind the teacher." The mother knows in her heart she has done her duty, and, has been successful, and is not afraid to trust her boy, so he goes forth the joy and pride of the teacher, not necessarily the brightest pupil but the one she will have the least trouble with simply because he has been properly trained at home.

When the child first goes to school he generally enjoys it. It is only when other interests come in at a later age that he wishes to remain away. But occasionally a timid and sensitive child dreads the school and shows a determination to stay at home. Here the mother should be very firm and should not be unduly alarmed if sudden severe illness attacks her young hopeful at twenty-five minutes or so after eight in the morning. Usually if a child is kept steadily at school, after a short time his reluctanre wears away and he enjoys the school life, especially if the teacher tries to make it pleasant for her pupils. Parents should take an intelligent interest in the teacher's work. They should be sympathetic and always speak highly of the teacher in the presence of the children.

It would be impossible to have a well-rounded character fully developed on all sides without religious training. The child should be trained in its earliest years that God loves him and should be encouraged to love Him in return. The habit of secret prayer should be formed. Religious training has a wonderfully helpful influence on the child in its physical

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and mental life and training.

In this busy age clergymen of all churches lament the decadence of family prayer. But good John Wesley said: "There is always time for prayer and provender." It is a beautiful custom to commence the day by singing a hymn, where the family is musical, reading a selection from God's word and all bowing before our Heavenly Father to thank him for his mercies and ask him for continued care. The children should be taught to take part at the family altar.

It is to be regretted that owning to sectarian differences religious training is not allowed in the schools. Although the public school curriculum is overloaded with necessary and unnecessary subjects no place is found for the most important of all training.

Of course, the teachers as a class are teaching by their lives and influence the highest truths. But this is not enough as witness Scotland where the bible is a text-book and the children are brought up on the book of proverbs, consequently, in whatever part of the wide world a Scotchman is found he is a friend and advocate of religion and education.

It is utter folly for parents to try to give their children a religious training if their lives do not correspond with their teachings. There are

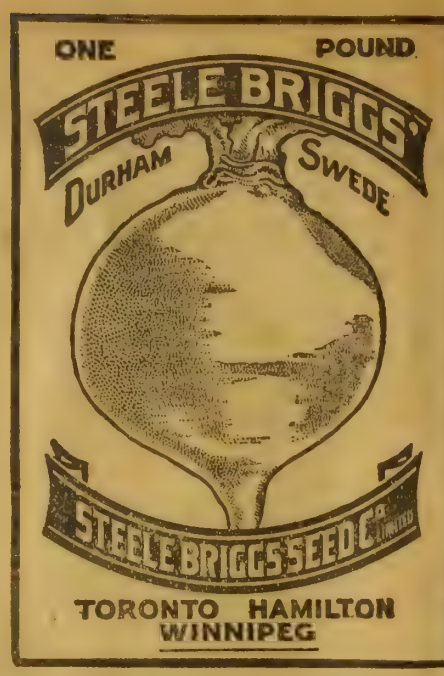
Water Lilies in the Experimental Farm Gardens, Charlottetown, P. E. I.

no hypocrites in the home. All stand at their best and at their worst. Although the very young child's confidence in the parent is supreme in later years children sit in judgement on their parents, they then perceive their faults but give them credit for their virtues. Many a person has lived a more wholesome, purer and nobler life for their children's sake than they otherwise would.

No effort should be spared to make the home bright, cheerful, attractive and beautiful so that the children will find their greatest happiness within its walls. When the shades of evening fall how contented the family can be with a bright light, warm fire and plenty of amusements. Music has a refining influence; games are helpful, they train the eye develop quickness and couage, but reading is the best amusement. By its means a person can become acquainted with the greatest minds. A cultivated taste in reading formed while young is a joy and comfort while life lasts.

Birthdays, the one day in the year which the child is the hero, and other anniversaries should be kept in some special manner. They not only provide the joy of the passing hour but they serve as milestones of happy remembered days, and these memories may later serve as an incentive to better things among the world's varied temptations. When one can bring pleasure by such simple means, it is worth while to make the effort because the time is so short that the young birds are in the home nest, and, they are gone before their parents realize their wings are strong enough to carry them.

It is deplorable that in modern life it is considered a misfortune to have a great family. This is a great mistake. The companionship of brothers and sisters will do more for the real making of genuine manliness and womanliness than the few extra comforts that it might be possible to provide in a smaller family. And if the parents have to make sacrifices when the children are young, they are amply compensated for it as they grow older. Although every child requires different treatment some are so easily trained while others seem to be born to do evil, it is reasonable to suppose that a mother could train her child better if it was her seventh or eighth than if it was her first. Parents should have high ideals for their children should realize their possibilities, and, should stir their ambition



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Our **TURNIP SEEDS** have made the name Steele, Briggs a household word in Canada. Here is a selection of Swede Turnips that possess no rivals. They are the newest and most vigorous production of celebrated growers.

Steele, Briggs' "Durham."
Steele, Briggs' "Select Purple Top."
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Steele, Briggs' "Select Good Luck."

They are fine grained and clean varieties and produce bountiful crops. To guard your interests and our own we seal the packages. These are the aristocracy of root seeds and no others are "just as good."

SOLD BY ALL LEADING MERCHANTS

STEELE, BRIGGS SEED CO., Limited
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NONE GENUINE UNLESS THE RUBEROID MAN

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Lessens Fire Risks—Cuts Down Insurance

Fire Insurance Companies rate RU-BER-OID Roofing as "First-Class", and insure at the "base" or lowest rate buildings covered with it. RU-BER-OID will not catch fire from flying cinders or burning brands, and the one-piece, air-tight, fire-resisting RU-BER-OID Roof helps to smother a fire starting within.

KA-LOR-OID (Colored RU-BER-OID) has the same fire-resisting qualities, and in its soft, permanent shades of Red and Green it makes most attractive roofs. 109

ROOFING

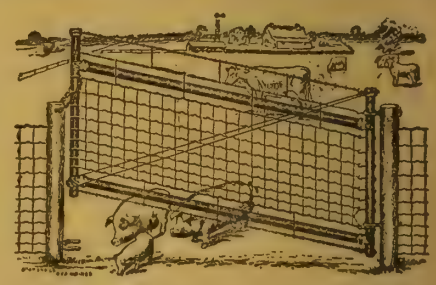
Improve Your Farm

FARMERS OF CANADA, WHENEVER YOU FIND IT NECESSARY to set up new gates on your farm, investigate the "Clay" Steel Farm Gate. This gate has features not possessed by any other gate. These features have commended "Clay" Gates to nearly all the leading stockmen of Eastern Canada, and have led to their purchase by the Ontario Agricultural College, Guelph; the Government Experimental Farm at Ottawa; the Model Farm in connection with Macdonald College, Quebec.

Clay Steel Farm Gates

have been bought by some thousands of Canada's best farmers. 30,000 "Clay" Gates were sold in 1912. This extensive appreciation of "Clay" Gates is the soundest possible evidence of the immense superiority of this Gate. If it costs a little more than the ordinary Gate, it is worth more—much more. Then consider this: Farmers who have had this Gate "on trial" have never given it up. Read our guarantee.

I GUARANTEE every Clay Gate to be free from defects in material or workmanship. I will replace free any parts, or the entire gate, giving out for such reasons.
H. RALPH STEELE, Manager.



This Gate won't sag, bend, break, burn, blow down or rot. Positively keeps back breachy cattle. Can be raised as shown. Will last a life time. Made of tubular steel of large diameter (far stronger than gas pipe or tee or angle iron) and heavy wire mesh fabric. A gate for every purpose. All sizes.

60 Days' Free Trial

One or a dozen "Clay" Gates will be sent on 60 days' Free Trial. State width of opening. Try them before buying them. Send today for illustrated Price List.

The Canadian Gate Co., Ltd., 54 Morris Street, GUELPH, Ont.

Agents for Maritime Provinces, F. E. COPP Oxford, Nova Scotia

to take advantage of everything that will help them upward, including our splendid educational systems. A child with a sound body, bright intellect and good memory can be fitted to fill the highest position in our country and to help their fellowmen. But through bad training he may grow up disobedient, untruthful, ignorant, idle, dishonest and dissolute to go out into the world to prey on law-abiding citizens or to become a tool in the hands of designing men. Our prisons are full of them. This contrast gives some conception of the mother's work in the seclusion and quietness in the homes of our land. These nation-builders are at work conserving, moulding, developing and guiding the lives and destinies of the future citizens of our country. The men and women upon whom will rest the responsibilities of the affairs of the greater Canada, eager, earnest and powerful. If at times in the mist and solitude of their work they loose heart may they realize with clearer vision the meaning and value of their days of stress and toil.—Paper by Mrs. W. D. Smith Blissville, N. B., read at the recent Convention of Women's Institute, Fredericton, N. B.

The Farm is the Place for You.

A young man applied for a position to a commission firm in the Live-stock Exchange building, says the Christian Endeavor World.

"I want a job. I am a first-class stenographer and bookkeeper."

The head of the firm looked at him for a minute.

"Where do you come from?" he asked.

"I live in Central Kansas. My father is a farmer and owns a big ranch."

"How much do you expect a week?"

"Well, I think I ought to be worth twelve dollars a week."

"Does you father need help at home?"

The applicant admitted that his father needed hired help.

"Young man," said the live-stock man, "the farm is the place for you. At first you would scarcely make enough here to pay your board. At home your father would be willing to pay you good wages, and that would be clear profit."

The boy looked at the floor. "I guess you're right," he admitted. "I'll go home to-night."

Many another farmer's son who is uneasy and ambitious for a life in the city should cut this out and paste it in his hat.

As I visit the great cities, I wonder how anyone of his own free will can live in one of them.

Many of us have to, to be sure. Our work lies in the city and we have to go to the daily treadmill; and the most we can hope for is a quiet home in the suburbs where we may spend our nights and Sundays, and perhaps a little farm where we may end our days when life's more strenuous work is over.

But the country, with its innumerable charms, its growing things, its animal life, its freedom, its good air, its sunshine, its glorious howling storms, its pattering rain in summer, its untrodden, unpolluted snow in winter—how can one ever leave it voluntarily for the city with its smoke and dust, its noise and clamor, its struggle and strife, its jealousies and intrigues, its saloons and its brothels?

I thank God for the brave souls who are willing to tackle the city's problems, and try to purify its social and political atmosphere, and am sorry for the poor souls who have to live in the city because they can't get away from it. But for the man who has a country home, or can have one, and who voluntarily leaves it—well, I simply wonder at his mental make-up.

I know what there is to be said on the other side; but the telephone and the trolley, the magazine and the newspaper, are largely eliminating the isolation and lonliness of country life, and are promoting that wholesomest of cries: "Back to the farm!" —Onward.

The Calf Question.

An American packing house is credited with the statement that 8,000,000 calves were killed in the United States in 1911. The house further states that the average weight of these calves was 70 lbs., and if they had been kept alive for a year longer their average weight would have been 600 lbs.

This is given as one of the reasons for the present high price of beef, and, by inference, farmers are urged to hold their calves until these develop into beef. The fact is apparently overlooked that the majority of these calves are the product of cows which are kept for dairy purposes. The dairy farmer finds that there is more profit in selling his milk as milk, or using it for the production of butter or cheese, than there is in using it to feed calves. So long as the condition remains, and the condition promises to be a permanent one, so long will the procession of calves to the shambles continue. This movement is aided, too, by the fact that veal is bringing a higher price per pound than finished beef.

Berkshire Queries.

J. McD.—Are Berkshire pigs the best pigs to raise for marketing at about seven months of age? Are they as easily fed as the Yorkshire, and are they so prolific for breeding purposes? or would a cross be better? if so, which breeds?

This depends upon the market requirements. Lumbermen desire fresh, fat pork, fishermen desire salty, fat pork, miners desire fresh medium-fat pork. Cities and town to a greater extent each year demand the leaner

There is no earlier maturing breed than the Berkshire but generally the sows are not as prolific as those of the Yorkshire breeds.

Crossing is only allowable when it is practised with the special object of producing a fair quality of pork and at the same time getting large litters.

Where Cattle Run Wild.

W. Barton, of New Zealand, writing in Hoardjs Dairyman, says that he has 700 cows running on a ranch simply for the purpose of breeding beef cattle. Most of these are so wild that they can be approached only on horseback. Every year the old cows are culled out and sent off the ranch to be fattened on the farm for slaughter. Two of these old cows, which had never been broken to milk, showed signs of being in calf when brought in, and at nine years old they dropped calves and gave eight gallons of milk a day for a period of two months.

AGENTS WANTED!

Handle the best paying line in Canada. We want live men and give liberal terms. Only hustlers wanted. Write for information.

Agents Dept.

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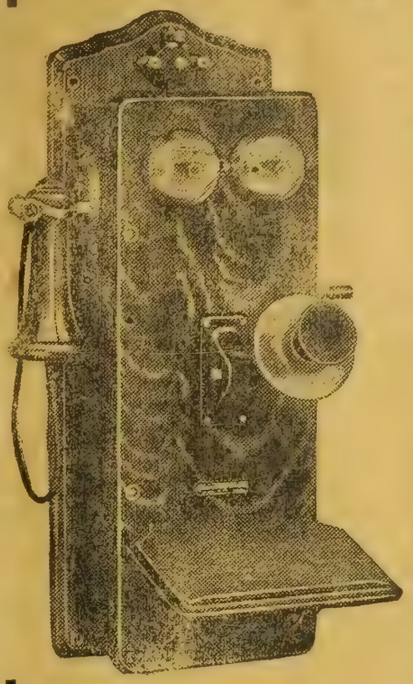
Independent Systems Constantly Growing



The number of municipal, government and independent local telephone systems in Canada is constantly growing. The independent telephone movement, in spite of tremendous opposition, is a huge success. If your locality is without telephone service, write us and we will tell you the steps to take to organize an independent telephone system.

We are the largest Independent Telephone Manufacturers in Canada. We carry complete stocks of guaranteed telephone materials, and can make shipment within 24 hours after receipt of order. Our telephones are superior to others in design, material and workmanship. Send for Free Trial so that you can test and compare them with others.

Write for our No. 3 Bulletin—the latest book on telephones. Tells how to build a telephone line. A very interesting and informing book.

Canadian Independent Telephone Co., Limited

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FOR ALL CROPS ON ALL SOILS

This most important Plant Food may be obtained in the highly concentrated forms of

SULPHATE of POTASH

and

MURIATE of POTASH

from all leading Fertilizer Dealers and Seedsmen.

Write us without delay, stating what crops you raise, and we shall send you valuable literature, prepared by recognized authorities on the important subject of Fertilizing.

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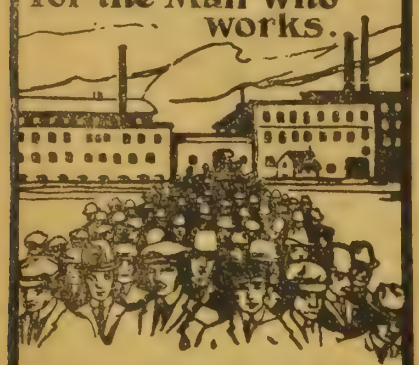
CHALLENGE BRAND
WATERPROOF
COLLARS

Look like linen—feel like linen, but outwear a dozen linen collars. No laundry bills—a little soap and water only required to keep them fresh and clean.

Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

For the Man who works.



The Arlington Company of Canada Limited TORONTO 2

A PURE, WHOLESOME NUTRITIOUS MEAL

CALFINE

CALVES LAMBS COLTS PIGS

GUARANTEED ANALYSIS

PROTEIN	20 per cent
FAT	8 " "
FIBRE	4 " "

Save $15.00 to $20.00 a Ton on your calf meal

SEND FOR BOOKLET AND PRICES

Canadian Cereal & Flour Mills, Ltd.
TORONTO, ONT.

45 YEARS OLD AND THE LAST YEAR THE BEST OF THE 45

The same enterprise, earnestness, ability and devotion to students' interests which have given this college its present standing, will be continued and every effort made to be worthy of the generous patronage enjoyed.

Next term will begin Thursday, January 2nd. Send for Catalogue.

THE ST. JOHN Business COLLEGE

S. KERR Principal.

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

Tomato and Raspberry Training.

B. V. Egbert of Nercer county is a gardener and small fruit grower who has ideas of his own. He is a close observer, and goes to the plants with which he deals for instruction in handling. Some of his methods were picked up on the Pacific coast and have been adapted to eastern conditions. His method of pruning tomatoes is unusual and unique. He allows the plant to make four leaves, then clips off the top. If a cluster of buds has formed it makes no difference; they are not saved, as they seldom develop into perfect fruit. The effect of this topping is to cause four strong side branches to form, one in the axil of each leaf. On these branches a fruit cluster will develop in the axil of each third leaf. Three clusters are allowed to form on each branch, then the end of the branch is clipped off. This provides for 12 clusters of fruit, which Mr. Egbert finds to be all that the plant can mature. Side shoots which spring from the branches later are pinched off, leaving only the main framework of the plant and the leaves growing on it.

The important point is the effect this method of training has in hastening the ripening of the fruit. Mr. Egbert claims that while a plant allowed to mature its first cluster undisturbed may ripen a single fruit sooner than a plant pruned in this way, the pruned plant will be far ahead in the race of producing fruit to go on the market, and that by this means he reaps a handsome reward for his care in the higher price obtained for the crop.

He also holds some ideas of his own regarding intensive methods of growing red raspberries and blackberries He is not content to grow these plants by the ordinary method of hedgerows and self-supporting plants, but insists on keeping the plants in hills and not allowing more than six canes to each hill. He objects to a spreading, self-supporting bush, because it interferes with cultivation, and he believes that thorough cultivation throughout the growing and ripening period of the fruit as a means of maintaining the moisture supply is a matter of the utmost importance. He ties the canes to a trellis made of two wires strung on posts. The canes are allowed to grow tall, being left six feet in height, after being cut back. He finds that the young canes do not develop strong fruit buds until they get above the fruiting canes. In order to overcome this trouble and get well developed buds without too great height he bends the fruiting canes over and ties them to the wires, thus giving the young shoots a free field in which to develop.

Mr. Egbert estimates it costs him as much to grow one acre by this method as it would to grow two in the ordinary way, but he is confident that the greater yields more than repay the extra cost. He is after cheaper bushels and feels that this is the way he gets them. The thorough cultivation which he gives enables the plants to carry a crop through a drouth that cuts off the crop entirely on bushes as ordinarily grown.—Maine Farmer.

Rotates With Strawberries.

I have a piece of land with muck and sand mixed. I get best results with strawberries and cabbage, where the water is from 2 to 3 inches below the surface. I follow a system of rotation with my crops that I have found splendidly adapted to this soil. I plant strawberries two years, then plow and plant to fodder corn. The next year I put in a crop of potatoes, then grain with clover and timothy. I cut one crop, plow down the sec-

Ask For Yours Now!

Forestall forgetfulness; taste this genuine tea-treat now. Your dealer offers it to you with this fair agreement:

Either you must like the flavor so well that you want to keep on drinking this tea by preference, or else you will please return the broken package and get your money back.

This is straight, unmistakable. A confident printed guarantee is on each 35c., 40c. and 50c. package. 40c. KING COLE is special value.

35, 40, and 50c. per lb.

HARROWS

In these days of expensive labor you can't afford to buy any harrow but the one which will do you work best and quickest—'twon't pay you.

Our Lever Harrow is a great one;—best there is going by long odds. It will harrow steadier, and just to what depth you want it. Then, you can regulate the draft on the horses and get the greatest amount of work for the least pulling.

A touch of the levers and the teeth are just where you want them at each round; not too deep at first, to ease the horses, then afterwards when the top soil is loose, throw them down and you're getting something done.

Saves time because less scrapes do.

Made in sizes 9 and 11 Tooth, Single Section, 15 and 17 Tooth Double Section.

Bailey-Underwood Co., Ltd., New Glasgow, N.S.

SEED OATS!

If the farmers of the Maritime Provinces, Quebec and Ontario want to make sure of getting the highest possible grade of seed oats for the Spring of 1913 apply to us at once. To prevent a repetition of the disaster that befell so many farmers last year by sowing devitalized grain, we have stored at Point Du Chene and Pictou 50,000 bushels of **large, selected, separated White Seed Oats, true to name and free from noxious weed seeds.** It will be the farmers own fault if they do not procure good seed as the extra yield of these oats pays twice over cost of the seed.

Our firm name is stencilled on every bag. Do not allow the dealers to give you other than Read's oats for seed.

JOSEPH READ & CO., LTD., Summerside, P. E. I.

ond crop, and plant strawberries. I use coarse manure for the potato crop, and fine manure for strawberries. I spread it thinly in the fall, previous to picking the first crop.

I have harvested 8000 quarts of strawberries per acre. They are of the Flint variety, and are the best paying crop that I grow. For every crop I grow I plow 8 to 10 inches deep, and harrow three or four times, or more, if necessary, to make a good seed bed. In planting early vegetables I plant spinach and radishes 32 inches apart, with a row of beets, parsnips, or a similar crop between. When spinach and radishes are harvested I go through the row with a horse, giving the remaining crop more room and at the same time saving the labor of a wheel hoe.—H. G Groat.

Orchard and Garden Notes.

Test all vegetable seeds as soon as they are received.

Calliopsis is a desirable quick growing annual for the cut-flower garden.

Go over the tools, put them in repair, and order any new ones needed for the summer's work.

Order plenty of sweetpea seed. There is no annual that is more appreciated than this.

Sow a few asters, pansies, cobea, and hardy carnations in the house the last of the month for earliest flowers outside.

The Senator Dunlap strawberry, Beta grape, King raspberry and Wealthy apple are good fruits for the garden. Plant liberally of each.

Lilac branches may sometimes be forced into bloom by cutting them and keeping in water in a cool, moist place, gradually giving more heat until the buds expand.

Plant out a few shrubs about the yard this spring. Spiraea Van Houttei, common lilac, Japanese lilac, Japanese rose, Mayday tree, mock orange and flowering currant are all good for the purpose.

Golden Bantam, sweet corn, Swiss-chard, Golden Self-blanching celery, purple eggplant, Kohl Rabi, White Japan muskmelon, Sweet Heart watermelon, are all vegetables that are worth trying.

Best Orchard Soil.

Deep, porous soil not only makes a good natural drainage, but is adapted to deep root systems essential to best results. The glacial drift soil so common in Maine in somewhat limited areas is the ideal soil for abundance of high-colored fruit. This soil, sometimes called granite soil, is composed of a light loam or sandy foundation more or less abundantly mixed with rocks of varying size, and is best adapted to orchards. Other soils give varying degrees of success, grading from the deep sandy or rocky loam as the best to the heavy clay at the foot of the list. The heavy clay is a hard medium to feed the tree through, and it also is a difficult soil to drain successfully for orchard work. The time has not yet arrived when heavy clay soil can be recommended for orcharding.—A. K. Gardiner, Maine.

"My little son had a very severe cold. I was recommended to try Chamberlain's Cough Remedy, and before a small bottle was finished he was as well as ever," writes Mrs. H. Silks, 29 Dowling Street, Sydney, Australia. This remedy is for sale by all dealers.

The Advantages of Oliver Plows

A REPUTATION for quality, such as is enjoyed by Oliver plows, is built up through many years of careful attention to details. No one of these details may seem very important of itself but the combination of many of them makes the difference between a plow that does good work and gives satisfactory service, and one that does not.

Your idea of satisfactory service is good plowing in Eastern Canadian fields and durability in the plow. This is exactly what you get when you buy an Oliver plow.

Fifty-Seven Years of Study and Practical Work Form the Basis of Oliver Plow Quality

Oliver plow designers are practical plowmen. Before an Oliver plow is offered for sale, the designers study all the conditions of the locality where that plow is to be used and construct a plow to meet them. The shape and construction of the share and the kind of material to be used; the construction of the frog; the amount and direction of beam landing adjustment; the strength and design of the frame; these are but a few of the points which are brought out by careful, thorough experimenting before an Oliver plow is ready for the market.

A reputation built up through more than half a century of constant, untiring effort for improvement, assures you of the full value of your money, both in good plowing and length of service, when you buy an Oliver plow. With all plowing problems worked out in advance, it is only necessary for you to tell the local agent what your needs and conditions are, and he can furnish at once an Oliver plow that will do your work the way you want it done.

See the I H C local agent, or, write the nearest branch house for catalogues and full information.

International Harvester Company of Canada, Ltd
EASTERN BRANCH HOUSES

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

Oliver plows are built at Hamilton, Ont.

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Do You Know What This Label Means ?

It means cement of the highest possible quality.
It means cement tested by experts whose authority is final at all our mills.
It means cement acknowledged by engineers, architects and hundreds of thousands of farmers to fulfil every requirement of scientifically made Portland cement.
It means a cement that is absolutely reliable, whether used for a great bridge or for a concrete watering trough. You can use

Canada Cement

with complete confidence that your concrete work will be thoroughly satisfactory. You ought to have this confidence in the cement you use, because you have not the facilities for testing its qualities, such as are at the disposal of the engineers in charge of big contracting jobs.

These engineers know that when cement has passed the tests made upon it at Canada Cement mills, it will pass all their tests.

And this same cement is sold to you for your silo, your foundations, your feeding-floor, your milk-house or your watering-trough.

Used according to the directions in our free book "What the Farmer can do with Concrete," Canada Cement never fails to give satisfactory results. Write for the book. It not only tells you how to mix and place concrete, but will also suggest scores of uses for it on your farm, every one of them valuable to you. In asking for the book you do not incur the slightest obligation.

There is a Canada Cement Dealer in Your Neighborhood

Address: Farmers' Information Bureau

Canada Cement Company Limited, Montreal

Order Your Horse Posters from us.

Regularity

of the bowels is an absolute necessity for good health. Unless the waste matter from the food which collects there is got rid of at least once a day, it decays and poisons the whole body, causing biliousness, indigestion and sick headaches. Salts and other harsh mineral purgatives irritate the delicate lining of the bowels. Dr. Morse's Indian Root Pills—entirely vegetable—regulate the bowels effectively without weakening, sickening or griping. Use

Dr. Morse's Indian Root Pills 50

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BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

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COMFORT
IN THE
RURAL HOME

The installation of a **GOOD HEALTH CHEMICAL CLOSET** in your home means health--convenience--comfort--for the whole family. Not a luxury but a necessity. A postal will bring you full particulars. Address
THE NATIONAL MFG. CO., Limited. MONCTON, N. B.

¶An Advertisement in the Maritime Farmer will sell your surplus stock--Try it.

Ropy Milk.

Of the many abnormal changes which sometimes take place in milk one of the most common and persistent is that which gives rise to what is called "ropy'- or "slimy-' milk. Such milk, when poured from a jug, has a rope-like form. A spoon or wire dipped into the milk and then taken out draws after it thread-like strands sometimes more than a yard in length. Such an abnormal appearance naturally alarms the consumer, while the persistence of the trouble frequently causes great loss to the producer or retail seller. The ropiness which appears in the mixed milk of a herd several hours after milking, and which increases on allowing the milk to stand, is due to the growth of bacteria, which, as a general rule, gain access to the milk after it has left the udder of the cow, though in a few instances they may exist in the udder before milking. This kind of ropy milk, though abnormal and prejudicial from the seller's point of view, is quite wholesome, and does not endanger public health.

"GARGET" MILK.

Ropiness, however, is sometimes observed in milk from individual cows, notably in cases of inflammation of the udder. In such cases the cause may be either bacterial or non-bacterial. If the ropiness does not increase when the milk is kept and cannot be propagated by transference into another sample of fresh milk, it is probably due to the presence of fibrin and white corpsules from the blood, which form masses of slimy material in the milk. Such milk ("garget'- milk) may not cause other milk to become ropy, but organisms are present in the milk which may lead to infection being spread from one cow to another by the hands of the milker. For this reason prompt attention should be given to all cows suffering from this disease, and all sources of infection avoided. Milk of this nature should not be used for food. In this leaflet the description "ropy milk" is confined to the first type of milk referred to; the article does not deal with "garget" milk.

ROPY MILK ORGANISMS.

The organisms causing ropiness are very numerous and may be divided into two broad classes:—(1) Those which, in sterilized milk, possess the property of dissolving the casein, making a thick, honey-like solution when grown for some time. These organism tend to produce an alkaline reaction in the milk, though some produce a little acid. In general they require a large amount of oxygen. (2) Those which do not dissolve the casein, but which, by means of the acid they produce, precipitate it (these include certain ordinary lactic bacteria). The quantity of acid produced in milk by these organisms is in some cases very large. These organisms are able to grow much better without air than the other type.

TESTS FOR ROPINESS.

On the appearance of ropiness it should first be ascertained whether the outbreak is caused by bacteria by adding a few drops of the affected milk to some sound new milk in a clean glass. This glass should then be placed in a warm room and kept loosely covered to prevent dust getting in. The time taken for ropiness to appear should be noted, and is of the greatest importance from a practical point of view, since it can be assumed that ropiness which does not appear until after three days would not affect the sale of the milk. The cows should be examined, and samples taken in clean glasses from the milk of individual cows and from the mixed milk after straining, cooling, etc. The time taken in each case of ropiness to appear should be noted. To a glass of clean fresh milk from another source should be added some of the water used for washing the churns and pails, and to yet another glass some of the water which the cows drink. A glass of this milk should also be left exposed in the dairy. The results of these experiments would probably indicate the source of the trouble and the measures prescribed below for dealing with the discovered source of infection should be carried out. On an outbreak of ropiness, however, it would be as well to adopt the whole of the following precautions:—

PREVENTIVE AND REMEDIAL MEASURES.

The bacilli causing ropiness are frequently found in water. Special care

A Get-Rich-Quick Scheme

may be all right in some cases, but the majority of us have to practise economy daily if we ever want to be rich, or even comfortably well off.

More money is wasted in the kitchen than in any other part of the home. That is where economy should be practised, but without a good Stove it is impossible. If you use an

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you will save in food, fuel and repair bills, (not to speak of time and labour) enough to pay for the range itself in from one to two years.

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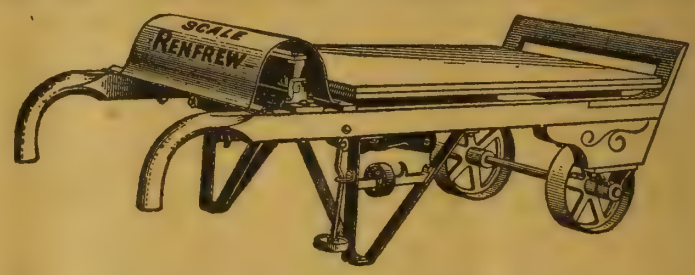

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should, therefore, be taken in washing the milking pails, strainer cloth, etc., after each milking. When thoroughly clean these should be well scalded, and should not again be rinsed with cold water. It is well to scald the pails, etc., shortly before milking. Great care should be taken that no water is splashed into the milk in the process of cooling, etc. Dust is also sometimes a carrier of the bacilli. The pails, etc., after washing should, therefore, be kept upside down, and the milk when it is in the pails shonld be kept covered as much as possible. The rooms where the milk is kept should be well cleaned. Wooden, cement or stone floors may be cleaned with a mixture of five parts of commercial sulphuric acid to ninety-five parts of water, but care should be taken that this does not get on the clothes of the person using it. Wooden vessels should not be used for milk, as they may persistently retain the ropy milk organisms. It is inadvisable to use wooden troughs even for washing milking vessels, but when they are used special care should be taken to clean them each time after use. Dilute solutions of washing soda favour the growth of organisms, and it would be better to use sddium hypochlorite or some other cleanser and disinfectant in cases of an outbreak of ropy milk. Straw, mouldy hay, and also butter. wort have been shown to hold ropy milk organisms, and the custom of wiping the udders of the cows with a wisp of straw before milking is a bad one. After washing their hands for milking, milkers should not handle straw or fodder, nor snould any such material be brought into the cow-barn just before or during milking. The organisms may be transferred to cows from water in which they have been standing, or which has otherwise been splashed on their flanks or udders. The cows should, therefore, be kept clean; and ponds should be fenced off so that the cows cannot wade in them. On the first indication of an outbreak of ropy milk the cows should, if possible, at once be turned into another pasture.—Leaflet of the Board of Agriculture.

Disease in the Lambing Pen.

Dealing with the mortality associated with the lambing season, and the average percentage of deaths, Smith says:—"But the whole of the mortality does not necessarily occur as the result of difficult presentations; parturient fever is common, highly infectious, and spreads by means of the shepherd, the soiled surroundings, and the after-birth left in the pen. When this disease appears, the lambing pen must be at once broken up and destroyed; let it be set fire to, and the ground on which it stands thus disinfected." This is drastic treatment in the case of a permanent structure, and yet it cannot be effectively disinfected, and it is probably of no great use for any other purpose. Fresh ground is as desirable, indeed as necessary, for lambing ewes as for rearing pheasants and chickens, and those engaged in these industries know well enough how certainly disease makes its appearance if the same land is used for rearing birds for several seasons in succession. Hothouses are not needed for sheep, only protection from wet and cold, and some small degree of comfort, and thus permanent buildings may be generally regarded as superfluous. They may save the trouble of erecting a fresh temporary shelter every year, and be relatively cheaper in that the expense incurred is not an annual charge, but they are not economical if they are not healthy. The protection or shelter is needed only during a few nights prior to and a few days, indeed, a few hours, succeeding parturition, for as soon as the ewes are fairly recovered from the labor, and the lambs are strong enough on their legs, they are better out in the fields, and the rest is simply a matter of providing a sufficiency of suitable food, which means plenty of milk for the lambs. It is a great mistake, and one that there is often a tendency to commit, to keep ewes and lambs hanging about the lambing pens. Where there is attention to cleanliness, thorough ventilation without draft, and a free use of disinfectants, any risk of disease is reduced to a minimum, but where permanent buildings are used for lambing ewes, the floor, at least, should not be permanent, because it is the litter and the ground that absorb parturient products and septic material. The floor, at least, should be changed each year by digging it out and carting it away, replacing it with fresh material, preferably rubble, or freshly burnt earth, but there is, after all, nothing so safe as a fresh fold of fresh ground ehery year. —Veteran, in Farm Home.

Scouring Sheep

Scour in sheep, taking the form of diarrhoea or dysentery, is a trouble with which most experienced sheep-owners are familiar. Diarrhoea follows the ingestion of young, quickly-grown, succulent green food, where all animals consuming it are concerned, and in spring and in autumn, when they are put on aftermath, a relaxed state of the bowels is the rule in both bovines and ovines. Mountain sheep have commonly hard times during winter, and so very often do some others that are not mountain, and when the winter is through they are often thin, weak and debilitated. In such cases diarrhoea is more likely to go hardly with sheep than when the animals have been wintered well and are in fair condition. This is one of the reasons why the poor sheep perishes while the animal in better condition is not perceptibly affected. Dysentery, which ofeen supervenes on diarrhoea, carries off a great many sheep. In the case of sheep scouring on spring grass or aftermath, the indication is to counteract its effect by the provision of some dry, nutrient and slightly astringent food. Cotton-cake is the corrective of succulent grass most commomly employed. The medicinal treatment of diarrhoea and dysentery necessarily depends upon the cause, and, in dysentery more especially, on the stage that has been reached. "Scour" is not in itself a disease, but only a symptom, generally of some digestive disturbance brought about by dietetic errors. There is material for a book in the consideration of the diseases and disorders of which diarrhoea may be a prominent symptom, and the purging may arise primarily from exactly opposite conditions—too much dry astringent food which is commonly the beginning of dysentery, or too much succulent, laxative food, which may cause simply a relaxed state of the mucous membrane of the bowels and the passing of fluid faeces, and eventually terminate in dystntery. Any tendency to scouring on account of succulent or laxative food can be corrected by giving something that is dry and astringent. There are certain lands that cause scouring, and each case should be considered on its merits, for it is utterly impossible to provide a medicinal remedy that will suit all cases or fit all circumstances.

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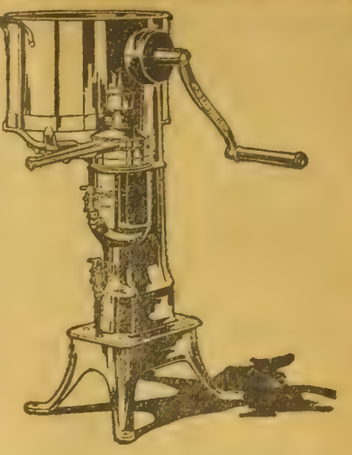

ECONOMY in buying a cream separator does not begin nor end with the price. You may easily pay too little and just as easily pay too much.

Learn the difference between gears that work without back lash and those that have it or develop it soon. Learn the importance of a self-adjusting bowl spindle bearing, and learn to know one when you see it. Discover the difference between brass and phosphor bronze as a material for bearings. Buy a separator with an oiling system that cannot fail you even for a few minutes of a run. When you find the separator that comes up to your specifications—one that with proper care will do good work for a long time—buy it. You will find it marked

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I H C cream separators turn easily and they are easy to run because the working parts are accurately made and the bearings are sufficiently lubricated. The shafts and spindle are the strongest used in any separator. The shaft and spindle bearings are supported by the frame, but have no contact with it. The contact is between the steel spindles and phosphor bronze bushings. The gears are spirally cut so that there is no lost motion between them. They are entirely protected from grit and milk, and at the same time are easily accessible for cleaning.

See the I H C local agent and ask him to give you a demonstration of the efficiency of the machine as a skimmer and to go over with you and explain carefully all of its good, mechanical points. You can get catalogues and full information from him, or, write the nearest branch house.

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In the Days of the First of the Georges

Trade names that have been established for fifty years in this country are few enough to be regarded as unique, and when we find one a hundred years old, it is singularly so. In the province of Nova Scotia there are two firms still in business that had their origin previous to 1790, and there are perhaps a few others in Canada, but not many. Probably the oldest trade name on this side of the water is that of Brandram. The firm of Brandram was established during the reigk of George I., and was therefore a well established trade name before the exciting days of Bonnie Prince Charlie.

But the name "Brandram is famous not only for its age as a business firm, but because of its connection with the product that bears its name. "Brnadram's" is a synonym for "quality" in white lead, and the reason for this is that through all the years of its history the policy and the practice of the Brandram firm has been to put its name on nothing but the best.

Brandram's White Lead was for many years supplied to the Canadian market solely from the home factory in England, but eventually as its reputation for quality grew, a Canadian factory was decided upon. Now "Brandram's B. B. Genuine White Lead" is made in the new corroding plant of Brandram-Henderson, Limited, Montreal, the finest white lead plant in America and one that was erected solely for making the Brandram product. Last year this factory corroded over 3000 tons and was unable to supply the demand. This year the output will be increased to about 4500 tons.

But Brandram-Henderson, Limited, are not only corroders of White Lead, they are also manufacturers of Brandram-Henderson English Paints, in which none but Brandram's B. B. Genuine White Lead is used. White Lead as our readers know is paint's first essential, in fact it is its most vital quality, and any paint that contains a sufficient quantity (70 per cent. of Brandram's B. B. Genuine White Lead is bound to be good, at least as far as White Lead is concerned. The base of Brandram-Henderson White Paint and colors is 30 percent oxide of zinc and 70 percent Brandram's B. B. Genuine.

About one hundred and eighty years have passed since the first Brandram was heard of in trade circles in England, and we think it may be taken for granted that "quality first" must have been his policy as it has been the policy of the firm during the past one hundred years of which manufacturing and sales records are obtainable. If it had not been his policy, it is doubtful if as a trade name "Brandram" would be alive to-day.

What a lesson the people of a young country like ours can draw from the history of the "Brandram" business. How it teaches us that whatever is worth doing is worth doing well, and that it is only the fit can hope to survive.

Your Summer Vacation.

A most interesting and well printed publication has just been issued by the Grand Trunk Railway System, dealing with the attractions of the well-known Algonquin National Park of Ontario, and copies may be had from any of their city ticket officers.

The territory dealt with is a thoroughly universal vacation one, combining high altitude, (200 ft.), pure air, unspoiled forest, beautiful lakes, splendid fishing, much wild game, hotel or camp life, in close touch with civilization or entirely apart from it, and satisfying alike to novice and veteran.

Included in this publication is a description of the "Nominigan Camp" situated on Smoke Lake, the centre of one of the finest fishing grounds in Canada, and which will be open for the first time this year with accommodation for 60 people. This idea of a log cabin camp is an innovation in Canada but one that has become most popular and attractive to a large number of summer playground seekers in the Rangeley Lakes, Me. Good hotel accommodation is offered at the "Highland Inn" and the rates are most reasonable.

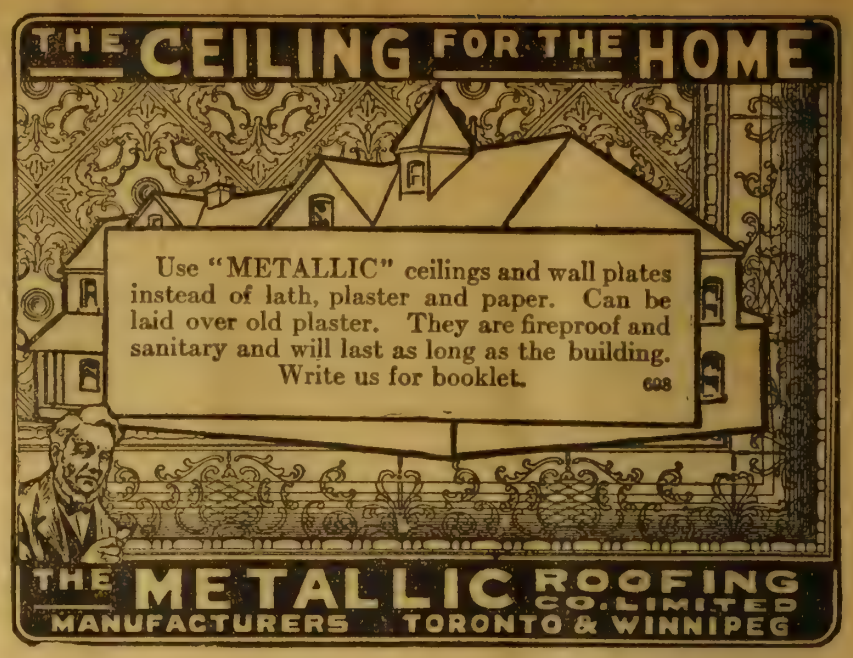
The publication is well written and the map that accompanies same gives one a good idea of the 2,500,000 acres that are found within the Park boundaries.

"Wolf Teeth" in Horses

There are a variety of causes for blindness in horses, but wolf teeth are not chargeable, in spite of a common belief to the contrary. These teeth are vestiges of the seventh molar or premolar teeth of the prehistoric horse. The modern horse has six large grinding teeth in the upper and lower jaws on both sides of the mouth, or twenty-four in all. The three grinders nearest the front of the mouth are called premolars, and the wolf teeth, if kresent in front of these three, would be called anterior molars. The hog has four of these teeth, and the prehistoric horse had them, but through evolution they have disappeared. Sometimes, however, we find vestigal anterior premolar teeth in the upper jaw of the horse, and these are so-called wolf teeth, and are of no importance whatever. They do not cause moon blindness (periodic opthalmia) or any weakness of the eyes. Occasionally they get in the way of the bit of the over-head-check-lines, and where that is so they may be extracted; otherwise they may be let alone, and often they drop out as the horse ages. A horse may have a foreign body under an eyelid or the membrana nictitans (haw of eye), and it should be located and removed; or the animal may have periodic opthalmia, which is incurable, and will end in total blindness of one or both eyes. The tendency to this disease is considered hereditary, so that an affected mare or stallion should not be used for breeding.—American Farm Journal.

Lampers in Horses.

The barbarous custom of firing a horse's mouth as a cure for lampers has fortunately been discarded for a more humane remedy. A horse so affected should be given a good dose of laxative medicine, such as ½ pint of linseed oil to regulate the bowels, and one of the following powders might be given in the feed once daily and be continued for a week:—Powdered nitrate of potash, 2 drachms; powered flowers of sulphur, 2 drachms; powered aniseed, 4 drachms. The diet should consist of soft, easily-digested food, green food if procurable. An occasional bran mash will be found beneficial, but no oats or corn should be fed.



FLORICULTURE.

After Easter Lilies are done blooming cut the stalk off about one foot from the pot gradually withdraw, water until the leaves wither and the soil becomes thoroughly dry, then set the plant, pot and all in some dry, cool room until September, when the bulbs may be repotted.

Spirea may be planted in a garden when done blooming in a sunny situation, where the drainage is good it can be divided and planted for forcing next fall, if desired, or it will winter in the ground with protection.

Never allow your Azaleas to become entirely dry. It would almost surely kill them. The calyx or bottom of the blossom should be pinched off close to the foliage as soon as the flower falls or otherwise the new growth will be much retarded.

Violets grown in pots require very little sunshine but plenty of light and moisture, also perfect drainage.

All plants that need repotting should receive attention now.

It is an especially good time to repot palms and ferns. Get good light soil that has plenty of decayed grass in it and repot into pots one size larger. Be sure to use broken pots or some rough material for drainage;

If you propose to have any painting done in your rooms this spring, see that plants are placed in some room that can be aired and that will not be exposed to the odor of paints. Turpentine is very bad for all sorts of plants, ferns being especially liable to damage therefrom.

Don't uncover hardy stuff in the garden yet, it is too early except in the most sheltered spots.

Straw should be loosened up on the bulb beds and a portion of the same removed, but not all.

Plant Sweet Peas for early bloom now. If the ground is very cold and wet, put a little horse manure, about two inches under the seed, manure must be covered with soil before seed is sown. Sow plenty of seed even if you have to thin them out afterwards.

As to the vine grown in boxes, I would highly recommend the Bignonia Radicans or Scarlet Trumpet Flower. It grows rapidly, peoducing a quantity of large dark red trumpet snaped flowers with an orange tint. Growing it in boxes which can be cellared in the winter all danger of winter killing would be avoided. I do not think you could get a better plant under your special circumstances.

The boxes should be about eight inches wide and eighteen inches deep and about two feet long with drainage holes in the bottom, covered with broken flower pots or stones to prevent clogging.

Plant Aster seeds for earliest use now, first of April. Try a few of the Honhenzollen type, if you have not already done so. Ricinus or Castor Oil Beans planted now one in a small pot will make pretty ornamental leaved plants for summer use. They should not be put out of doors before the last of June, however, as they do not like cold nights.

IHC Wagons Are Tough

DID you ever notice, when one of the wheels of your loaded wagon dropped into a rut or bumped over a stone, how the seat springs gave and rebounded, almost throwing you off? That is an indication of the shock and strain that the rigid spokes and axles have to stand whenever the wagon is traveling over a rough road or through a field. Even on a smooth road there is always the crushing strain of the load, affecting every part from the top box to the lowest point of the tire. I H C wagons

Petrolia Chatham

take these stresses and strains as a matter of course. They are made to stand just that sort of work. From neckyoke to tail board they are built of selected, air-dried lumber, strong and tough, bending to strains but coming back as straight and true as ever when the load is removed. Besides being tough, I H C wagons are light running. The wheels have just the right pitch and gather, and run true. All skeins and skein boxes are paired. The running gear is assembled by skilled workmen whose wages depend as much on the quality as on the quantity of the work they turn out. Machine work, being more uniform and a great deal faster, takes the place of hand work wherever possible. Consequently, I H C wagons are practically all of the same high standard of quality throughout.

You cannot do better than to equip your farm with I H C wagons. The I H C local agent sells the wagon best suited to your work and your conditions. See the wagon at his place of business and get catalogues and literature from him, or, address your request to the nearest branch house.

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Methods of Improving the Supply of Field Root and Vegetable Seed.

Continued from page 527)

GENUINENESS OF SEED STOCK.

To test seeds as to their trueness to kind and their quality in respect to breeding and selection, growing tests on trial plots have to be made. This third, and important branch of seed testing that we have been unable to take up except in a preliminary way for the results of the preliminary trial plot tests with field root seeds that have been presented to you in the paper by Mr. Eddy. We are indebted in a large measure to the Director of Experimental Farms, who although somewhat cramped for land space, kindly placed at our disposal both land and labour for cultivating it. Three acres of land in these trial plot tests has produced some highly interesting results, which however should be confirmed by repeated trials of a series of years before we could consider ourselves warranted in making definite statements that make or mar the reputation of a seedsman.

From the results of two years tests we have been able to form some opinion as to which of the seedsmen are most skillful in coining new and attractive names for established sorts that are already on the market under a multiplicity of names. To say that to catalogue five or six distinct varieties under ten or twelve variety names was done for the purpose of flim-flaming the farmers and gardeners would be unfair to the seedsmen. When a certain popular kind and variety of seed is known under variety names that differ in different districts it is a matter of business to insert in the catalogue all of the variety names under which seed is commonly known. The mixture of varieties and mongrel nature of the crop produced from the seeds of some of the stocks that were imported, is a matter of much greater importance than the multiplicity of variety names. There can be no excuse for the importation of some of the mongrel seed stocks put on the retail market unless it be to supply the demand from growers who want cheap seeds.

Our experience with grass and clover seeds has been that when farmers know they are getting No. 1 grade they are willing to pay a fair price for it and I believe that the only practical way of suppressing the importation and distribution of cheap inferior qualities of field root and garden seeds is to conduct trial plot investigation work from year to year and as soon as definite information of unquestionable accuracy is available to give that information to the public in a form so that farmers and gardeners may readily know which of the seeds and which of the seedsmen are the best, and which are unreliable. A simple reference catalogue giving the results of such trial plot tests over a series of years together with accurate illustration of variety and type forms, and the names by which they are properly known should prove of much value to Canadian farmers and gardeners. Such a publication issued every two or three years would be of real benefit to good reliable seed houses, and equally injurious to importers of inferior or worthless stocks that may be bought at low price from unreliable growers or seed brokers of foreign countries.

SHOULD SEED GROWING IN CANADA BE ENCOURAGED.

The matter of providing special encouragement to growers of field root and garden vegetable seeds is under consideration. In Europe the breeding and selection of plants to secure excellence of kind is done by private interests. In Canada we will have to look to the plant breeding specialists employed on the staff of the various experiment stations to produce elite stock seeds of the various kinds and varieties that may prove to be best adapted to our soil and climatic conditions and purposes. We have a few good farmers and gardeners in the principal localities where seeds from these crops may be grown successfully who would be quite competent to maintain excellence of quality under the inspection and direction of this association while increasing the supply in quantity for commerce. It has been suggested that it would be advisable to offer such prospective seed growers some special encouragement in the nature of a bonus amounting to approximately one-eighth of the average retail price for the different kinds to be paid to them under proper regulations, and according to the amount of seeds they produce. The principal envolved in paying bonuses for such purposes is one that is not generally popular. My experience leads me to believe that to create a supply of high class root and vegetable seeds by this means would be a slow process, and any monies expended for that purpose, nominally in the form af a bonus, should really be considered as an expenditure for educational work in seed growing. The question is one that is deserving of careful consideration.

FIELD COMPETITIONS IN ROOT AND VEGETABLE CROPS.

Field crop competitions with seed producing crops such as wheat, oats and potatoes have had a splendid influence in stimulating to greater interest in the advantages to be derived from improved cultural methods and the use of superior seeds. There can be no doubt that equally good results are to be obtained from extending those competitions to field root and garden vegetable crops.

IMPROVEMENT MUST COME FROM DEMAND FOR GOOD SEED.

That there is abundant opportunity for improvement in the supply of field root and garden vegetable seeds there is ample evidence. The seedsmen as a class are less to be condemned for the condition of the supply than are the farmers and gardeners who want cheap seeds. None of the seedsmen are faultless and all, or nearly all of them have some good points in their favour.

"There is so much that is good in the worst of them, and so much that is bad in the best of them, that it ill becomes any of them to talk about the rest of them." We must look for improvement in the seed supply mainly through educating farmers and gardeners to demand only the best, and that it is of the worst kind of false economy to use inferior seeds no matter how cheap they may be had. It is also our opportunity and duty to provide the means, so far as possible, whereby they may know where they are getting the best and how to guard against purchasing the inferior article. It is an exceedingly difficult problem that is not impossible of solution. The results that may be obtained from the use of better seed, over the aggregate area under cultivation in these crops, is well worth the best efforts that can be directed to that end.—Geo. H. Clark, Seed Commissioner.

The Ayrshire Association Grant to Chatham Exhibition.

Editor Maritime Farmer:

In your issue of February 25th you stated that the Ayrshire Association grant to Chatham Exhibition was $25.00. Please correct as the grant in question is $50.00, same as to Fredericton, Halifax and Charlottetown.

G. C. P. McINTYRE.

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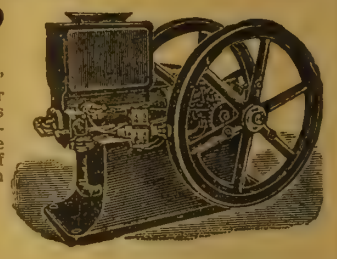

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Care of Milk and Cream on the Farm.

Many dairymen do not realize the interdependence between the creamery and the cream producer. Good butter cannot be made from an inferior grade of cream. The better the quality of the butter produced the greater will be the demand. The higher grade butter demands the highest price, even when the market is well stocked with the lower and cheaper grades. If the creamery is forced to sell at a lower price, owing to the poor grade of butter produced, it follows that the creamery cannot pay as much for the butterfat. Dairymen lose thousands of dollars annually, due to the lower price paid for poor butter.

It is not easy to say what is the most important feature in the production of clean milk. Special stress may be placed upon some particular step, yet if carelessness is allowed to rule at other steps, much of the most painstaking care would count for naught in the final results. Clean and sanitary conditions are factors of first importance upon which too much stress cannot be laid. It is impossible to produce good milk or good cream if dirt of any kind is allowed to get into it. The amount of dirt that gets into the milk is one of the chief causes of its rapid spoiling. Although some farmers think that the creameryman can in some mysterious way remove the dirt and all its attendant evils it remains a fact that the contamination resulting from dissolved filth cannot be entirely eliminated.

The author describes utensils, as milking pails and coolers and the sanitary arrangement of the milk house, drawings being used to illustrate his points. He also shows a pit or milk well that has been found quite satisfactory as a storage place for dairy products in the absence of ice or running cold water. He shmmarizes his instructions as follows:

It is impossible to produce clean milk and cream unless the cows, stable, milker, utensils and separator are clean.

To wash milk utensils use, first, cold water for rinsing; second, warm water containing a small quantity of good washing powder, for cleaning; third, boiling water or steam for sterilizing.

Use a metallic strainer; it is practically impossible to keep cloth strainers sweet and clean and free from bacteria.

Skim the milk as soon after milking as possible, and cool the cream at once.

Skim a cream testing from 35 to 45 per cent.—the richer the cream the better it will keep. By skimming a rich cream, more skim milk is left at home for feed, and there is also smaller bulk on which to pay express charges.

Do not mix warm, new cream with cold cream until it has been cooled.

Keep the cans of cream in a tank of cold water until time of delivery.

Wash the separator thoroughly after each separation.

Deliver the cream to the creamery

or cream station early in the morning.

Deliver the cream not less than three times a week during the summer, and twice a week during the winter.

Protect the cans of cream from the sun by covering with canvas or with a wet sack while en route.

Blown Sheep.

The condition known as hoven or "blown," although not so frequent in sheep as in cattle, is quite as urgent in its demand for immediate relief. The causes are also much the same—abrupt changes of diet, particularly to quickly-grown, succulent or wet green food. The rapid transference of material of this kind to the rumen places it under conditions favorable to rapid fermentation, and during fermentation gases are given off more rapidly than they can be dealt with through the ordinary channels of escape. In summer clover is the material most likely to cause "hoven", but any wet green stuff may do so. The symptoms are not difficult to recognize, and there is the same expression of pain, unwillingness to move, affected breathing, and distension of the rumen with gas, characteristic of the condition in the bovine. The drum-like swelling on the left side, which gives a resonant sound when tapped with the fingers, is conclusive of the nature of the trouble. Sheep, except in the case of a few pedigree animals, being of small commercial value, are not generally treated professionally, unless there is a wholesale outbreak of disease, and the shepherd of the flock is generally also its doctor; but, even if the vet. were usually employed, there is no time to send three or four miles for a peterinary surgeon, and thus the means of treatment should be kept in readiness for use in emergencies. "That, thou doest, do qdickly," or it will be useless to attempt to do anything. Anti-ferments and stimulants are the agents to be given and there is no better medicine than ammonia in combination with ginger and Epsom salts. The average dose of carbonate of ammonia—the form most generally available, is half a drachm dissolved in water, gruel, or ale. Other agents sometimes given are chloride of lime, chlorate of potash, bicarbonate of potash, bicarbonate of soda, hyposulphite of soda and carbolic acid; but, if at hand, the best results may be looked for from ammonia. Stomachics and tonics are indicated after relief from the distention by gas has been afforded, in order to restore tone to the organ, and the animal must for a time be most carefully fed. If medicine does not relieve, or there is imminent danger of the sheep dying before it can act, such as when the distension is enormous and the brain is affected in sympathy with the disordered stomach, we must depart from the rule of first removing the cause and gain time by puncturing the rumen. The pocket-knife may be used for this purpose, and it is generally the handiest weapon for stabbing; but it is not the best instrument to employ, since, owing to the churning motion of the rumen, the wound in it will, as the gas escapes, be removed from apposition with that in the skin and abdominal wall, and the escape of gas be permanently stopped, if it does not result in some of the contents of the stomach falling into the abdomen. The proper instrument to use is the trocar and cannula, the tube of which keeps the wounds in juxtaposition and provides for a free escape of gas. As an illustration of the safety and absence of risk when the operation is performed with this instrument, Youatt records a case in which he punctured the rumen seven times in four days, the sheep eventually recovering.

Growing and Ensilling Corn.

The lack of confidence in the value and use of corn ensilage is gradually being overcome. According to Mr. J. H. Grisdale, Director of Experimental Farms, who has tested the matter in many parts of the Dominion, corn for forage or ensilage can be grown to advantage in almost all parts of Canada occupied by stock farmers. Failure to secure satisfactory results has often been due to wrong cultural methods practiced, or unsuitable varieties grown, rather than to adverse climatic conditions.

In order to secure for the benefit of stock growers generally reliable information on the subject of corn ensilage, Mr. Grisdale was summoned by the Select Standing Committee of the House of Commons on Agriculture and Colonization, to give evidence based on his experiments and observation. This evidence was printed in a pamphlet of sixteen pages and sent out in large numbers but there still available for distribution a number of copies in the hands of the Publications Branch of the Department of Agriculture at Ottawa.

Corn will do well in almost any kind of soil provided with good drainage and well prepared. Barn-yard manure, which may be applied during the winter or spring, is the best fertilizing material to use. From the middle to the end of May, according to the weather and soil conditions, is said to be the proper time to plant the seed which may be put in hills or rows. After describing the necessary cultural operations, varieties suitable for various provinces and districts are named. For the more northerly latitudes Longfellow, Comkton's Early, Angel of Midnight, North Dakota Flint and Sanford are recommended. Harvesting and ensiling are fully described and feeding is dealt with also. For feeding young stock some bran and clover hay should be added to the silage. Rations are given for all classes of cattle.

In discussing silos a table is embodied which shows the capacities of those of different dimensions. A hundred ton circular silo is shown to be 27 feet deep and 16 feet inside diameter. Silos of different materials are dealt with and their construction described. Cement silos properly constructed are referred to as being probably more durable and satisfactory than those built of wood.

Warts on Cows Teats.

A trouble which the milker has sometimes to deal with is that of chaps and warts on cows' teats. Warts appear on any part of the animal, and wherever situated, always detract from the appearance of the animal. In all cases warts are a disfigurement, and the majority of them prove a great inconvenience, especially when they form on parts where most offensive, such as the teats or lips. Some stockmen appear to take practically no notice of warts, and allow them to grow to great sizes on the cows. This is a sign of great carelessness on the part of the person in charge of the cows, as the larger the warts are and longer they have been growing, the more difficult will their removal be. In this case it is painful to the cow when milked, therefore warts and chaps should be got rid of as soon as possible. Many people fail to get rid of warts because they think it can only be done with great difficulty or by tearing the wart bodily away, but this is not the case. When cows are milked twice a day it does not seem to afford much opportunity to get rid of warts. To use any substance of a poisonous nature for the wart is dangerous in many ways. When the teats are chapped only, some kind of soothing ointment should be applied, and for this purpose carbolized vaseline, and other preparations may be procured from the chemist. This will heal the teat up in a short time, and allow the milking to be carried on without any discomfiture to the cow. In the case of warts when small they can be generally got rid of by touching them with caustic soda. Another simple remedy, and one which in many cases has been found to be successful; rub the wart with vinegar, then while it is still wet dust it with dry carbonate of soda. If this is done after each milking, the warts will gradually get smaller, and finally disappear. —C. W. Walker-Tisdale.

Every one that leads others to read and keep up with progress is a true benefactor to man. Only those who keep up with the world's progress can hope to hold their own in the struggle of life. Let us induce others to keep up with the procession.

Amatite ROOFING Needs No Painting

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The wearing surface is composed of a pitch-concrete made by embedding crushed mineral matter into a tough pitch matrix.

Rain has no more effect on the pitch than it has on the mineral, and year after year Amatite roofs give perfect service without any paint or care.

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Creonoid *Lice Destroyer and Cow Spray*
Creonoid sprayed on cows keeps away flies. Use it before milking and cows will yield better.

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Save money by using this black paint wherever the color is no objection. Elastic, heat-proof, durable. Use it for "rubber" roofings and all exposed iron and wood.

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HERD BULL
"Canada's Jethro Bass"

CANADA'S JETHRO BASS (19383 A. G. C. C.) (380 C. N. R.) Weight at yr 10 mos. 1075 lbs.

Jethro Bass (11366 A.G.C.C.) Sire of Rose of Langwater, 751 lbs b. fat
Sire of Langwater Dairymaid 651.5 lbs fat.
Half brother to Dolly Dimple, world's record 3 yr old heifer, 906 lbs. b. fat.
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Imp King of May, (9001) (A.R. 72) Sire of 9 A.R. cows.
Sire of Langwater Hope, 2 yr. old record 773 lbs b. fat.
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FOR SALE—Several Guernsey bull calves sired by Canada's Jethro Bass.

T. D. BLAIKIE, Great Village, N. S

Warm in Winter Cool in Summer

Interline the walls, floors and ceiling of your house with

"Sovereign" Sheathing Felt

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and you will find it much easier and cheaper to maintain an even, comfortable temperature within, all the year round.

SOVEREIGN Sheathing Felt does more than stop the wind—it acts like a blanket in the wall and effectually prevents the heat from leaking out in winter or filtering in during the hot summer days.

Made of the same enduring materials as RU-BER-OID Roofing, it will not rot, dry out or crack, but will give permanent protection.

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Standard Paint Co. of Canada, Limited
Montreal-Winnipeg-Calgary-Vancouver

Pure Bred Poultry for Profit.

(Continued from page 539)

circumstances and fancy, I procured a trio of good white Wyandottes. Shortly afterwards I got four more pullets of the same breed and later I bought 12 high grade Barred Plymouth Rocks.

As I had a nice white Wyandotte cockerel I penned the Wyandottes by themselves anh saved the most uniform eggs for hatching purposes. By the 25th of April I had set the first hen and by the fourth of May I had seventy-five eggs under five hens which hatched out seventy-two nice chicks which I raised until fall.

In October I made some fattening crates in which to put the cockerels to fatten. In five or six weeks I killed them and sent them (over 200 lbs. in all) to Halifax and received 18 cencs per lb. Some of the birds dressed from five to six pounds.

As I had to buy all the feed for them, I kept a strict account of every item and by December 31st I found that I had a nice little profit.

I selected three of the best hens and twenzy-four nice pullets which commenced to lay on January 10th, 1911. From these I raised 68 chicks and in the fall the cockerels were prepared and sold as before but for 20 cents per pound. On December 31st my profit was $36.00 over cost of feed.

In 1912 I had a flock of thirty, twenty-five of which were pullets. I only raised fourteen chicks, seven of which dressed 33 pounds in October and sold for 20 cents per pound. The hens laid 336 dozen eggs and by December 31st, I had a profit of $46.00 Each hen earned over $1.50 over and above her feed and care.

If I could have got the prevailing prices for eggs in Springhill or Amherst I could have done much better.

I purpose continuing with hens and believe I can make them earn over $2.00 per head over and above expenses. I have now as fine a flock of White Wyandottes as I think one can find anywhere in Nova Scotia or perhaps in the whole of the Maritime Provinces. My flock is headed by a nice cockerel, one of the blocky style, which weighed eleven pounds in December, 1912. I now have two hens coming off with twenty-five chicks from twenty-six eggs. In the face of numerous evidences of this kind I often hear people say that pure bred stock is no good and that they are more weakly and not so thrifty as crosses and mongrels. For my part, I have no use for either a mongrel or a cross, if it can at all be avoided.

I often think of a statement that Prof. Hare, of the Poultry Division, Ottawa, made at a Nova Scotia Farmers' Association meeting at Windsor, N. S., some years ago. He said: "People wonder why their hens don't lay. If one were to look at their flocks he would find a combination of all the different breeds of hens that has ever been known to mankind since Noah's Ark moved to Mount Ararat."

My advice to any person beginning with poultry is: get good pure breds of whatever kind you fancy and select the very best from these. Then subscribe for the Maritime Farmer and through its columns keep in touch with the methods practiced by other successful poultrymen. By following this advice you will be able to make the henery one of the most paying farm assets.—J. H. Carter, South Pugwash, Cum. Co., N. S.

Egg Dealers Plan Radical Change

That the system known as the "case count which has prevailed in the egg trade for a number of years provides no discrimination whatever, and that under it the producer, with no reflection on the hen, is not encouraged to market an article of high quality, was the decision come to yesterday afternoon in the rooms of the Board of Trade at a largely attended meeting of the egg trade of the Provinces of Ontario and Quebec. The remedy for this state of affairs was suggested as taking the form of an Eggs Marks Act, similar to the act governing fruit. The formation of a new produce association was also proposed.

Determining means whereby consumers and merchants could be protected against the marketing of stale and rotten eggs was the primary object of the meeting. Under the present system when bad eggs are found in the cases there is no recourse for the dealer to take, and the opinion of the meeting was that the "case count"—where a flat rate is quoted, stale and bad eggs commanding just as high a price as those of the highest grade—is equivalent to placing a premium on careless and dilatory methods in the productian and care of this product. Moreover, it was pointed out that the country storekeepers received no encouragement to market an article of high quality.

The opinion was unanimous that legislation should be secured to prevent the sale of such products and full approval was given to the proposal to adopt a new system whereby due discrimination should be made between good and bad eggs. The following resolutions were unanimously adopted:—

Resolved, "That it is the concensus of opinion of those assembled in this meeting that the greatest need of the Canadian egg trade at the present time is the passage by the Federal Parliament of an Egg Marks Act, similiar to the Fruit Marks Act; such act to make unlawful the buying, selling or trading in rotten eggs and to include such other regulations as may be thought advisable to promote the best interests of all concerned.

Resolved, "That the egg dealers assembled here unanimously approve of the proposal to change on June 1, 1913, from the present system of buying eggs to a system of buying only on the basis of quality, and further, we disapprove of paying for any rotten eggs in our receipts after that date.

Resolved, "That the chairman appoint a committee to draft a constitution and to take steps in conjunction with the trade in other provinces to form an association to be known as "The Canadian Produce Association" with a view to bringing together the city and county wholesale produce dealers, and further, that a meeting be called in Toronto at an early date to give effect to this resolution.

Representing the Federal and Provincial Government the following officials attended at the request of the trade: Mr. W. A. Brown, Live Stock Department, Ottawa; Mr. J. H. Hare, Live Stock Department, Ottawa; Mr. F. C. Elford, poultry manager, Experimental Farm, Ottawa; and Professor W. R. Graham, of Guelph.

The efficacy and the imperative need of a system of payment based upon quality was set forth by these speakers. Their proposal was followed by continued and animated discussion, but through it all it was clear that the majority of the meeting was heartily in sympathy with

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The ladies' suit, illustrated, is one of many in the new Bon-Ton 1913 Spring and Summer Catalogue which shows many stylish suits and unusual bargains. Reference to newest style books, or latest fashion plates of highest priced tailors, in the leading fashion centres, will convince you that the suit illustrated is cut and made along the most fashionable and most correct lines. The material is fine quality imported whipcord in black, navy blue, royal blue, grey or brown—the most stylish material of the coming season. This suit is strictly tailor-made. Coat is 27 inches long and made in semi-loose effect at back with the new cut away style in front. The fashionable rolling collar and revers are carefully tailored. Cuffs and back of coat are ornamented with handsome buttons. Coat is lined with a good quality silk serge giving the garment a very dressy appearance. The skirt has two gores with high belt and back stitched with side plait in centre. Front drapes perfectly with buttons trimmings on both sides. Material, fit style and finish considered, this suit cannot be duplicated in Canada for the price.. **$14.95**

So confident are we of giving satisfaction that, if the suit does not in every way come up to your expectations, you may return it at our expense and get your money back.

If this suit is not what you need we have others and a full range of Ladies, Misses and Childrens overwear and underwear, so send today for the new 1913 Bon-Ton Spring and Summer Catalogue.

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912

this or any other measure that would enable the producers and handlers of this product to curtail, or if possible, entirely eliminate, the enormous and needless loss due to the marketing of bad and deteriorated eggs.

It was further pointed out by certain members present that it would certainly be unwise not to take advantage of the experience gained by a number of the States, notably Kansas and Michigan. What was proposed at the meeting had already been worked out in a practical way in these States with the result of very greatly conserving this valuable product by eliminating needless loss and thus making the poultry enterprises more remunerative for the producer and the price of the product cheaper and its quality more dependable for the consumer.—Extract from "Montreal Gazette."

Home Made Plank Roller.

J. McD.—I intend making a land roller out of plank, and do not wish to have it draw harder than a solid hardwood roller about fifteen inches in diameter and about five feet long. What plan would you suggest building it out of hardwood plank? How thick and how wide would plank be required? What material would be required for frameword? How would axles be placed. I would also like to have a seat on it. A mowing machine seat would be suitable.

Ans.—About twelve years ago, the writer made a plank roller that is still doing good service. The roller was made about 33 inches in diameter as follows:

Take four pieces of hardwood plank 2 ft. 6 ins. long, from six to eight inches wide and one and one-half or two in thickness. Put in the form of a square and halving where the ends come together. Then take two pieces of the same length, from three to four inches in width and of the same thickness and halve them into each other at the centre in the form of a cross. Halve the centre of each side of the square already formed on the reverse side from that halved at the ends, making the mortise the exact width of the cross sticks you have put together. Next halve the ends of the cross sticks referred to also on the side reversed from that halved at the centre. If the work is carefully done you will find that the various parts will go together very nicely and will fairly lock in position. Put two or three quarter inch dowels in each corner and where the cross sticks are mortised. You now have a square with four spokes in it. Now strike a thirty-inch circle using the centre of where the spokes cross as your centre point. Next trim off the corners following your circle as closely as possible and you will have formed a very rigid four spoke wheel. If you make a one-piece roller you will only require two of these wheels. You will also require to make two or three rims as above described, but without spokes to use as reinforcements for your roller to be placed at equal distances between heads of roller. For staves I used hardwood strips two inches wide and one and one-quarter inches thick. I levelled the pieces slightly on the side next the form on which they were nailed. I used ordinary 12 d. nails, one at each place where a stave and heads or reinforcements come together. I got the blacksmith to shrink three hoops made from old wagon tires on the staves, one at each end and one at the centre and it is today as rigid as when it was first made and although it has been in use for twelve seasons it looks as if it were good for at least twelve more. The blacksmith also made two iron crosses with a one-inch hole in the centre, which were bolted at the centres where the spokes crossed. A one-inch iron iron bar was then run through these crosses to form an axle.

The blacksmith also made a pair of standards with a loop in one end to go over the ends of the axle and about 20 inches in length, divided about the loop and turned at right angles at the proper height and bolted to an eight inch plank which ran the whole length of the roller and extended about six inches beyond each end.

A mowing or raking machine seat was then bolted at the centre of this plank. The pole or shafts were also bolted to this plank and braced to suit.

The writer made his roller in one piece, but if he were to build another he would make it in at least two sections as a section roller turns nicer at the corners and does not tear up the seed bed.

A splendid roller may be made in the same way by taking four old mowing machine wheels of equal diameter. Get the blacksmith to drill holes in the rims for you and bolt the staves on them with small tire bolts.

Rockview Farm, the Home of Classy Holsteins.

(Continued from page 533)

26.30 pounds of butter fat in seven days.

Backed by such ancestry, it is no wonder that the little beauty is developing into such an animal of promise. Although not old enough to breed she is now showing a wealth of tortuous milk veins and a little udder so well developed and with such nicely placed teats that if one were to close his eyes and feel he would naturally suppose that the heifer had been bred and was springing.

Mr. Harding is a brother of Harding Bros. of Wish-ton-Wish Farm and as the two farms are only a few miles apart he uses the Wish-ton-Wish bulls Schuling Sir Posch, twice grand champion at Toronto and Sir Mersena Faforit Lad, a winner of first prizes and championships at Maritime shows. The thrifty young calves that our representatives saw in their pens in the Rockview stables were sired by these bulls.

Since Mr. Harding took over Rockview Farm its fertility has been systematically increased but as it is only a small holding and pasture room is limited he will be obliged to increase his acreage in order to make room for the natural increase in his herd.

While the Rockview stables make no claim for protentious dimensions, they can go one better than the average: they are kept scrupulously clean, are well ventilated and there is an abundance of light, factors that tend to the health and comfort of the stock.

A strict record is kept of the producing achievements of the various animals and when a purchaser inquires for stock, Mr. Harding is ready and willing to give the facts and figuress for which the discerning buyer will always inquire.

There are four little Hardings in the Rockview Farm home. They are all interested in their father's herd and although Holstein names are not the easiest in the world to spell they can spell the names of every individual in the herd, although they are only able to yet lisp their alphabet.

DISPERSION SALE OF

High Class and Show Ayrshires

We purpose dispersing our entire herd of pure bred and Grade Ayrshires now on our farm at

FOREST GLEN, Westmorland Co., N. B., on

Friday and Saturday, May 23 & 24

A strict record has been kept of each and every cow in the herd and as the food consumed by each cow has been charged against her production, boarders were quickly spotted and disposed of. This rigorous record keeping and weeding has brought the herd up to a good average producing capacity.

Terms: Under $50.00 Cash. Over that amount notes will be accepted with approved security, bearing interest at 6 per cent for four months.

Sale will begin at 11 o'clock. Luncheon will be served.

For nearly four years this herd has been headed by the richly bred bull "St. Louis King"—29094—a son of the noted Show bull and dairy sire "Pearlstone of Glenora" a many times winner in Canada's leading exhibitions and in 1909 was selected by A. S. Turner & Sons to head their world famous dairy herd at Ryckman's Corners, Ont.

The dam of St. Louis King "Vera of Kelso" is one of a family noted as producers and showring winners, her full sister Lily of Kelso was winner of the Canadian bred class at Sherbrooke, Que., 1909.

St. Louis King is of good size, ideal dairy type and conformation, and a look at the 30 or more of his offspring in this herd (or sale) will convince the most critical that he is breeding true to type and dairy conformation.

JAMES A. TELFER, *Auctioneer.*

Catalogue on application to R. CHESLEY COLPITTS, Manager, Forest Glen Stock Farm, Forest Glen, N. B.

All animals offered for sale have been tested and are free of tuberculosis

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This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Pure bred Shorthorn bulls, all ages. GUY DIXON, Point de Bute, N. B.

IMPROVED BERSHIRE PIGS for sale. Choice Stock.—Highland Stock Farm, Victoria, Car Co., N. B.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

IMP. PURE BRED CLYDESDALE MARE, Sally of Lubas, No. 15506, for sale. Apply, F. E. SHARP, R. R. No. 1., Norton, N. B.

SHORTHORN BULLS FOR SALE whose sires, dams, and grandam were bred in Ontario and Scotland. WALTER EATON, Upper Canard, N.S.

FOR SALE—Well bred roadster (female), bred to foal May 1st, 1913, by a pure Hackney, 8 years of age.—L. M. ANDERSON, Sackville, N. B.

FOR SALE—Four Ayrshire bulls, five to eleven months old from good producing stock. JOHN F. FROST, Hampton, N. B.

FOR SALE—Two yearling pure bred Guernsey Bulls from good size stock. T. D. BLAIKIE, Great Village, N. S.

FOR SALE.—One pure bred Shorthorn bull, eighteen months old, color red, good size. Apply to C. H. RIPLEY, Rossendale, Cum. Co., N S.

STRAWBERRY PLANTS.—Best and most productive varieties. Sold at reasonable prices. Send for catalogue.—JOHN N. CHUTE, Berwick, N. S.

FOR SALE—Registered, Ohio Improved Chester Pigs, sire from largest strain and oldest herd in Canada. A. A. H. MARGISON, East Centreville, N. B.

CHEESEMAKER—Wanted for Season, 1913, at the Salmonhurst Cheese Factory. Apply stating particulars to A. J. JENSEN, Salmonhurst, Vic. Co., N. B.

HOLSTEINS FOR SALE—Six bull calves ranging in age from three weeks to five months old. Also an aged bull, very quiet. JEFFRIES BROS. Sussex Corner, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

FOR SALE—One pure bred Jersey bull, one pure bred Shorthorn bull, each 16 mos. old, sires of both from College Farm, Truro. Write A. JOLLYMORE, Brule Shore, N. S.

VALLEY FARM HOLSTEINS FOR SALE—One pure bred Bull calf dropped in April 1912 1 bull calf dropped in October from good producing stock. W. G. CAMPBELL, Salisbury, N. B.

WANTED—The name and addrees of the party who mailed Postal Note No. H. 998512 at Moncton, N. B., on March 15th, so we may give proper credit for same.—THE MARITIME FARMER, Sussex, N. B.

ENGINES for all purposes such as pumping water, spraying, wood sawing, motor boats, etc. Cut out the drudgery and let the engines do the work.—GUARANTEE MOTOR CO., 371 Bay N, Hamilton, Ont.

EGGS FOR HATCHING, One Dollar per setting. Single Comb Brown Leghorns, White Wyandottes and Houdans. See our win at Amherst in Christmas issue. WOLFVILLE POULTRY YARDS, Wolfville, Nova Scotia.

FOR SALE—Ohio Improved Chester White Pigs, registered. Five dollars at five weeks. Dam sired by first prize boar at Toronto and London exhibition. Pairs furnished not akin. WALTER S. COGSWELL, Centreville, N. B.

STRAWBERRY PLANTS—We have four varieties this season. Senator Dunlap Heritage, Pride of Michigan and Stevens Late Champion. We are also booking orders for Pure Bred White Wyandotte eggs for Setting. All orders promptly attended to. Prices on application. WM. F. NEWCOMBE, Brooklyn Corner, Kings Co., N S.

GUERNSEY BULLS FOR SALE—We have on hand 1 bull 2 years old in May, 2 bulls 14 months also 1 ten months. All good quality stock and from good dams and sires. We must sell to make room for young stock and will sell right. Come and see them or write us. WILLIAM COX & SON, Canard, Kings Co., N. S.

FARM AT BARGAIN in Annapolis Valley. Mature orchard, picked 1000 bbls apples, tree run. Young orchard. 17 acres dyke, excellent house, pasture and timber. Episcopalian and Baptist Churches, High School, D A R. Station and stores within 1 mile. Absence of owner demands immediate sale. Terms easy, $6,500. GEORGE SANDERS, Round Hill, N. S.

Egg Trade Investigation.

During the past year the Live Stock Branch of the Department of Agriculture has been engaged in a preliminary investigation of the Canadian Egg Trade. Certain facts relating to the enormous loss that is charged back against the farmer and the unsatisfactory status of the trade as a whole have been collected and presented in Bulletin No. 16, entitled "The Care of Market Eggs." Realizing, however, the necessity of securing more detailed information before inaugurating any policy having for its object the bringing about of improvement in the condition of the business, the Minieter of Agriculture has authorized the appointment of J. H. Hare, B. P. A., of Whitby, to undertake the necessary investigation.

Mr. Hare has held the position of District Representative in Ontario County, Ont., for the past four years. He was born in Cobourg, Ont., and received his early training on the farm. He entered the Ontario Agricultural College in 1904 and graduated in 1908. Since taking up the District Representative work in Ontario County he has devoted much time and has been very successful in the organization of co-operative egg circles. Not only has he paid particular attention to conditions of the egg trade as they exist in the rural districts, but he has also made a close study of poultry business in general, and has written numerous articles, among which is a bulletin now in press. By virtue of his technical training and his practical experience, Mr. Hare is, therefore, well qualified as a specialist in poultry work.

Mr. Hare will first be concerned with the collection of all data that is available on the grading of eggs as they have been received at wholesale produce houses of Canada during the past two years. The information thus obtained will be used to form a basis for such action as may be taken by the Government in initiating a movement to improve and properly regulate the trade.

Mr. Hare will be located at Ottawa but will travel extensively throughout the Dominion, first in the east and later in the west.

Promoting the Cattle Industry in South Africa.

A South African correspondent of in Hoard's Dairyman, says that he yal Mail Steamship Co. which has secured the contract for carrying the mail between England and South Africa, has arranged to carry pure-bred live stock from England to the Commonwealth free of all charge except attendance and feeding. Formerly the charges imposed for such service were prohibitive to all except rich men. What is now being done will, it is said, give a great impetus to the cattle and dairy industry of South Africa. That Commonwealth may, indeed, in the course of a few years become an important factor in the world's supply of meats and dairy products.

Pure Bred Jerseys at Auction Sale

On Saturday, May 10th, 1913, at 2 o'clock p. m. at my residence, Norton, N. B., four cows, one two-year-old heifer in calf, one yearling heifer, three calves, and one two-year-old bull, all pure bred Jerseys. Also several grade cows, and some colts, carriages, farm implements and grain.

Dr. H. G. FOLKINS, Norton, N. B.

SHORTHORN CATTLE

To avoid inbreeding am obliged to offer my splendid, dark red, imported stock bull for sale. Bred by The Right Hon. Earl of Moray, Doune, Scotland, is of the low down kind and represents the best quality and families of this breed in Scotland. His color alone is worth his price to anyone wanting a head for a herd.

J. E. Hetherington, Codys, N. B.

JOHN RICHARDS,

Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand. Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep-milking families.

HOMESTEAD FARM

Holstein-Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

LOGAN BROS.
R. R. I.
Amherst, N. S.

Long distance 'Phone

HEREFORD STOCK FARM

Let us know how much money you want to invest in Hereford bulls, heifers, or cows with calf by her side or bred to "Prime Lad".

Buff Orpingtons and White Wyandottes, good laying and Utility strains, eggs $1.50 per 13.

R. R. BLACK, Amherst, N. S.

Cattle and Sheep Labels

Size	Price doz.	Fifty tags
Cattle.....	75c	$2.00
Light cattle...	60c	1.50
Sheep or Hog.	40c	1.00

No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample mailed free

F. G. JAMES, Bowmanville, Ont.

$3.00 and $1.25

Per setting is all I am asking for eggs from my 2 pens of Noted Prize Winning Rose Comb Rhode Island Reds. I will guarantee you cannot get eggs for less than $10. from breeders outside the province that will hatch chicks as good as my $3.00 pen. This pen is headed by 1st. Amherst Cock mated to 10 winning females. Pure American Beauty Strain. Will sell pen for $50.00, any 4 of the pullets are worth this.

GEO. H. SEAMAN, MONCTON, N. B.

Strawberry Plants

I have for sale the Senator Dunlop. This variety is acknowledged by commercial Strawberry growers to be the best and earliest market berry raised in the Maritime Provinces. Plants tied and boxed ready for shipment $3.50 per thousand. In lots of 5000 or over $3.00 per thousand, cash with order.

MANNING ELLS, Port Williams, N. S.

CORNING TURNIP SEED
FOR SALE

About 1000 lbs. of the famous Gr. Top "Corning" Turnip Seed, crop 1912, grown from selected roots. Price 50c., postpaid 55c.

S. P. GOUDEY, Yarmouth, N. S.

FOR SALE

Three pure bred Holstein Bulls, 2, 9 and 16 months old, from good stock and good size. Inspection invited.

CAMPBELL BROS., Props.
McKay's Siding, Col. Co., N. S.

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

NORTHERN GROWN TREES

Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery—no agents. Send list of your wants for prices, etc.

E. L COLPITTS
Petitcodiac, New Brunswick

Holstein Bulls For Sale

We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

Price if taken before April 1st, $40.00

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
Loch Lomond West Nova Scotia

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

C. C. H. EATON, Canard, N. S.

Raspberry Plants !

Wishing to remove all Raspberry stock from ground they now occupy, we are making the following low prices for April: King (early), $1.25 per 100. The celebrated "Herbert," $2.00 per 100. Hiram, $1.00 per 100. Cuthbert, $1.25 per 100. Eaton (new), $1.50 per 100. Any variety mailed, postpaid, 50c per doz.

Orchard Hill Farm,
Brown's Flats, N. B.

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.B.

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PRODUCE COMMISSION MERCHANTS

141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

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Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
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Fullline of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

Say I Saw It in The FARMER

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire attle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

Stewart Bros., Alliston, P. E. I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.

Shropshires

C' A. Archibald, Truro, N. S.

POULTRY.

Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

Springbrook Ayrshires !

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

SPRINGVALE FARM AYRSHIRES

Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd.
Young Stock For Sale.

FRED S. BLACK, Amherst, N. S.

" HILLSIDE STOCK FARM "

We have for sale at right prices four Ayrshire bulls from twelve to fifteen mos. old. They are sired by the champion bull of 1911; a son of the renowned Scotch champion "Spicy Sam."

Prescott Blanchard, Truro, N. S.

Lawndale Stock Farm Shorthorns

We offer at present a few young heifers and bulls, as well as three cows, all bred in the purple.

Information cheerfully supplied to enquirers, Address,
I. M. LOVITT, M. D., P. O. Box 352, Yarmouth, N. S

Sea View Stock Farm

offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

Sgd. J. D. IRVING,
Buctouche, N. B.

ROSE BANK FARM
Jerseys & Yorkshires For Sale

Bull calves by Foxhalls St. John O'Dreamwold, and young pigs, both sexes, ready to ship in April.

JOSSELYN & YOUNG, Silver Falls, St. John, N.B.

FOR SALE !

A few choice White Leghorn Cockerels from prize stock. Eggs for hatching all breeds. Send for catalogue.

Maritime Poultry Supply Co.
MONCTON, N. B.

Ayrshire Bull For Sale

King of Islabank—381273

A choicely bred young bull rising 2 yrs, sire Cherry Bank Sunrise, dam Crouchville Lass that sold at the dispersion sale at Hill Grove Farm last May for $260.00, this is a rare chance to get a first class dairy bull.

For price and particulars write

EDWARD RILEY,
Coldbrook, P. O., St. John, N. B.

FOR SALE

We have a number of choice cockerels and pullets of Barred Plymouth Rock, White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Eggs for hatching $1.00 per setting. Apply to

Walter McMonagle & Sons, Sussex Corner, N. B.

Pure Bred Ayrshire Bull Calf

Dropped Jan. 12th, 1913. Bred from a daughter of Barcheskie Kings Own. Come and see him and his dam. Stables near the station.

ALLANDALE FARM, - Hampton, N. B.

We Duplicate All Infertile Eggs

White and Columbiam Wyandottes, Single Comb White Leghorns, and Light Brahmas. We use trap nests. In business over 30 years. Brahma eggs, $3 for 15; $5.00 for 30. The other varieties $2 for 15, $5 for 50, $10 for 100. Address,

MICHAEL K. BOYER, Box 27,
Hammonton, New Jersey.

Commercial Strawberry Plants
FOR SALE

Senator Dunlap — Perfect blossom, very vigorous, good size, good quality, very productive. $3.50 per 1000 f. o. b.
Sample—Imperfect blossom, very large, very productive, fair quality. $4 00 per 100 f. o. b.
Cash must accompany order.

L. D. ROBINSON,
Berwick, N. S.

EGGS FOR HATCHING

From prize mating Rose and Single Comb R. I. Reds and Buff Orpingtons and S. C. Brown Leghorns. Eggs $2.00 per 15. Send for mating list.

W. H. HENRY, Shubenacadie, N. S.

ELMWOOD STOCK FARM.
Holstein Friesian Cattle.

FOR SALE—Five pure bred Holstein bulls ranging in ages from two months to six months bred from some of the very best dairy stock. Also some heifers and a few cows. Correspondence solicited. Inspection invited.

W. L. ETTER, Prop.
Shubenacadie, N. S.

Eggs For Hatching
Columbian Wyandottes

Finest exhibit in mating. $3.00 per 15. We offer special prize of $1.00 for best cockerel and $1.00 for best pullet from above mating at next Amherst Fair. Barred Plymouth Rocks, McDonald College Utility strain, 75c per 15. $3.00 per 100.

Orchard Hill Farm, Brown's Flats, N. B.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

DROP A CARD

KINGSDALE MATING LIST
Our mating list is now ready for 1913.

KINGSDALE POULTRY SUPPLY CATALOG
Fully illustrated 60 pages all up to date.

EVERYTHING FOR THE POULTRY KEEPER

KINGSDALE POULTRY & SUPPLY CO., SUSSEX, NEW BRUNSWICK

WISH-TON-WISH STOCK FARM
Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

AYRSHIRE BULLS FOR SALE

I am offering a two-year-old bull for sale. He is out of the famous cow White Heather of St. Annes. I have also two other choice bulls that are fit for service. Correspondence solicited.

J. FRANK ROACH, - - Sussex, N. B.

Custom Hatching and Day Old Chicks

We can supply Day Old Chicks from our Standard Utility Bred B. P. Rocks and White Leghorn Pens at rate of 20c apiece for April and 15c apiece for May delivery. Prices for Hatching Eggs supplied by customers is $3.50 per 100 eggs in lots of 75 or over.

With our modern Hatching Machinery, including new 3000 egg Candee Sectional Incubator, and long experience in the business we feel we can give satisfaction. Some 250 and 360 egg Model & Prairie State Incubator for sale.

Kinnear Poultry Company, Ltd., Sussex, N. B.

BRAMPTON JERSEYS !

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

YOUNG HOLSTEIN BULLS !

We have lots of them, all ages, from one to six months. Show Calves from our best cows. Now is the time to get your choice. Females all ages, bred for the fall shows and dairy tests. Some excellent high grades fresh or springing. Also Three Draft Fillies rising two, three and four, and a quantity of Seed Potatoes.

LEA & CLARK, VICTORIA, P. E. I.

Rockview Farm, Welsford, N.B.

(Wm. S. Harding, Jr., Proprietor)

High Class Holstein Cattle. Young stock bred from heavy producing and showing ancestry for sale.

Cobequid Farm Holsteins

Present offering. One fine bull fit for service and several bull calves three or four months old, sired by Helbon Dehols Prince, and from cows that are producers. Among them one whose two nearest dams average over 26 lbs. butter in 7 days. For particulars and prices write

Samuel Dickie & Son, Central Onslow, Col. Co. N.S.

BELLEVIEW STOCK FARM
Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

C. A. ARCHIBALD, - Truro, N. S.

BARRED ROCKS
(Exclusively.)

Never beaten out in 15 years of competition. Now holders of Silver Cup for Best Birds at Amherst Fair, 1912. Offering eggs from six pens—every bird an exhibition specimen. Prices cheertully given on application. A few colonies of Bees for sale.

CRAIG BROS., Amherst, N. S.

Elmwood Stock Farm

offers for sale Bull Calves, from five to six months old. They are straight and right. Well marked, more white than black. From my stock Bull, Boron Posch (4852) which has won a number of 1st prizes at our Provincial shows.

W. L. ETTER,
Shubenacadie, N. S.

"Use My New 'George' 100 Year Metal Shingle on the Roof and My Zinc Covered Corrugated Iron on the Walls of your Barn"

This is the Shingle I Recommend for Barns

"MY son, George H. Pedlar, Jr., invented this big shingle, just before he died. He planned a big shingle for big roofs, to lay in one-tenth the labor time needed for cedar. We made up and tested them for three years. I recommend the 24 x 24 inch 'George' shingle for good-size barns. It costs the same as my 16 x 20 'Oshawa' shingle per square. Both are in 100-year metal and are fireproof, lightning-proof and sunproof. These two shingles are the triumphant result of 50 years of labor in making good barn roofs."

"I HAVE been making metal shingle for farm barns for half a century. I found recently a hundred-year metal for my shingle. It surpasses and outclasses anything else in the world that a man can use for a barn roof. You want a 100-year roof on your barn, at about the cost of cedar shingle, don't you? Of course you do."

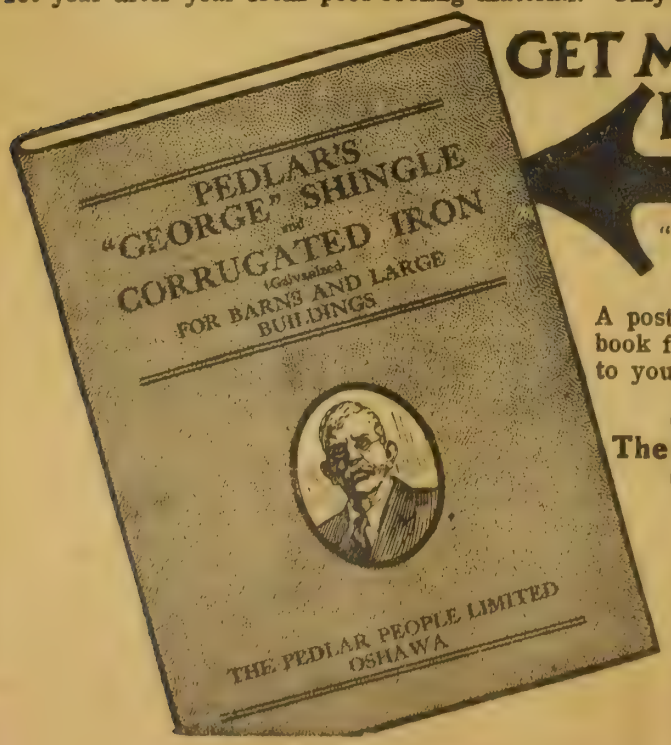
"Well, that means my shingle. My metal shingle will cost any farmer less to-day, and be lighter and stronger, than cedar shingle. This is because my shingle saves many dollars for labor cost in laying. My shingle needs no paint. Once this cost advantage did not exist. But now-a-days labor cost of laying is very high. Wood shingles are of poorer quality and advanced cost. All told, my roof on the barn itself is the utmost value your money can buy—is to-day's most economical roof."

"A barn built without my shingle is going to cost you more in actual dollars to-day, and next year, and every year, than you need to spend. It is going to be a leaky barn sooner or later. You will pay higher fire insurance. You will take bigger fire risk. You will either pay out money for roof repairs, or see your hay and grain rot year after year from poor roofing material. Only my shingle in metal will stop these troubles from the beginning. It will give service for one hundred years. Besides, you actually pay out less money for my roof, when laid, than for a cedar-shingle roof laid and painted properly."

"But that is not all in lowering barn cost. The time has come to stop using lumber sidewalls. Labor and lumber is too expensive. Use my galvanized, corrugated iron for the walls. It is fireproof and strong. It is applied swiftly in 8-ft. sheets, saving days and days of wages. Besides cutting out painting, every sheet of my iron in a brace, that strengthens your barn framing against sagging and wind pressure. A barn with my shingle and my sidewalls in metal costs less than the same barn with cedar shingles or roll roofing and lumber walls, when you figure in labor and paint. Use my corrugated iron for your barn walls, and my metal shingle for your roof—save money, get a lightning-proof barn, and get a longer-lasting barn than any other way."

"Write my nearest office about your new barn or remodelling your present barn. Tell us the dimensions. We will tell you what shingle and walls in metal will cost you and what they will save in labor and paint."

"Send them a letter to-day. I now have two sizes of metal shingle for you. My big shingle, the 'George,' is 24 x 24 inches. My 'Oshawa' is 16 x 20 inches. According to the size of your barn, we will tell you the right shingle to use. Even the big 'George' Shingle does not cost more per roofer's "square"; your roof and its shape determines the size needed. My corrugated iron goes with either shingle."



GET MY NEW PEDLAR BOOK FREE

"WHY not have my little book? It shows how a barn is built with my shingle and corrugated iron siding. It is a straight talk about making a better barn at less cost than the old way, and making it fireproof as well. A post-card will bring it. My nearest branch will send you this book free. I have just written it. It is my personal message to you."

G. H. Pedlar

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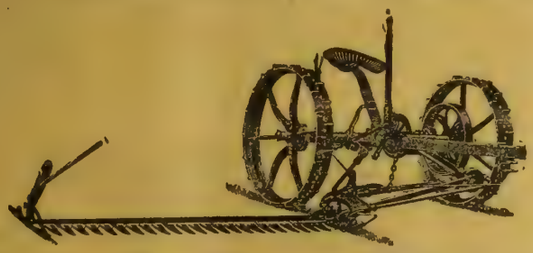
Vol. 18. SUSSEX, N. B., MAY 13, 1913 No. 15

Have Frost & Wood help in your hayfield

THERE is an experience of 75 years behind "Frost & Wood" farm implements. This means that few farm machines have the benefit of so many suggested improvements by so many practical farmers.

When you buy a "Frost & Wood" machine or implement, the purchase you receive has in it details, materials and features of design that make it as nearly perfect in service and dependability as skill can make it. You cannot be in error, if your implement bears the name "Frost & Wood."



Frost & Wood Mowers

The long pitman on this Mower avoids broken knives and wear at the knife head. The drive from the main wheel is by means of an ***Inside*** gear operating an ***Inside*** pinion. This keeps two gear teeth in contact with two pinion teeth. and reduces wear. These close-meshed teeth start the knife immediately, and prevent choking at the cutter bar, broken knives and sections, and strain on the Mower and team.

"Frost & Wood" Mowers have roller bearings on the power shafting, are easily oiled, and give years of service like a new Mower on account of the care taken in building each part.

Frost & Wood Tiger Rake

We have put a "perfect" Rake on the market—the "Tiger." In the first place, it is strong and simple. We support the frame with a truss on the larger sizes, and make this rod of heavy steel. The teeth are perfectly seated in the tooth bar, and are of the best steel. They are tempered in oil and are so carefully shaped that they slip along the ground, missing nothing, but still not digging into the sod.

The foot-trip is an easy-working cog device, operating at the centre of the axle where the weight of the load is most nearly even. Everything is the best material obtainable, and the "Tiger" will give long service and fullest satisfaction. See the catalogue.

Write us for Catalogue or see the Frost & Wood Agent about any Farm Implement you need, especially if you seek years of perfect service in your machinery.

Head Office & Works: SMITH'S FALLS ONTARIO

The Frost and Wood Co., Limited

SAINT JOHN, -- NEW BRUNSWICK

Branches at Montreal Que., Truro, N. S., Charlottetown, P.E.I.

May be the dough had forgotten to *rise.*
Or had risen quickly overnight and *fallen* again—
To rise nevermore.
Twas *weak* flour, of course.
Meaning weak in *gluten.*
But FIVE ROSES is strong, *unusually strong.*
With that *glutinous* strength which *compels* it to rise to your surprised delight.
Stays risen too.
Being coherent, *elastic.*
And the dough feels *springy* under your hand.
Squeaks and cracks as you work it.
Feel the *feel* of a FIVE ROSES dough.
Note the wonderful *smooth* texture—soft—*velvety.*
Great is the *bread* born of such dough—
Your dough!
Try this *good* flour.

Five Roses Flour

Not Bleached — Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED MONTREAL

Talking Machines, Sewing Machines, and Used Organs

at

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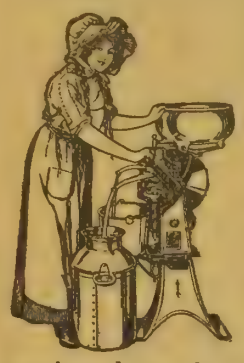

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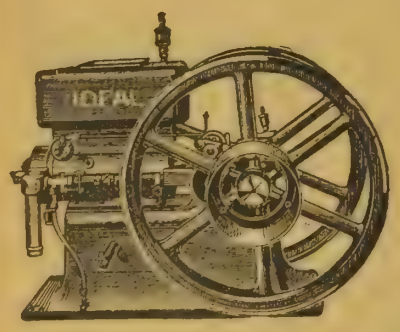

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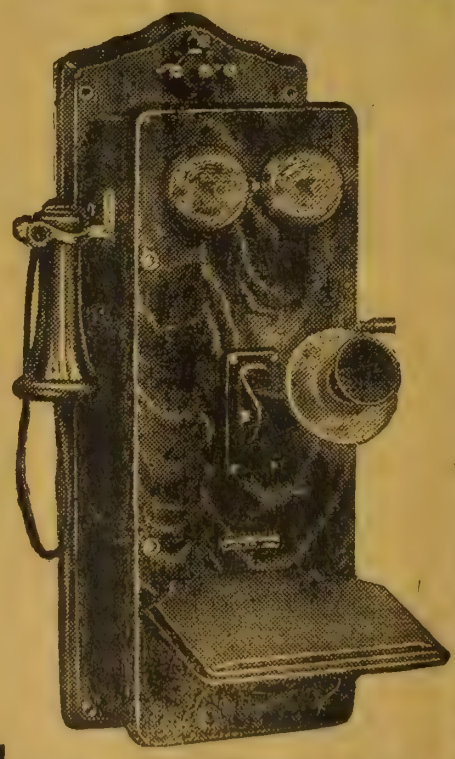

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THE MARITIME FARMER

AND

CO-OPERATIVE DAIRYMAN

Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 18. SUSSEX, NEW BRUNSWICK, MAY 13, 1913. Number 15.

How to be Successful in Raising Dairy Calves

Experience of a Practical Breeder and Exhibitor

By W. M. Lea, Victoria, P. E. I.

THE Maritime Provinces being a live stock country, and as all classes of meat-producing animals are steadily raising in value, the young stock, especially hand raised calves should be given much better care than is now the custom in many parts of our provinces.

Given all they can profitably consume two-thirds of the two-year-olds' weight will be attained the first year. This will be their cheapest gain, and it will influence their usefulness as mature animals and will largely decide as to whether profit or loss is realized in their raising.

Before the advent of the hand separator it was difficult to rear calves on skim milk. In cheese factory districts it must be a hard proposition yet. Up to the time we started a hand separator on the farm, we for years patronized a creamery the entire year, but as the milk was often returned sour or badly tainted, always had to be heated before feeding, and was more or less watered we found it anything but satisfacory, and never could grow the calves properly. In fact, it often made culls of them, even after we had fed for weeks on whole milk at the start.

However, there is no trouble to raise good calves every time with a hand separator. Never since we started using one have we had a stunted calf much less lost one. We have followed the same system for the past four years, and, while it may not be scientifically correct, it is simple enough to be easily followed, which is a strong point in any system.

Some Old Timers in the Orchard of A. R. Gorham, Gorham's Bluff, N. B.

We allow the cow to calve in her stall, as the stable is warmer than any other part of the barn. We turn the cow loose to dry out if cold weather then give her a little feed in her manger to attract her attenion and quietly remove the calf.

When it is about twelve hours old we milk enough from the dam to feed it and teach it to drink. This is a very simple process if the calf is hungry, and I have seldom found it necessary to give it the finger either. Have an assistant cant the pail. Then take the calf's head in one hand to force it down to the milk then with the other hand, instead of letting the calf suck your finger, grasp it below the eyes, so your thumb and finger can spring the mouth open and let it close on the milk just as it comes in contact with it when it will almost always grab at it again and go on drinking without any further trouble.

If the calf comes strong and in good flesh we feed whole milk for two or three weeks but if thin, whole milk fed a longer time, or until it will make good veal, that is our only rule. "Whole milk until it is in good flesh whatever time that may take."

We then start to gradually change to skim milk which the calf will be usually getting entirely when six weeks old. By this time it will be eating some hay, grain and pulped turnips. While we can give about all the whole milk they can consume we must be very careful after the fat has been removed, and it is always better to weigh the milk to each calf; one over-dose may start scours, and a little time lost weighing will save a lot of time dosing calves and is better for the calf.

We never put any kind of linseed mixture, gruel or anything at all in their drink. The theory of adding some kind of fat to take the place of the butter fat removed sounds all right and it may be the proper thing to do if we could be always sure of getting the proper amount at the right temperature; but it means extra work and it has been my experience that it is better not to bother with it. Linseed meal is costly and I would rather feed its worth of extra whole milk and teach the calf to eat all the whole meal it will as early in life as possible. To encourage this we always allow our calves to run loose together. The little fellows start to pick at the feed when they see the others at it and it is surprising how soon they will start eating under these conditions. We have fed as many as eight to ten together without bother by always feeding the same pairs in turn. They soon learn to count when their turn comes if you adhere strictly to this rule and enforce it with a good switch. I never noticed any evil results from them sucking each other.

Twice a day we give what pulped turnips they will clean up with a mixture of crushed grain and a little oil meal increased as the calves grow until they flesh up. We are careful to feed the milk always warm to calves under three months. Cold milk will cause trouble almost as quickly as anything.

Another matter of importance is to keep a look out for indications of scours and cut them on their supply of milk for a feed or two is all we are ever required to do. Raised by this method the calves will grow fast but may be rather thin up to three months when they will be eating enough dry feed to start to flesh up and you can make them as fat as you wish at six months by simply incresing the grain ration.

After the calf is four or five months old, we usually add some water to its skim milk and feed twice a day as the older cattle are fed. Up to about three months we must not expect very rapid growth as we must feed carefully and keep the calf's stomach right. After this age we can make a big yearling of it if we increase the feed as it grows. This is where most people fail. They wean the calf before it is old enough to make good use of other feed. There is no animal on the farm that will better pay for skim milk feed until one year old, than a calf, and there is no feed like skim milk for keeping a young animal thrifty and growing fast. We feed it usually up to a year old. We have had calves so raised that weighed 1060 pounds at this age and always have them large as yearlings.

It has often been stated that there is no feed left in milk after the cream is all taken out by being put through a separator, and some are of the opinion that it is impossible to rear a calf without feeding a large quantity of whole milk. I had occasion to test this matter two years ago.

A grade bull calf was dropped shortly after returning from the shows, and as everybody was busy getting the corn in the silo we decided to put off slaughtering it until a more convenient season or until the cow's milk was fit to use. After a few days when we began to separate her milk we put the calf at once on skim milk entirely to keep it from starving until we could attend to it, but the weather being fine and everything in a rush he was left so long we just went on at that and that calf never got any whole milk in his life excepting the colostrum. He just lost the usual treatment for the first six weeks. We kept him and he took chances amongst the others and was fed afterwards just as they were and when killed at fifteen months dressed 450 pounds baby beef. This calf was pretty badly scoured at first but never had any medicine, only was cut in his milk occasionally but he had some indigestion. He was thin up to six months and dropped some back of the shoulders from which he never recovered but he grew all the same. The skim milk along with his other feed up to a year was what made him grow.

We find it a good plan to have a small pasture well fenced, convenient to the buildings, to turn the calves in at night. They are fed before going out at night and after they come in, in the morning, and we always have a good strip of Mammoth turnips left in the field our green feed was used from, to turn the calves in in the latter part of September. Turnips are a great feed. All the calves can eat is good for them and after they get accustomed to them you can drop both milk and grain and they will

gain in flesh. We allow them to run over an acre or more of them and eat all they want and stay out until the snow flies good and plenty. They will be found husky, thrifty and in great shape to winter. While it costs some money to grow calves this way we find it cheapest and best to do so. Two pounds grain a day is about what a bunch of three to six months calves average and we don't feed over 1,000 lbs. per calf the first year, which is not much to an 800 to 1000 lbs. calf. Our calves are, of course, pure bred Holstein calves that are dropped usually from September to February. I think many June and July calves will do equally as well if fed and cared for the same, but they can never with us, get as good attention as the winter calves and we seldom have them come at that season.

Calf feeding, like everything in the stock line, should only be done by "an observing person," one who will always notice anything going wrong while there is a chance to better it, and who has good judgment in increasing feed. A great many calves are starved while young for want of hay and grass. I have seen them confined in all sorts of enclosures where the grass was all eaten off or dirtied by other stock and poultry. An old orchard seems to be a popular place to confine them and any kind of feed seems to answer the purpose.

A lot of silly superstition yet exists about their calf raising. I have often been amused to hear pretty level headed men talk about their calves not doing well this year somehow, they just didn't do well. As if this was a business outside of their control, such as the weather, and if the case of a young bull, they always put it down as that they must have fed him too well. In the larger breed of cattle it is difficult to feed too well if the foods are properly balanced. Animals, are sometimes for a more or less short time off feed, on feed that may be too violent a change but are rarely ever fed more than they require to make proper growth. Few unexperienced men seem to realize what an animal that will reach 1000 pounds at one year old consumes. That is a big average gain per day and they can't eat roughage enough to acquire it. One thing is certain, if we are to have better cows to surplant all those condemned by the Cow Testing Associations, we have to have a radical change all over the country in the method of feeding calves during the first two years of their lives. No man can excuse himself with the plea that he cannot afford it. He must not attempt to rear more than he can find feed for continuously. Nothing is more foolish than spasmotic feeding for short periods and changing abruptly. We must get on to some system that is grinding surely all the time.

Prepare well in advance for every emergency and have feed for all you attempt to keep. Nothing is so suitable for the live stock interests of any county as a cream gathering creamery operated the year round. Where ever you see them you will invariably find the best stock, and where cheese factories are only operated for the summer months I would like to see a butter plant operated a few months at least, spring and fall. It would give the calves a little chance and the patrons an experience in a good business that they might soon continue throughout the year. If I were forced through circumstances to be a patron of a cheese factory I would have the cows freshen in February and March to make butter for a time so the calves would have a little milk. Few men can resist the temptation to send about all the milk away when it is worth good, ready money and the result is we seldom find decent calves in a cheese section. P. E. Island is covered with these factories and the cattle are not improving very much in quality for this reason; nor the business increasing as it should. Good feeding is certain to pay. A well fed calf can be at work in the dairy a year earlier. You are not so liable to accident, sickness or loss. You will have a much more valuable animal to dispose of at any time and something to add pleasure to your work. Breed, feed and weed, or feed, breed and weed, which every way you put it, should be the aim. purebred or blue-blooded animal can make bettee use of the feed it gets after it is fed all it can consume. No animal stands starvation more profitably than a scrub. There is no secret or economical way of raising young stock that the animal cannot discover. The only way is to breed for a special purpose and only attempt to raise what you can feed a full and proper ration.

Four promising Ayrshire Calves from the Forest Glen Herd.

A Fine Quintet of Ayrshires. The Pride of the Forest Glen Dairy.

Milk Viens and the Udder

In a recent issue of Hoard's Dairyman a subscriber asks the following questions of interest to all dairymen in regard to the elaboration or secretion of milk:

(1.) Why are the abdominal veins crooked?

2.) Do the abdominal veins branch? If so, what course do the branches take and where do the branches enter the vena cava, posterior or anterior.

(3) What is a milk well on the mammary vein?

(4) Does the abdominal vein get smaller after it leaves the udder on its course toward the heart?

(5) Did you ever see crooked abdominal veins on a heifer before the udder commenced to enlarge or fill just before freshening?

(6) Does the quantity of milk produced depend on the size or weight of the mammary gland?

(7) What is the amount of blood pressure on the mammary gland, while at rest and while milking?

(8) Do the cells of the alveoli secrete the constituents of milk while milking or at other times?

(9.) Can you, by feeding or manipulating, create more or new lobules, alveoli or cells that secrete milk, or do you simply strengthen those present?

(10. Can water or any other substance of milk filtrate into the udder or gland when the ducts and lobules are filled with milk? Or in other words, how can the mammary gland secrete the different constituents of milk from the blood when the milk pressure is high and blood pressure in the capillaries is nil?

ANSWERS GIVEN.

Answering the above questions, Alfred King of the State of Maine gives advice as follows:

1. The abdominal veins are naturally crooked to allow stretching of the part, which, if sudden would rupture the veins. A second reason is the veins grow in length with a gradual increasing size of the abdomen. When the increased size is lessened as by parturition, the veins are left more crooked. A third reason is that the pressure of the blood not only dilates the veins but lengthens them. This also makes them crooked as the point of origin and termination remain the same. These three causes may all work together in making crooked veins.

2. The abdominal veins are formed from branches and receive branches as they proceed in their course but do not divide into branches. They pass through openings in the muscular portion of the anterior abdominal wall, on the inner side of which they join the internal thoracle veins, one on each side, with which they become continuous. The internal thoracic veins each accompany an artery of the same name. They run forward under the inner lining of the lower wall of the chest and enter the anterior vena cava of the first rib.

3. Milk wells are at the openings in the muscular portion of the abdominal wall mentioned in answer two. These dilated openings contain connective tissue, small arterial branches and dilated milk veins distended with blood. The dilated vein distended with blood at this place is called a milk well.

4. The internal thoracic vein, which is a continuation of the milk vein, is much smaller than the dilated milk veins.

5. Crooked abdominal or milk veins are seen on heifers before they have had a calf. They are more easily felt than seen. They do not become very conspicuous until after calving. The dilated milk veins do not appear until after a heifer has had a calf.

6. The size and weight of a mammary gland depend upon the tissues forming it. These are principally skin fat, fibrous connective tissue, blood and lymph vessels, milk ducts and alveoli, blood lymph and milk. The number of alveoli in the glandular part and the activity of the cells lining them would have to do with the production of milk. Growth of fat and connective tissue, or swellings from various fluids or tumors would not increase the quantity of milk but decrease it.

7. I do not know that the blood pressure in the mammary gland has been measured, nor do I see how it can be measured satisfactorily. Active secretion is accompanied by a dilation of the small arteries and capillaries of the aveoli. This leads to an increase of pressure variable with the activity of the secretory processes. This would be slightly increased by the milking process.

8. The cells of the aveoli secrete the constituents of milk, while milking and at other times during the lactation period. The formation of milk is continuous but is subjected to variations in amount from numerous causes. Milking excites, accelerates and prolongs glandular secretion, but the milk formed is soon removed. When the quantity formed is very large, three or four milkings a day may be necessary, but in ordinary conditions more than two milkings a day has not been found profitable. For a most active milk cell to take up food, form within itself oil globules, sugar of milk, and casein, burst and repair the injured wall preparatory to another cycle of activity, some time is necessary, probably more than that required for milking. As cells are found in different periods of the cycle it would be impossible to start them working at one time if the production occurred only while milking. The fact that the milk ducts fill again with milk after being milked but showed the continued secretion of milk.

9. The development of the glandular portion of the udder is partly due to feeding. Lack of feed or improper feed will stunt the growth of any part. Proper feeding will assist in promoting the development of any part. The growth of the mammary gland starts in early foetal life. Another period of growth takes place at puberty. Another occurs during pregnancy and another during the earlier part of the lactation periods for several lactations. Milk cells in their activity produce not only milk, but other milk cells and form other alveoli. As feeding is one of the means of promoting this activity, feeding at times of glandular growth promotes the formation of new lobules or alveoli. Manipulating, which improves the circulation of the udder or excites the milk cells to increased activity at these periods, will cause development of much alveoli. Proper feeding and manipulating also improves the cells.

10. Water or other substances of healthy activity of the milk forming milk may be absorbed from the milk ducts or lobules filled with milk when there is retention. When milk ducts are distended with milk, which cannot escape, the resulting disturbance or irritation checks and finally stops the secretion of milk.

pounds of these elements, it is only fair to figure them at these values; by good rights the figures should be higher, considering the additional humus value to the soil.

Many years ago Dr. E. H. Jenkins, director of the Connecticut experiment station at New Haven, announced that roughly speaking, 80 p. c. of the fertilizing value of feeds given milch cows is returned in the manure. He figured that 90 p. c. was returned from fattening cattle, and hogs; 85 p. c. from working stock and sheep, and about 75 p.c. from young growing stock. In other words the animal's system appropriates only portions of the food that it can best use and a large per cent of the fertilizing value passes on to aid in building up the soil, that most profitable crops may follow.

For convenience the accompanying atble shows the number of pounds of nitrogen, phosphorus and potash that are found in 1000 pounds feed meal, hay silage, etc.
of common feed like bran, cotton-

FERTILIZING ELEMENTS IN DIFFERENT FEEDS.

(In terms of lbs. for every 1000 lbs. feed.)

	Nitrogen	Phosphorus	Potash
Bran	26	28	16
Cottonseed Meal	68	28	8
Ground Oats	17	9	5
Gluten Meal	50	3	0.5
Corn Meal	18	7	4
Corn Stover	10	3	14
Mixed Hay	14	2	2
Clover Hay	20	4	22
Corn Silage	3	1	4

With this data any farmer is able to calculate for himself the approximate ferilizing value that animals are returning. It will vary somewhat with the feed given animals, more concentrated feeds like cottonseed meal bring up the value of the manure pile.

However, for example suppose we take the standard ration at the Connecticut agricultural college for its herd of 20 cows the past five years. This is announced as 35 pounds silage, 12 pounds mixed hay, 2 pounds bran, 2 pounds corn meal, 2 pounds gluten and 2 pounds cottonseed meal. This is per cow per day. At least an eight months' feeding period should be calculated since the cows will be at pasture only about four months in the year and it may be less these days. This would be 240 days. Now multiply the 35 pounds silage daily by the 240 and the result is 8400 pounds silage that one cow eats in the eight months. Doing the same for the other feeds gives the following results; 2880 pounds mixed hay and 480 pounds each of bran, corn, meal, gluten and cottonseed meal eaten during the eight months or 240 days.

Now we are ready for another table showing the pounds of fertilizing elements in this silage hay and grain. Reference to our first table shows that in every 100 pounds corn silage there are 3 pounds nitrogen. Then in 8400 pounds there will be approximately 25 pounds nitrogen; further, there is 1 pound phosphorus in each 1000 pounds silage, then in the 8400 pounds there would be 8 pounds phosphorus; of potash every 1000 pounds carries 4 pounds hence in 8400 pounds there is approximately 33 pounds potash. Figuring out each element in this way for each feed gives the number of poa nds of nitrogen, phosphorus and potash in the feed that each cow eats in 240 days. See table.

FERTILIZER IN 240 DAYS' FEED.
(In pounds.)

	Nitrogen	Phosphorus	Potash
Silage	25	8	33
Hay	24	4	42
Bran	12	13	8
Corn Meal	8	3	2
Gluten	24	1	0
Cottonseed Meal	33	14	4
Total	127	43	89

Adding the number of pounds nitrogen that each feed carries which each cow has consumed in this period we find 127 pounds nitrogen, 43 pounds of phosphorus, and 89 pounds potash. If milch cows return 80 p. c. of this feed in the manure pile, then we can figure on there being 101 pounds nitrogen, 34 lbs. phosphorus, and 71 pounds potash. This is the amount of fertilizer actually in the manure heap per animal, il the farmer has done his part in saving both liquid and solid excrement.

If our nitrogen is worth 18 cents a pound, we have the equivalent of $18.18 worth of nitrogen; 34 pounds phosphorous at 4½ cents is worth $1.53; 71 pounds potash at 5 cents is worth $3.55. This gives a total of $22.26 as the cash value of the plant food that each cow returns on a standard ration such as used by the Connecticut college for eight months in the year.

It will be observed this is above the $20 average, but the reader will also note that the Connecticut institution gives a better grain ration than some feeders provide. Some cows may not take this amount of food for the 240 days and again it is rarely that all manure receives the care it should. Hence, the $20 estimate per animal is not far from accurate for a large number of cases. The question is if farmers actually so handle the manure that this value is realized. If it is not, then why not? —N. E. Homestead.

A Bunch of Pure Bred Ayrshires owned on the Forest Glen Farm.

Farm Manures High in Value

The farm manures resulting from the keeping of live stock on the farm doesn't receive the attention it should. It is unfair to a dairy herd and to the annual balance sheet to ignore the high value of stable dressing which has been well cared for. Quite outside of the fertilizing value in terms of nitrogen, phosphorus and potash that the dressing carries, the humus value and consequent improved mechanical condition of soil, are important. Roughly speaking dairymen who figure this source of income estimate that a single milch cow fed normally, will return approximately $20 per annum in farm or stable dressing. With only a herd of ten cows this $200 is not to be sneezed at.

If the farmer wishes proof that this estimate is not high and cares to figure it out in dollars and cents the accompanying tables and explanations will be convincing. It is not difficult to determine the approximate value of the stable dressing per animal, once settled on two or three general principles.

To begin with, the value of nitrogen in the open market may be taken as 18 cents a pound, phosphorus (wrongly called phosphoric acid), 4½ cents a pound, potash 5 cents a pound. That is what your fertilizing elements will cost if you buy the most economical forms of chemicals and they may cost more in the case of some mixed goods. If the stable dressing carries a certain number of

Commercial Fertilizer.

The question of soil fertility is of great importance to the farmer. Good farming consists in growing profitable crops and at the same time maintaining or even increasing the productive power of the soil. Many farmers are able to do this from the experience of years, during which time, the character of the soil, its adaptation to certain crops, the method of its management and manuring have been made the subject of careful study, without, however, any definite knowledge concerning manures and their functions in relation to soil and crops. Experience is a good teacher, nevertheless a definite knowledge of fundamental principles may be substituted for years of experience in the successful use of manures.

The fertility of the soil would practically remain unchanged, if all the ingredients removed in farm crops were restored again to the land. This to a large extent, may be accomplished by making the farm a factory where crops grown on the farm are fed to animals, carefully saving the manure, both liquid and soild, and returning it to the soil. A careful study of the subject indicates however, that as a rule, the manure produced on the farm is not sufficient to maintain its fertility. Hay, straw and grain are sold and nothing brought back to rep,ace it. Very often the manure is left in a heap under the eaves of the barn to be leached away to the brooks and ponds and the liquid portion runs down under the stable to be lost forever. Then the improvident farmer spends money on commercial fertilizer to replace this loss.

The system of growing crops of grain year after year on the same fields, then seeding to grass, and mowing these fields until nothing but wire grass and white flowers grow, has tended to rob the soil of its humus, which is one of the main factors in producing profitable crops.

It is a great mistake for any man to think that by the use of commercial fertilizers in large or small quantities combined in the most scientific way, that he can for many years maintain the productive power of his farm unless he takes special care to keep up his humus supply either by well kept barn manure or the plowing under of green crops.

Very large quantities of commercial fertilizers are used on the orchards of the Annapolis Valley. This seems to be the only way for the reason that in many cases all the available upland is planted to orchard, no meadow or dyked land is attached to the farms and hence the supply of barn manure is limited, and to successfully grow fruit the nitrogen and phosphoric acid is supplied by commercial fertilizers and the humus by plowing under in the autumn, heavy crops of summer vetch or crimson clover.

These three elements, Nitrogen, Potash and Phosphoric Acid are the elements most likely to be deficient in our soils for the reason that they are the three principle elements of plant food. The value therefore, of a commercial fertilizer is determined almost exclusively by the amount and form of the above named elements. Soils differ in their needs. A sandy soil is generally deficient in all the mineral plant foods as well as in humus. Clayey soils are usually well supplied with potash.

There are numerous companies, both in Canada and the United States for the manufacture of commercial fertilizers. The different brands are made up of a mixture of the various kinds and forms of fertilizing material on the market, sometimes termed chemicals. And the difference that exist in the brands of different manufacturers is due to the variation in the propor-

(Continued on page 586)

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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R. D. Robinson Publishing Co., Limited
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

MAY 13, 1913.

DATES OF ISSUE.

May 13-27
June 10-24

WHY FARMERS MUST COMBINE

It is silly longer to contend that prices arrange themselves automatically in accordance with the variations of supply and demand. There are too many evidences that individuals and corporations dealing in the commodities determine the prices that shall be paid for them. In the case of manufactured articles, merchandise and mine products, the owners or sellers name the price, but in the case of farm products, the buyers name the price.

Only a few days ago the buyers of poultry, eggs and dairy products in St. Louis met to form an exchange, not in the nature of a trust, as did those who partiripated in the meeting, but merely an association "for the purpose of fixing prices." These people, it was claimed, had been put to considerable inconvenience, and in some cases, to losses, by not knowing what the others had on hand, or what they were paying or charging; for this price making system, of course, involves the making of the price that shall be paid the producers as well as the price that shall be charged the consumers. Thus these dealers, acting in an organized capacity, determine the margin or profit between the buying and selling prices, and so fix their own income.

Heretofore these prices had been fixed by the city's general board of trade which gave the actual dealers in these things only a general voice in the price-making, whereas they desired the entire say in the matter, and they now propose to have it by an organization of their own.

In mercantile transactions, and in general business, including manufacturers, it is a well-settled principle that the selles names the price, and the buyer may not pay it or leave the article alone. It is true, two may "haggle" and come to an agreement as to price, but that does not affect the general principle that the seller is the price maker. It necessarily must be so. The ownership of property depends upon it. Whaever owns an article can retain that ownership until a prire satisfactory to himself (his price) is paid for it. There is but one exception in organized society or government, and that is the well-known Right of Eminent Domain, which means that the public is greater than the individual and the individual right must yield to the public good. If an individual own property and that applies only to landed property or other propezty that may be declared a nuisance) that it is important for the public to possess, and he refuses to sell to the public at a reasonable price, such individual owner may be compelled to sell to the public at a reasonable price, such individual owner may be compelled to sell regardless of his own wishes in the matter. But in that case the purchaser does not fix the price. A jury of the individual neighbors is called to do that, and to the actual value of the property may be added any damages the individual may sustain on account of having to surrender the property as by reason of the use to which it is put.

The above is the theory of exchange, of buying or selling, and it is observed in all cases except when farmers sell the products of their soil and toil. Neither the law of eminent domain nor the right to abate a nuisance applies then. It is simply accept the buyer's price or accept the stuff and the farmer must sell or go without an income, or do without money to meet the wants he cannot supply himself. The price offered may be so low that he gives double value for the money he gets, but he must have what will buy other commodities; and there again he must meet the price fixed by another.

So far as selling and buying is concerned, the farmer is absolutely without protection or a chance. But he need not be. The farmer is compelled to sell to get money, but he is nat compelled to sell to getmoney, but he is not comwould only practice what others teach them, and organize as others do, they would refuse to sell except at their own prices, as others do, and gain for themselves r?asonable profits, as others do.

BREEDING LIVE STOCK

The breeding of live stock does not get the serious thought from the farmers which it demands. Raising stock is one thing and breeding stock is another. The addition of a calf, colt or a lamb to the herd is regarded on many farms as ol very ordinary importance, but on farms where high class stcok is reared, the addition of a young animal to the herd creates almost as much interest as the birth of an additional member to a family. In the case of the ordinary calf or colt, there is little or no interest manifested as to the future of the animal. If the calf or colt is pure bred, its daily growth to maturity is watched with anxiety. If it is a heifer calf that is dropped the interest is so great at the time that it is difficult to wait until the calf becomes a cow in order that it may be known how much of an improvement she is over her mother in milk production. If a colt, the farmer can hardly wait until it is old enough to drive in order that he may determine what speed it will make on the track. When good stock is introduced on the farm there immediately becomes attached an interest which is not shown in scrub stock. It is this interest and sentiment which have resulted in producing some of the world's record breakers, and the interest doesn't fail to appeal to any man who endeavors to improve the live stock on his farm. This is one of the advantages of breeding good animals. This is one of the things which make farming and live stock husbandry entertaining, instructive and profitable and removes the old time drudgery.

LEARN MORE ABOUT FARMING

Did it ever occur to you that the farmer when he is successful and when he does his duty toward his fellow men is a very important man to society and the state? Society looks to the farmer for food and clothing. Nature spreads before him the most beautiful flowers and choice fruits; the forest is clothed with rich verdur, the streams ripple and surge against the moss-covered cliffs for those who linger at their brink. What a pleasant occupation, what opportunities for contentment and happiness! Surely, we are fortunate to have such privileges for useful lives. Do we fully appreciate our opportunities on the farm? Do you take advantage of the situatian to be prosperous, useful and contented boys and young men? Do you know how to enjoy the blessing which nature has so bountifully placed before you?

Those who do not enjoy farm life are not worthy of the good life that is possible on the farm. Those who see nothing good and happy in the companionship of nature would get more out of life by taking up some other work. We should search our aptitudes diligently and find out what we can best follow and prepare ourselves for it. Without preparation success is not probable. Those of us who like the farm and fully enjoy its environment should strive every day to get more information on farming. We should not be contented to be an ordinary corn grower, or an average farmer. Those who have become specialists in corn growing, stock raising, fruit growing and cotton growing, have learned how to study and application to the principles of good farming. They did not become specialists by accident.

Let us as intelligent boys and young men resolve from this moment that we will better appreciate our great opportunities on the farm. Let us determine to become better farmers and good men. Let us study our soil, our crops and books and papers that give us information about good farming in order that we may learn more about this occupation than we deem so important. It will be easy if we are determined in this matter. Thousands of otners have done this. Why can't you?

WHICH ONE?

There are two types of farmers quite common on our Canadian farms. The farmer who works hard from daylight till dark and never seems to get much out of his labor except a liv ng or the advance in his land for which he is not entirely responsible, and the farmer who seldom has to work overtime, finds time to visit his neighbors and enjoys life to its full measure, while his crops stock and bank account thrive.

There is a reason for this difference and we need not go far to seek the cause. The first named farmer starts in anywhere and usually ends nowhere. He is without a system. He works with his hands but fails to use his head. Planning things has not become a habit with him. He does not look far enough ahead, depends upon brawn instead of brain and brawn to carry on his farm operations. He may have plenty of pluck, perseverance, integrity, but lacks the one acquirement, system, so essential in farm work.

The successful farmer is forehanded. He plans things and keeps more than one kite on his string. Rotation of crops, stock breeding, farm accounts are studied by him. When the iron is hot he strikes it. Good seed is planted at the right time in the right place. "The hit or miss" method is not in his category. He doesn't go after a proposition until he is sure it is for his best interests. He studies his business akin to the attention paid by the successful merchant in handling a successfu, enterprise. Details are not forgotten. Economy of time is brought about by rushing the step in the busy season instead of extending the hours. True, he may not always be successful in every operation, but where results and work are weighed at the end of the harvest the profit side of the ledger shows the usual profit.

WASTE IN SEED SOWING

It is said of a famous mustard maker that he has not made a fortune out of the mustard consumed so much as by that left uneaten on the sides of plates. Just so, and if there was no waste of a somewhat similar character, the seed trade would most likely be less profitable than it is. It is one of the failures of agricultural and horticultural humanity to sow too many seeds, and there seems to be no getting away from the habit. Perhaps it is a mere habit, or it may be want of confidence, or a desire to ensure against loss, but the fact remains that the only time when seeds are sown about as they should be is when there is a fear that the supply in hand will be insufficient to go over the ground that is being sown. In the old days of adulteration, and when the means for preparing and cleansing seeds were not so complete as they are now, it might have been essential to sow very thickly by way of making allowances for failure, but at the present time there is little need to consider these points if the seed is obtained from a reliable firm and a fair price is paid for it. To sum the matter up briefly, it is unwise to be niggardly in the distribution of seed, but to be wasteful in sowing twice as much as is needed is an equally bad policy.

"The time has gone by when goods, no matter how excellent, will sell themselves. The quality may be the highest, or the price the lowest, but that alone will not sell them. They must be made known to the consumers in such a way that the consumers will demand them and will not be satisfied with substitutes."

The telephone is handy in asking how a sick neighbor is, but it doesn't take the place of personal help in the sick-room. Mix a few personal visits with your well meant inquiries.

Conserving Soil Moisture.

Editor Maritime Farmer'—

I would like to have you tell me if I am pursuing the best course to conserve moisture in a dry field. Description of soil treatment given and to be given, are as below:—

The soil is sandy, gradually growing harder and poorer as we go down until at three and a-half feet it must be picked and at five feet it may be called shell rock. Further down the layers thicken enough for building purposes. It has been so frequently manured with barn manure and swamp muck that the surface for six inches has grown much darker than when I began to cultivate it. Last year it grew potatoes and was plowed after the crop was lifted. It was plowed only because the potatoes were so poorly dug that it payed to plow and hire a picker to follow the plow.

Believing that wheat likes a firm soil I did nothing this spring but harrow with a spike tooth harrow, teeth being 2¾ inches long. Twelve pounds of clover seed was broadcasted when the wheat was drilled in and covered with same harrow. I purpose harrowing again in four days, and in four days later rolling in another four days harrow again and in another four days give a final roll. In the event of rain the harrowing and rolling will be done as soon after as possible. Will the clover stand all this disrurbance?

I use this same harrow on potatoes about twice a week from planting until they are well up and almost all weeds coming from seeds are destroyed.

I am in doubt whether rolling will hasten evaporation or retard it, but expect in this kind of soil it will break up capillary attraction.

Please clear up my doubts.

Arthur M. F.

If it were our case we would roll immediately after seeding to pack the soil around the seed. We would not care to disturb clover seed twelve days after seeding. The harrowing will kill the weeds and form a mulch. We have seen a field of wheat through which a runaway team attached to a harrow passed after the blade was up several inches and while it seemed to do a lot of damage at the time the harrow's path soon recuperated and made much more rapid growth than the rest of the field, so much so that it could be readily distinguished from a great distance.

We think it would be advisable to sow the clover seed at the second or third harrowing instead of with the grain.

If the soil is very fine the rolling will break up the capillary attraction but if coarse and open the rolling will increase the capillary attracting by bringing the particles closer together and thus making it easier for the moisture to climb to the surface. It would be well for you to leave a few check plots and compare the results of the cultivated areas with the uncultivated plots.

What is a Fertile Soil?

Editor The Maritime Farmer:—

The question may be answered broadly. A soil that will grow good crops, but this does not give all the answer. From whence does the plant get its food? We know that plants get food from the air, a much larger per cent than from the earth.

From the soil it gets phosphorus, potash, sodium, sillicun, calcium, iron, lime and other substances, from the air, oxygen, hydrogen, carbon and nitrogen. Some of these elements the plant requires in a very limited degree but every one it must have in order to grow, neither can one be substituted for another. If the soil contains all necessary elements to grow a full crop excepting one, the limit of that crop will be the amount the plant can get of the deficient element. Hence, we find that land deficient in, say, lime fails to give satisfactory returns, although all other elements may be present in abundance.

Neither will soils containing all elements necessarily always produce satisfactory returns, because the plant food they contain may not be available or in a form that the plant can use it. Gravel may, often does, contain all the mineral elements the plant needs but yet it will not grow crops.

Crops often fail, not so much from a lack of plant food in the soil, as from inability to get that food, on account of a poor texture—lumpiness, looseness and a lack of moisture capacity or because of a lack of drainage of stagnant water from the soil.

Plant food must be available, or in such a condition that it can be easily dissolved by water. Roots of plants never take in solids, and soil water can only dissolve food from the soil it comes in contact with, hence, the finer the soil particles, the more readily can the water perform this function. To put it another way, cultivating the soil, i. e., fineing it is fertilizing it. Usually only three elemants need be cared for in the soil, nitrogen, phosphoric acid and potash and sometimes lime.

¶ Mr. J. H. Wright will travel through the counties of Digby, Annapolis and Kings during the Summer of 1913 in the interests of the *Maritime Farmer*. He is authorized to take ad. orders, new subscriptions and collect for renewals.

When we use the term plant food we mean the first three and they are the ones quoted in commercial fertilizers.

Phosphorus we get from the bones of animals and from phosphate rock that must be treated before being quickly available. The potash in the soil is mostly in compounds, known as sillicates, such as much of our sands. These are very slowly soluble in water. Perhaps it is well that this is so, else it might have been leached out as nitrogen has been from much of our soils.

Potash is made available by tillage and the decay of humus in the soil. Tillage fines the soil, reducing the size of the soil particles, humus gives a good, fine texture and adds to the ability of the soil to hold water. Other substances, such as lime, salt and plaster tend to render potash available. In wood ashes we have a large amount of available potash, hence the well-known value of ashes to the soil, particularly in assisting to get a catch of clover. The potash of commerce comes largely from Germany, in the form of Nitrate of Potash.

Nitrogen is the most expensive, and the easiest lost or destroyed of all plant foods.

Nitrogen is the element that gives the dark green color and abundant growth; while stiffness of stem and fruitfulness are an indication of abundance of phosphoric acid and potash. A yellow color and stunted growth indicate a lack of nitrogen or a deficiency of moisture or what is likely both, as largely moisture will not remain during a dry time in soils that are deficient in humus, which is the base of nitrogen. Nitrogen is formed in the soil by the decay of animal and vegetable matter therein, hence the old maxim, "To build up a fertile soil we must have something rotting in the soil, making humus, and something growing on the soil, taking up nitrogen released at the same time.

By the burning of straw stubble and such like we lose a large amount of nitrogen as we also do by the over-rotting of stable manure.

There is also a great family of plants that have the ability to take in free nitrogen from the air by means of the agency of a certain bacteria residing in nodules on the roots. Prominent among these are the clovers, pease and beans, by a judicious use of which in a rotation sufficient nitrogen can be secured to maintain the fertility of the land for all time.

Early Vegetables Show Profit.

I find carrots, beets and parsnips three as profitable vegetables to raise as any I know of. If planted early they can be bunched and got in the market early, and early bunch stuff always sells well, and what is not disposed of in this way can be harvested for busheling for the winter market.

In preparing the soil for these vegetables I plow the ground in the fall and again in the spring, using a liberal amount of stable manure, from six to eight cords per acre. By plowing in the fall it gets the ground in better shape for bed stuff and all hoed crops. Many people neglect fall plowing, but I claim it is a most essential step toward successful farming.

This method also works well on witch gtass, as by turning it in the fall the roots are exposed and the frost works sad havoc among them. I will tell how I received $140 from ⅛ acre potatoes. I exhibited 80 varieties at the Rockinghm fair and won $70, including $10 in gold for the best exhibit of New Hampshire grown potatoes. I then sent these same potatoes to the Greenfield fair, where they won another prize of $17. I then exhibited 104 varieties in the New Hampshire state fair held at Nashua, where I won another $52.50, making a total of $140.

I have had the best luck raising potatoes where I have planted to cabbage the year before on greensward, turning under the cabbage waste and using 100 or more pounds fertilizer per acre. The old sod which has not become fully rotted is just what the potato roots like and the tubers will usually come out smooth and clean.

Both summer squash and cucumbers gotten in the market early are very profitable, as they always bring good prices. They should be planted, cared for and manured well. There is nothing better for the common running squash and melons than manure broadcasted and hen manure or fertilizer in the hill.

In storing vegetables for the winter I have two cellars, one for cabbge and one for roots and potatoes. Cabbages require a cooler place than the roots. I usually keep my cellar for storing cabbages as near the freezing point as possible.—Fred G. Steele, Hillsboro County, N. H. in N. E. H.

Kinks in Growing Carrots.

You invite farmers to send in their way of raising crops, and as I have had good success raising carrots, I will say a word. I have raised these more or less for over 40 years, and for the last few years more than formerly, as I find ready sale in the village. Have always used them at home for my own stock.

I use old ground. Plow in from 20 to 25 loads manure per acre. Then harrow many times till very fine. Sow 800 pounds per acre phosphate and harrow in well. Be sure of good seed. I use Danvers half long and plant with hand seeder. Run the rows straight. As soon as carrots are up go over with wheel weeder and keep it up every week or 10 days till the tops cover the ground.

In 1911 on 35 rods of ground I harvested 312 bushels of 50 pounds per bushel. In 1912 on same land I had 280 bushels. This was a poor season for many crops. I give close culture, rows 20 inches apart.

Thin to 1 or 1½ inches apart in row. This is the main work of the season. Now as to harvest: Late in October I mow the tops off close with a scythe; rake off, then with hoe clip close and rake off again. Then take a one-horse plow and plow two furrows to the row. The last time run very close to carrots. I then take a garden rake and push them into the furrow. They are then ready to pick up and bag. This is the fastest way to harvest I know of. I have several times, with a man to help me, harvested and put in cellar or storehouse over 100 bushels in eight hours. For three years I have sold them for 35 cents per bushel. It brings in good money for land used and no enemies to fight our weeds.—O. B. Shattuck, Orleans County, Vt. in N. E. H.

Potatoes, Oats and Hay Rotation.

That potatoes with a moderate amount of fertilizer make a good forerunner for a field of oats the following year has been shown by Frank Crowell of Somerset county, Me. After planting his potatoes one year on a sandy loam (a half ton fertilizer to the acre) the next year he put on oats and was able to get 60 bushels to the acre and the only extra dressing used was a little fertilizer sown broadcast. When he sowed his oats he seeded the ground down without using any more dressing or fertilizer. The next year he got a ton of hay to the acre.

He is convinced that potatoes planted first did the ground good, for he had apiece of land near this one that a little while before he had plowed up and seeded down, using about the same amount of fertilizer throughout as he had on the potato piece, but he got only about three-fourths of a ton of hay to the acre.—N. E. H.

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HORTICULTURE.

Shrubs and Their Handling.

When shrubs are shipped from the nurseries they are carefully wrapped in moss and burlap and can be sent across the continent. When the amateur purchaser gets his bundle, he usually rips it open to see what the plants look like. He leaves the roots exposed to the air until he gets ready to set out the shrubs. Then, he digs a whole, crowds the roots, pours a pail of water over the earth and calls the job done.

Now, trees are living creatures and they need to be mighty robust to enduce such treatment. Pretty often they die. They were not given a fair deal. If they live, they are likely to be spindly and frail.

Most failures are due to one of three causes or to a combination of them all—letting the roots dry out, failure to cut back the top, and too deep planting. The shrubs may be kept safely for several days in the original package, if the roots are not exposed. If they are to be kept for some time before being planted, a trench should be dug and the plants set in it, very close together and slightly inclined toward the direction from which the sun shines, the roots being covered with earth. This is called "heeling in" and serves to keep the roots moist.

If there are several shrubs to be handled at planting time, it is well either to set them in a barrel of water or to dip the roots in a puddle of liquid manure, which will cake over them and prevent them being dried out by the wind.

Many men get poor results because of their curious mania for deep planting. Generally, a ring on the stalk will show where the plant stood in reference to the surface of the ground when in the nursery. Let it go into the earth just deep enough to hide this ring under half an inch of soil.

Lifting a plant usually deprives it of half its root growth, and the top sgould be cut back accordingly. It is just as well, in fact, to have rather less top than root at the beginning. Cutting back to this extent may seem a drastic measure, but it really is of vital importance. The roots themselves should be trimmed smooth at the ends, if they have been broken off, and should be carefully spread out in a wide circle. This means, naturally, that a wide hole should be dug. To get the best results, the soil should be thoroughly dug up, just as if annual garden plants were to go into it. Well-rotted stable manure may also be worked in to provide entirely willed, the earth should be well compacted with a maul of the foot. A slight depression to hold the water may be left around each shrub.

Put into the ground after this manner, one need have little doubt about his shrubs living and prospering. And in all the essential features, the process to be followed in planting trees is the same. Most shrubs look best when massed, and should therefore be planted thickly, and some of them removed when they get large enough to crowd each other. No sort of planting dresses up the home grounds to better advantage than shrubs, and fear of not making them live need deter no one from ordering a supply. The nurseries are busy places in the spring and mistakes may occur in a rush season.

As for the pruning of shrubs, it is not so much a matter of how to do it and when. Many a garden lover has conscientiously gone over his choice shrubs every spring, and then has marvelled that they have failed to bloom except in a half-hearted way. The truth is, of course, that he has cut off a large proportion of the buds All the shrubs that flower in the spring or early summer make the same summer the wood on which the next season's flowers are to be produced. It follows, then, that the lilacs, Japanese quince, bridal wreath, flowering currant, weigela, syringa and such early flowering plants should be trimmed immediately after they have blossomed. On the other hand, the late blossoming kind like the hydrangea and althea (Rose of Sharon) may be pruned in winter or spring.

When the shrub has been set in the hole, the soil should be carefully worked in around the roots so as to leave no open spaces. The end of a lathe is excellent for pressing the soil into the interstices. When half full of earth, a pail of water may be poured in, not so much because water is needed by the plants as to firm the soil over the roots. When the hole has been filled in.

In most cases, the trimming should not be severe. Some gardeners are too fond of the knife. Nipping of the branch ends is a common mistake. The real purpose should be first to cut out the old and dead wood, getting the pruning shears as close to the bottom of the plant as possible. Then, some of the new wood may be cut out, if necessary, and the branches trimmed back if they are growing out of bounds. Usually, very little of this work is needed.

The hydrangea, however, is somewhat of an exception to the general rule. This shrub may be cut freely to secure special results; it is one of the most obliging plants imaginable. If wanted for massing in a bed, it needs merely to be cut back almost to the ground.

Save Trees Girded by Mice and Rabbits.

Notwithstanding the fact that most of our growers took the necessary precautions to protect their trees this past winter from the invasion of mice and rabbits, upon investigation many were found to be damaged to a depreciable extent. Are we going to make an effort to save those trees or shall we let them die? In the first place, it will not be necessary to lose such trees, no matter how bad the injury if we will apply ourselves immediately. By resorting to any of the following methods the trees may be saved.

First, if the injury extends only around a portion of the tree and is near the base, it will heal over in one or two seasons, by banking up the soil over it. This should be done before the wood becomes dry. The soil should be piled about a foot high and pressed firmly around the base of the tree. In case the wound cannot be covered with soil, it should be covered with soft grafting wax and wrapped with three or four layers of burlap. New bark should soon form under the cover if the exposed surface has not become too dry. Trees completely girdled have been saved in this way.

Girdled trees can also be saved by sawing off below the injury and cleft grafting the stub. If the stub is over an inch in diameter, two scions should be inserted which will hasten the healing of the wound. At the close of the first season the weaker one is removed. From the scion inserted, a strong tree will be developed in two or three years. Trees that have been saved in this way will come into bearing about as soon as others not girdled, set at the same time.

Another way to save the trees, if the injury extends completely around the tree, is by bridge grafting. By this system, scions, which have been cut to a wedge ar each end as for cleft grafting, are inserted in the live bark through openings cut above and below the wound. These scions will carry over the sap until the wound is covered. The scions should be about two inches apart. After setting the scions, the parts are waxed and then everything is covered with burlap. This operation should be performed before the buds have started to swell.

A good wax to use for this kind of work is made of the following ingredients: Resin, 1 lb.; tallow, 1 oz.; alcohol, 8 oz. To make this alcoholic wax melt the resin and tallow together. Then remove from the fire and add the alcohol after allowing the liquid to cool somewhat. Stir until a thick paste is formed. In order to keep the wax in paste form it will be necessary to place in closed receptacles.

Improve Your Potatoes.

It has been demonstrated that the selection of the best tubers, regardless of hills, results in higher yields of potatoes than the selection of the best hills ordinarily done.

The tuber-unit method, may, however, give still better results. One carefully selected tuber is used as a starting point, or many may be similarly treated if desired. The tuber selected is cut lengthwise into four pieces from which four hills are grown. If many tubers are used, the best groups of four hills, each from a single tuber should be selected at digging time for use in planting the next year. Keep each group separate, and decide which is the best principally on the basis of the yield and the desirability of the tubers. Selection is continued from year to year by saving as many as possible of the tubers from the best groups.

Laying Out the Garden.

If possible, the garden should be close to or a part of a cultivated field, and so laid out that it can be cultivated by horse-power. It is preferable to run the rows the long way of the garden, and to so plan it that vegetables of similar growth will be together; for it is easier to cultivate if the rows are the same distance apart. Room for turning must be left at the end of the rows. The perennials, such as asparagus, rhubarb and the fruits, should be placed at one side, so as not to interfere with cultivation.

Buy Roofing
For What It Protects

Let's have a little cold-blooded reasoning. You've got several thousand dollars' worth of perishable property under cover. A little dampness—a trickle of rain—might cost you more than the price of a dozen roofs. Same next year. In 20 years one good roof will protect a fortune. In one year a poor roof may destroy it.

Now—can a roof be too good? Is it a thing to bargain about—to buy with narrow-minded economy?

When you can secure for only a *little* more the absolute protection—the positive insurance—which NEPONSET Paroid Roofing gives, can you afford to experiment with cheap, bargain roofings?

NEPONSET
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Roofings
NEPONSET roofings are a fire protection, leak-proof and long lived. Any one can lay them. NEPONSET Paroid Roofing is for general use. NEPONSET Proslate Roofing is an ornamental roofing for dwellings. Attractive colors.

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If NEPONSET Waterproof Building Papers are built into walls and floors, the building will be warmer, will cost less to heat and will last years longer. Recommended by architects, engineers and building owners everywhere.

Wall Board
NEPONSET Wall Board is a scientific product which takes the place of lath and plaster; comes in sheets 32 inches wide. Remember, it is the only wall board with waterproofed surfaces that requires no further decoration. Anyone can put it up.

Are you going to build? Write for valuable information about modern ways to waterproof and weatherproof. Send for samples, free booklet and name of nearest NEPONSET dealer.

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THESE Wide-Tire Steel Wheels are constructed that they roll smoothly over the roughest roads, without tiring your horses. And they are absolutely accident-proof—yet cheaper than ordinary wooden wheels.

T-A Wide-Tire Steel Wheels and Handy Farm Wagons

Our Handy Farm Wagons are built low—making them easy to load and unload—and are especially designed to meet the requirements of the man who wants a light, strong wagon for all kinds of work on the farm.

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"M. Moody & Sons Co., Terrebonne, Que. Selling Agents for Province of Quebeb."

A WELL STOCKED VEGETABLE GARDEN $1.00

RENNIE'S "GEM GARDEN" COLLECTION OF

VEGETABLE SEEDS

contains just the right quantities of each kind to give a plentiful supply of fresh vegetables every day in the season—early or late.

Ask for the "GEM GARDEN" Collection when ordering. It contains

½ lb.	Dwarf Stringless Yellow Pod **Beans**
½ lb.	Dwarf Stringless Green Pod **Beans**
1 pkt.	Dwarf Bush Lima **Beans**
1 pkt.	Round Red **Beet**
1 pkt.	Early **Cabbage**
1 pkt.	Intermediate Red **Carrot**
½ lb.	Early Sugar **Corn**
1 pkt.	Slicing **Cucumber**
1 pkt.	Cabbage Heading **Lettuce**
1 pkt.	Early, Slicing **Onion**
1 pkt.	Large, Boiling **Onion**
1 pkt.	Long White **Parsnip**
½ lb.	Earliest Dwarf **Peas**
½ lb.	Medium Early Dwarf **Peas**
1 pkt.	Early Round Red **Radish**
1 pkt.	Marrow **Squash**
1 pkt.	Early Smooth Scarlet **Tomato**
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$2.50 worth of Seeds for $1.00

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If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

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FARMER ADS BRING RESULTS

Injurious Insect and Pest Act.

AN ACT TO PREVENT THE INTRODUCTION AND SPREAD OF INSECTS, PEST AND PLANT DISEASES, DESTRUCTIVE TO VUGETATION.

(Passed 20th March, 1913.)

Be it enacted by the Lieutenant-Governor and Legislative Assembly, of New Brunswick as follows:

1. This Act may be cited as the "Injurious Insect and Pest Act, 1913"

1. In this Act and in any regulation made thereunder, "Vegetation" shall mean any tree, shrub, vine or plant, or the fruit on any other portion of a tree, shrub, vine or plant.

"Inspector" is a person appointed for the carrying out of the provisions of this Act, and the Regulations made thereunder.

3. The Lieutenant-Governor-in-Council may make such regulations as are deemed expedient to prevent the introduction into the Province of New Brunswick, or the dissemination therein of any insect, pest or plant disease, seriously injurious to vegetation.

4. Such regulations may provide:

(a) For the prohibition generally or from any particular country, region or place, of the admission into Province of New Brunswick, or any vegetable or other matter likely to introduce into the Province any such insect, pest or plant disease.

(b) The terms or conditions upon which any such vegetable or other matter may be admitted into the Province of New Brunswick.

(c) For the treatment and method of treatment to be given to any vegetation, vegetable matter or premises, to eradicate, control or prevent the spreading of any insect, pest or plant disease, seriously injurious to vegetation, and may prescribe whether such treatment shall be given by the owner or by a person appointed for such purpose.

(d) For the prohibition of or treatment prior to the sale as disposal of any vegetation or vegetable matter infected with any such insect, pest or plant disease.

(e) The occupier of the premises on which is discovered any such insect, pest or plant disease, shall immediately notify the Minister of Agriculture, and shall also send specimens of such insect, pest or plant disease, to the said Minister.

(f) For the confiscation of any vegetable matter and the container thereof, if any, in respect of which a breach of the Act, or any regulation made thereunder is committed, and generally for any other purpose which may be deemed expedient for carrying out this Act, whether such regulations are of the kind enumerated in this section or not.

5. The Minister of Agriculture may appoint inspectors or other officers for carrying out this Act and the regulations made thereunder, and such inspector or other officers, so appointed, shall act under his direction.

6. Any inspector or other officer so appointed may eneter in or upon any place or premises in which there is reason to believe that any such insect, pest or plant disease exists.

7. The Minister of Agriculture, upon the report of any inspector as to the existence of any such insect, pest or plant disease, in any locality defined in such report, may prohibit the removal from such locality of any vegetation, vegetable or other matter, which is likely to result in the dissemination of such insect, pest or plant disease.

8. Any person contravening or neglecting to carry out, or offering any hindrance to the carrying out of any provision of this Act, or of any regulation made thereunder, shall be liable, upon summary conviction, to a fine of not less than twenty dollars nor more than one hundred dollars, together with costs, and in default of payment, to imprisonment for a period of not less than ten, nor more than thirty days.

9. The Lieutenant-Governor-in-Council may, by order, direct the inclution in the provisions of this Act of any insect, pest or plant disease, seriously injurious tp vegetation.

10. Every Order-in-Council and regulation made under this Act, shall be published in the Royal Gazette in two consecutive issues.

THIS IS THE WAY YOUR HENS WILL LAY WHEN YOU GIVE THEM

International Poultry Food

Right now is the time to feed INTERNATIONAL POULTRY FOOD. Hens need the tonic effects of this wonderful egg producer to start them laying and to keep them laying. Ordinary feed is not enough to make hens lay regularly.

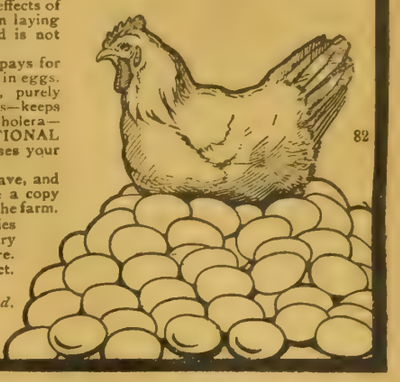
INTERNATIONAL POULTRY FOOD pays for itself—over and over again—in the increase in eggs. It is not an ordinary food, but a tonic, purely medicinal. It actually produces more eggs—keeps fowls well and vigorous—prevents Chicken Cholera—cures Roup. Just feed INTERNATIONAL POULTRY FOOD and see how it increases your egg production.

Write telling us how many chickens you have, and what other stock, and we will send you free a copy of our $3,000 Stock Book. You need it on the farm.

International Poultry Food and Poultry Remedies also International Stock Food and Veterinary Preparations are for sale by Dealers everywhere. If your Dealer cannot supply you, write us direct.

All our goods are sold under a spot cash guarantee of your money back if not satisfied.

International Stock Food Co. Limited
TORONTO ONTARIO



Herds.

No garden is complete without some of the herbs. Among the best for use are mint, sage, lavender, summer savory, thyme, annis, corlander, dill and winter savory. Directions for sowing these are given, as a rule, on the package in which the seed comes. The seed may be sown in boxes or flats early in spring; and, as soon as the plants are large enough, they may be transplanted to a permanent place in the garden. One-year-old plants of most of these herbs can be purchased from the nursery, which will save some time.

It's easy to insure a bumper crop

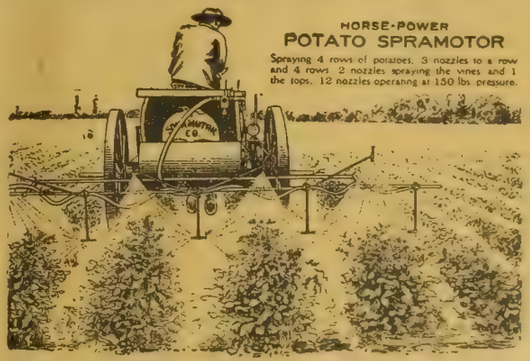
Costs little to do so, because—You can make that and large profits equally certain with a

Hand Power Spramotor

A machine that will return the money invested in it every year and then some.

A Hand Power Spramotor sprays an acre of potatoes *effectively* in 30 minutes—annihilates bugs, germs and pests and make the blight impossible. Making your work *vastly more profitable* than ever before.

The Hand Spramotor has two lines of 10 foot hose—couplings attached, patent valves, two bamboo extension rods with internal brass tube, brass cupped ends, patent drip guard and two nozzle clusters.



A *durable* machine for all purposes — destroying weeds spraying orchards and can be used effectively for whitewashing or painting the buildings about the farm.

Note:—There's a Spramotor *built for your exact* requirements. Prices range from $6.00 to $350.00. You owe it to yourself to find out all there is to know about it. We forward you the facts with our treatise on "Crop Diseases" without placing you under any obligation to buy.

SPRAMOTOR CO.

1536 King St. E., London, Can.

It Pays to Advertise in the Maritime Farmer.

DAIRYING.

The Pure Bred Dairy Sire.

For the farmer who milks cows for profit there is probably no question which comes closer to his pocketbook and interests him proportionately that that of the purebred sire, says P. B. Bennetch in Kimball's Dairy Farmer. There are, however, still a lamentably large number of farmers who have not discovered that they cannot possibly afford to use any other than a good, purebred sire where they are raising heifer calves to take a place in the herd or for selling, and all this in spite of the large amount of agitation in favor of such sires.

The farmer with a herd of common cows realizes what it costs to purchase good cows to replenish the herd, when he has to pay upwards of $108 apiece for cows without any guarantee that the cow purchased will be a good one until tried at the pail. There is at present and probably will be for some time to come keen demand for good dairy cows, and the time when such cows can be purchased for $35 or $40 is past. All this means that we will have to raise more heifer calves in the future, and, when we remember that it costs as much to raise a poor heifer as to raise a good one, we realize just how important it is that we at least attempt to raise only the heifers from our best cows, and that we pay more attention to the sires that we use.

There are three kinds of sires which the dairyman can keep in his herd—a scrub, a grade or a purebred—but there is only one kind which he will keep if he does not want "just calves" and means business, and that is a purebred sire. It costs about as much to feed one as another and the advantages to be derived from keeping a good, purebred sire are so great that it is nothing less than a calamity to keep anything else where heifers are to be raised. As farmers, we must realize that a scrub bull is good only for sausage and that we simply can not afford to keep him.

It is an old saying that "the sire is half the herd," or in other words, he gives half of his blood to every offspring in the herd. The first cross of a purebred sire with common cows will give heifers with half of the same blood as the sire. The second cross gives heifers with three-fourths, the third cross heifers with seven-eights, the fourth cross heifers with fifteen-sixteenths of the same blood as the sire, and so on until the "scrub" blood of the original dams is almost entirely eliminated in the sixth generation.

If we assume that these original common cows give 5,000 pounds of milk per year, the first cross heifers should give at least 6,000 pounds, provided the sire used was a good one. This increase alone at $1 per hundred is worth $10 and, assuming 20 cows and half of their offspring heifers, each year the 10 heifers would give an increase of $100 the first year in milk over what their dams produced, and these heifers will be good for five or six years and alone would give a total increase over their dams of about $500. To this we must add the increased value of all the heifer calves which this purebred sire would produce, and it is an easy matter to see where in a few years a purebred bull will be a money maker, worth many times his cost. A good sire of any one of the dairy breeds can be purchased for a reasonable price and it is a very short-sighted policy to use a scrub sire simply because he costs $50 or $100 less. We must remember that the scrub sire in the dairy herd is too dear at any price.

We may ask why it is that the pure bredsire gives so much better results than the scrub or grade. This is not a new theory by any means. It is the law of heredity that like begets like and that to improve by breeding we must always breed for the best.

After deciding on the breed you want a calf out of a well-bred cow with a good milk and butterfat record. Sometimes it is possible to secure a mature bull at a reasonable price and it is desirable to do so when possible, because then you can judge the bull himself, you can judge him by his dam and by his daughters and what they are doing.

As for the individual which you select, he should be uniformly well bred, should be well reared, active, vigorous, and, if mature, above the medium of the breed in size. He should not have the feminine appearance of the cow because such a sire is certain not to be able to transmit any of the good qualities back of him. In other words he should be strongly masculine and have a general dairy conformation, and not the tendency to beef. He should also have the general breed characteristics, such as color and conformation. The most important point to consider, however, is the ancestry and the four principal dairy breeds have systems of testing their cows so that it is not necessary to depend on private records of production.

There is another value of the purebred sire as contrasted with the scrub sire. Hiram Smith, of Wisconsin, is reported as having said: "A registered sire is a great educator. It is an upward step." We can all see the influence that the purebred sire has. The man who keeps him almost always is a thinking farmer, one who is progressive and uses his head as well as his hands. We are known by the company we keep and we cannot afford to keep company with either scrub bulls or scrub ideas.

Better ideas lie at the bottom of all betterment, and when a man buys a registered sire he gives notice to the world that he is making progress in his ideas of cattle, and that he will think towards improvement in other things.

Then, again, how much more pleasure there is in raising and developing heifers which are at least part purebred. With more intelligence added to animal breeding and the consequent use of more purebred animals, there will be less trouble in keeping our boys and girls on the farm, because it will be both more profitable and pleasanter. For the dairy farmer with average means there is no quicker or more certain way to success.

For herds of 10 cows or less, it is a good plan for two or three farmers to combine and purchase a good sire, as one sire will be sufficient for 30 to 40 cows. It is also important that in the same community farmers breed the same breed, making it easier to co-operate in breeding and selling surplus animals. When a sire has proven himself to be a good one, as indicating by the producing qualities of his daughters, never part with him unless to prevent too close breeding where this must be avoided. Proven sires are valuable and there are many in use, more particularly in purebred sires which are 10 to 15 years old.

Difficult Churning.

At this season of the year the experiment station receives a large number of inquiries in regard to the difficulties of churning cream into butter. The inquirers complain that they churn their cream for a considerable period of time but that the butter will not "come."

This difficulty may be due to several reasons, which may be enumerated as follows:—

At this time of the year and particularly a little earlier than this, there

Heavy Cream

Mr. J. W. McGhee of Conover, Ont., says: "I find that the Standard cream separator will deliver any density of cream with either warm or cold milk, and still flush out easily." So if you want heavy cream, simply turn a screw on the top disc of the

Standard

and get any thickness desired. This cream-regulating screw is placed on the top disc for your convenience, so that you do not need to take the bowl apart to reach it. This point may not seem very important to you. We mention it merely as an example of how carefully and thoroughly the Standard is built down to the smallest detail. A booklet, explaining the entire construction of the Standard cream separator, and telling why it has earned the name of "The World's Greatest Separator," will be mailed free as soon as we get your name and address. Drop us a post card today.

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HELP TO DECORATE YOUR ENTIRE HOME FREE

WALL and ceilings of every kind may be decorated in the most pleasing effects by the use of **Maple Leaf Flat Wall Colors.** They appear equally as well on smooth plaster, sand finished plaster, stucco walls, wall boards of all kinds, metal ceilings, burlap or decorators cotton. They produce a soft, velvet-like richness of color which is pleasing, artistic, yet restful to the eye. Border or panel effects carried out with **M. L. Stencil Designs** over **Flat Wall Colors** complete by far the most satisfactory method of wall treatment. But above all this their greatest value is that they are the most

SANITARY AND ECONOMICAL

M. L. Flat Wall Colors are oil paint colors, without gloss, and will outlast all other means of wall decoration two or three times over. Colors do not fade, are more durable and do not have to be removed to be renewed. Just another coat and the decoration is new again. Then too, they are waterproof; washing frequently with soap and water will not injure them, but freshens them up. This makes them of great hygienic value besides allows the housewife to keep her wall decoration clean and new all the time.

Twenty beautiful shades to choose from. Anyone can use M. L. Flat Wall Colors with delightful results.

How To Make Your Home Cozy

The advice of our M. L. Decorative Aid Dept., on the choice of the most harmonious colors, the selection of the best materials and how to apply them is **Free.** Mail this coupon to-day for our book "The Wall Beautiful and Hygienic" which tells how this free advice may be obtained. We tell you how to decorate your home in the most attractive way.

9

The IMPERIAL VARNISH & COLOR CO., Limited

Send me, free, your book "The Wall Beautiful and Hygienic" and particulars how to obtain your free decorative advice.

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WINNIPEG TORONTO VANCOUVER

CANADA

THE BUTTER-BUYER said—
"Your two lots of butter taste all right—but will they keep? What kind of salt did you use?"

THE FIRST FARMER said—
"I don't know—the storekeeper gave me what he had".

THE SECOND FARMER said—
"I used Windsor Dairy Salt".

THE BUTTER-BUYER said—
"I want your butter. I know all about Windsor Dairy Salt—and the man who is particular enough to always use Windsor Dairy Salt is pretty sure to be particular to make good butter.

I'll take all you make—as long as you use

WINDSOR DAIRY SALT

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EMPIRE
Cream Separators

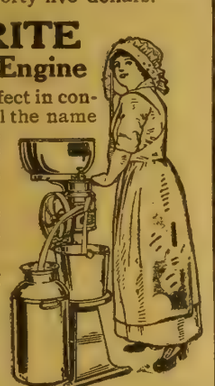
Better this year than ever.
Built for discriminating dairymen.

BALTIC
Cream Separators

A thoroughly reliable separator for the small farmer. Prices from twenty-five to forty-five dollars.

STA-RITE
Gasoline Engine

Simple and perfect in construction. Is all the name implies. Write us in which of the three lines you are interested and we will send full particulars.



Ask for Catalog No.131.

AGENTS WANTED

In unoccupied territories, we wish to arrange with good, reliable men to handle our goods. We have a proposition on which good money can be made each year. Write at once, as our agencies are going fast.

The Empire Cream Separator Co., Ltd.
Toronto—Winnipeg

Poor appetite is a sure sign of impaired digestion. A few doses of Chamberlain's Stomach and Liver Tablets will strengthen your digestion and improve your appetite. Thousands have been benefited by taking these Tablets. Sold by all dealers.

is no green feed which may be fed to the cows, except silage. The dry feed causes the butterfat to assume a hard, white condition. The fat occurs in the cream in the form of little globules or balls. It is necessary that these little globules shall stick together in large masses to form particles of butter. When the cows are on dry feed these little particles become hard and will not stick together. A ration composed of corn meal, cotton seed meal, corn stover and dry hay is particularly calculated to cause a hard condition of the fat. Silage will help to some extent in reducing the hardness. Linseed meal also tends to cause a softer fat.

When the cows get on grass in the spring the difficulty of churning is soon eliminated because the green grass softens the fat.

One of the most frequent causes of long churning is thinness of the cream. The cream should be rich in order that the globules may be brought close together and the butter gathered readily. In the summer the cream may be frequently churned at a temperature of 58 degrees F., but in the winter we find at the Experiment Station that it is necessary to churn the cream at a temperature of about 62 degrees. A higher temperature serves to soften the fat and causes it to churn more quickly. Thirty per cent cream which has been carefully held at a temperature of 75 degrees for twenty-four hours will ripen and be ready for churning. The ripening will help materially in decreasing the length of time required to churn the cream, also this ripening gives the butter a delightfully mild acid flavor. The ripening in addition causes all the butter to churn out of the cream and therefore, there is very little loss of butter in the resulting buttermilk.

Cold cream often foams and will not churn. Two hours before the cream is to be churned the temperature should be reduced from 75 degrees F. to 62 degrees F. It requires this length of time for the butterfat to [illegible] throughout.

Difficult churning is sometimes caused by the fact that the cream becomes contaminated with undesirable bacteria that prevent the growth of the desirable kind of lactic acid bacteria. Therefore, it is highly advisable to carefully wash and scald the milk utensils after using them.—J. J. Hooper, Kentucky College of Agriculture.

Does Record Making Injure Cows?

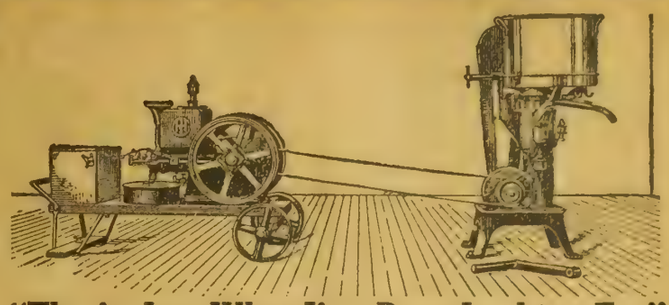
I have often been asked if the forcing of a cow for a big record is not apt to injure her? I feel certain that there is a danger of injuring the health of a cow by getting a little too anxious while making large records and feeding beyond tne danger point. On the other hand, there is nothing that will tend to the building up of a dairy cow like feeding for records. Of course, the cow must be in the hands of a good, but not over anxious, feeder; by over anxious I mean one who desires to get a little more milk from his cow and knows there is a chance of doing so by feeding more, but may not know just where to draw the line in order to preserve the health of his cow. The old saying, "It is the last straw that breaks the camel's back," holds good here.

We consider that the greatest danger of cow injury comes in the long-time records, especially with heifers. We do not believe the short-time records to be as injurious as the yearly records. With the short-time records one may make a large record from a cow year after year and still give her a good rest from heavy feeding between records, while with the long-time records the cow does not have the rest from heavy feeding.

I do not mean to discount the value of yearly records. I consider them to be the most valuable records we have. But in making the large records it is very necessary for the feeder to thoroughly understand what his cow will stand without overdoing her.

I will illustrate by a grade cow that we raised. She was an extra good heifer, and naturally we were especially interested in her welfare. She never made a poor season and was always well fed. I can remember that some of our neighbors remarked, while she was in her prime, that she would not last long because she would wear herself out. When this cow was in her fourteenth year we put her in a dairy test at London Fair, where she won first place, competing with all breeds and ages. When in her fifteenth year she made the best year record she ever made. There is nothing that will develop a heifer and make her a large producer as will testing her.

In feeding for records the offspring of the cow may be affected if the cow is dry for some time before freshening and loaded with fat. We have never had a weak calf ourselves. If we want a good horse, we will feed him well from the time he is foaled, then when he is old enough give him plenty of work to harden him without overdoing him. If we want a good cow we start when she is a calf, feed her well, and when old enough, feed and milk to her capacity, but never overdo it.—George Laidlaw, in Farm and Dairy.



"That's Just What I've Been Looking For"

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I H C Cream Separator
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and a one-horsepower back-geared I H C engine. The engine is mounted on a portable truck, and can be used for any farm work to which power can be applied. The back gear adjustment runs at the proper speed to operate any hand turned machine.

The working parts on I H C cream separators are accurately made and all bearings are well lubricated. The shafts and spindle are the strongest used in any separator. The gears are easily accessible for cleaning. Both separators have the famous I H C dirt-arrester chamber.

See the I H C local agent and ask him to explain carefully all of the good points of these outfits. You can get catalogues and full information from him, or, write the nearest branch house.

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LIVE STOCK.

Distribution of Pure Bred Male Animals by Department of Agriculture Ottawa.

Realizing tde inability to secure the use of well-bred male animals is at the present time one of the greatest difficulties standing in the way of live stock development in many parts of Canada, particularly in the newly settled districts, the Dominion Department of Agriculture, through the Live Stock Branch, is this year undertaking a widespread distribution of pure bred stallions, bulls, rams and boars. The original cost of the animals will be borne by the Department and they will be placed in the hands of such local organizations as agree to the conditions governing the distribution. In a word these sires will remain the property of the Department, but the local associations will be responsible for their proper maintainence and management under the general supervision of officers of the Live Stock Branch. In the case of stallions, the members of the associations will also be required to pay a fee covering an annual insurance premium.

All animals distributed will be bought from home breeders and will be Canadian bred. As far as possible, they will be purchased in the province in which they are to be placed. In this way Canadian breeders will receive encouragement and their market will be increased not only directly but also indirectly through the emphasis given throughout the country to the value of pure bred sires. It may be added that it is not the intention to place the animals in districts where suitable male animals of the same class are already owned by private individuals. The aim is rather to aid sections where pure bred sires are lacking and as well to encourage new communities in following a proper and intelligent system in breeding.

All bulls distributed will be purchased subject to the tuberculin test and only stallions which have passed a rigid veterinary inspection for soundness will be selected.

In order to take advantage of this form of assistance, it will be necessary for interested parties, in any section, to undertake the organization of a local association, in whose hands such sires as are required may be placed. Complete information regarding the rules and regulations governing the distribution may be made upon application to the Live Stock Commissioner, Ottawa. Whenever possible, an officer of the Branch will render assistance in the perfecting of the necessary local organization.

Water for Swine.

Swine need plenty of pure water to drink, even though they get slop two or three times daily writes a large swine grower in an exchange. To compel them to drink from mud holes or from dirty troughs is not conducive to good health and rapid growth.

Any trough system yet devised is not wholly satisfactory. Hogs will get into troughs in hot weather, and although many cleats may be nailed across to keep them out, dirt soon soon collects in them, cleats are broken, water slopped over until a mudhole is made about the trough, and it becomes unhealthy and unsatisfactory.

One method that gave satisfaction and was cheap was the automatic stock waterer. This took the place of everything else on the farm, because it was cheap, simple and indestructible, and furnished pure water at any and all times when hogs wanted it, and during hot weather the little device was kept busy.

A stock waterer is all iron, and is attached to any water-tight barrel. It works automatically, filling itself as the animal lowers the water in the basin. A barrel with the waterer attached can be located anywhere and kept filled by means of pails or pipe connected with the big stock tank. All that is necessary is to keep the barrel full; the hogs do the rest.

There is nothing to get out of order about a waterer. Hogs cannot break them nor interfere with their working. They save time, and the barrel may be filled once a day, instead of lugging water three times daily.

Even though it is necessary to fill the barrel by hand, it is quickly done at any time, as the barrel is not usually located far from the supply. Some farmers connect the barrel and stock tank, and simply turn a faucet to fill the barrel.

When one must be away from home for the day, the hogs have a supply of clean water for the day. No disease germs can be conveyed through a stock waterer unless they are first put into the barrl or tank. Such a waterer is better than a running stream, because the water comes from the well and is not liable to contaminatination from sources up stream.

It is a good plan to make a small platform of old barrels upon which the barrel is placed. This keeps it level and the little water that the hogs will slop over in drinking will not make a mudhole.

Contagious Abortion.

The annual loss sustained by horse breeders from contagious abortion continues undiminished. The veterinary profession have not made much headway in combating the disease among mares, but some very interesting results have lately been published by W. J. Taylor, of the Montana Experiment Station, reviewing his experiments on cattle.

It has been recognized for some time that carbolic acid taken internally or injected under the skin had valuable preventive and curative properties in cases of certain microbic diseases. It has been further established that contagious abortion is caused by agerm that enters the system and lodges in the productive organs of the female, causing premature separation of the foctal membranes from the uterus.

Three herds were experimented on by Dr. Taylor and in every case the carbolic acid treatment was an unqualified success.

In administering the acid a four per cent solution was used. That is, a given weight of crystals was dissolved in twenty-five times the same

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weight of water. This was mixed with the meal fed. It was found that cows would eat up to as much as 750 lbs. daily with apparent relish.

Cows were started on small quantities during early pregnancy, say 100 cc. daily for ten days each month. This was increased as seemed necessary with advancing gestation up to usually 500 cc for the last month. If signs of abortion appeared, the internal dose was supplemented with injections in the thin skin behind the shoulder. The injections varied in quantity from 50 to 60 cc.

It was found that in cases of impending abortion, carbolic acid can be injected in sufficient quantity to cause staggering gait and dilation of the pupil of the eye with no apparent unsatisfactory after-results.

Heifers pregnant for the first time are more liable to abort than during subsequent periods of gestation and should be carefully watched and vigorously treated if abortion exists in a herd.

Angora Goats.

During the past few months the Live Stock Branch of the Dominion Department of Agriculture has been in receipt of numerous inquiries as to where it might be possible to purchase either Angora or Milch goats. It would appear that in many parts of the Dominion the demand for these useful and profitable animals is rapidly developing and that those who at present have any surplus stock can find a ready sale for them is a channel of communication between supply and demand is established. Accordingly as the means of starting a convenient Directory of Canadian Breeders of Angora Goats and Milch Goats, the Live Stock Commissioner will be pleased to receive from such breeders information regarding their respective flocks covering the following points:—

1. Kind and number of goats kept.
2. Usual number for sale each year.
3. Approximately the prices asked.
4. If possible a brief statement regarding expenses found necessary and the returns which may be expected by one enagaing in raising this class of stock.

Communications supplying the above information should be addressed to the Live Stock Commissioner, Ottawa, Ont. Such letters do not require postage.

Cost of Making Light ank Heavy Pork.

It is recognized by hogmen generally that the first 100 lbs. of a pig can be made for a very small amount of feed per pound of gain; that the second 100 lbs. will cost almost twice as much, and the third 100 lbs. will cost between two and three times as much as the first 100 lbs. In this way the cost per pound increases as the pig grows older and heavier. Since this is so, it must be evident that, barring cost at birth, a pound in a 100-lb. pig can be made for about one-third the cost of that required to produce a pound of gain in a 400-lb. pig. There is more substance to an old and fat pig than a young, light one, and it takes feed to make it. On the market they are all bought for the pork they will dress, consequently the difference in price per pound is not great, but the cost of producing it is, and to this the producer should give heed. That is why so many hogs today are marketed at 200 lbs. and fewer at 350 and 400 lbs. This does not imply that the hogs should not be finished or carry fat, but simply that as the weight is increased the cost per pound to produce it is increased.

The pork producer anxious to make money can do no better than turn his attention to a consideration of these and other details that may suggest themselves, and determine their application to his individual conditions.—Farm, Stock and Home.

Your Soil Is Alive

TO all intents and purposes, soil is alive. It breathes, works, rests; it drinks, and, most important of all, it feeds. It responds to good or bad treatment. It pays its debts, and pays with interest many times compounded. Being alive, to work it must be fed. During the non-growing seasons certain chemical changes take place which make the fertility in the soil available for the next season's crop. But this process adds no plant food to the soil. Unless plant food is added to soil on which crops are grown, unless the soil is fed, in time it starves. There is one best way to feed your soil. Stable manure, which contains all the essentials of plant life, should be spread evenly and in the proper quantity with an

I H C Manure Spreader

I H C manure spreaders—**Corn King or Cloverleaf**—are made in all styles and sizes. Sizes run from small, narrow machines for orchard and vineyard spreading, to machines of capacity for large farms. The rear axle is placed well under the box, where it carries over 70 per cent of the load, insuring plenty of tractive power at all times. Beaters are of large diameter to prevent winding. The teeth that cut and pulverize the manure are square and chisel pointed. The apron drive controls the load, insuring even spreading whether the machine is working up or down hill, or on the level. I H C spreaders have a rear axle differential, enabling them to spread evenly when turning corners.

The I H C local agent will show you all their good points, and will help you decide on the one that will do your work best. Get literature and full information from him, or, write the nearest branch house.

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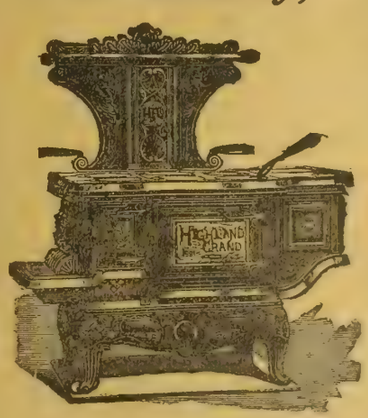

depends somewhat on good cooking, and good cooking depends largely on a good Stove. If you provide your wife with a

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you can be sure she can get no better cooking Stove to work with.

The ***Highland Grand Range*** is one of our best, is economical on fuel, either with coal or wood, and we guarantee it to give good results.

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Lame back is usually caused by rheumatism of the muscles of the back, for which you will find nothing better than Chamberlain's Liniment For sale by all dealers.

THE HORSE.

The Veterinary Examination of Stallions

At the annual meeting of the Clydesdale Horse Society, the following resolution was passed:—"That this meeting emphatically opposes any steps to be taken meantime tending to impose compulsary veterinary examination."This was because the question of compulsary veterinary examination of all horses travelling the country-side was brought forward. There had evidently been a conference in London on the subject, and a letter had subsequently been received from the Board of Agriculture and Fisheries stating that it was not their intention this session to introduce any measure requiring the compulsary examination of all horses travelling the country-side.

Some strong opinions were expressed on the subject. One might think from them that a great injury would be done to the breeders of horses if such a plan was adopted. The view was expressed that horse breeders knew better than any officials what were the best horses to breed from. It might be imagined that here could be no thought of any official ever being given any power to say what horses a breeder should use, except such as experience had proved were undoubtedly liable to produce undesirable stock.

Members of a society of such standing as the Clydesdale Horse Society may be able to get information, and may thoroughly know a horse; but what of the hundreds of breeders who keep only one or two mares and are dependent on the services of such horses as come into their districts? These breeders will probably supply the majority of horses for commercial use. Have they to be dependent on the word of the groom who is travelling an animal which is practically a "cast off" as far as serving any pedigree mare? One has known men who have boasted of having travelled stallions which they knew were suffering from some unsoundness, but by scheming they have managed to travel them the whole season through without anyone ever suspecting the fact. Can it be that the pedigree Clydesdale breeder has something to fear from the veterinary examination of stallions? Sound horses are not as plentiful as they ought to be. Those who wish to hire sound stallions or buy horses for town work say how scarce right ones are.

It could not be otherwise than good for the country if unsound stallions were prohibited from travelling. If the pedigree man does not object to the use of horses which are unsound, let them be kept at stud for their own class. One does not wish to interfere with the experts, but to protect the ordinary breeder who hopes to breed an animal which is sound at five years old and suitable for town work. We cannot think that any injustice would be done if the method adopted by the Board of Agriculture for the examination of stallions for registration were made compulsory on all that travel in the country. The veterinary surgeon who examines a stallion for registration sends his report to the Board of Agriculture, which requires him to say whether the horse is free from cataract, sidebone, bone spavin, roaring, navicular disease, stringhalt, whistling, defective genital organs, shivering, ringbone. If it is lame or sufficiently lame to interfere with its usefulness as a stallion, if free from contagious disease, what its physique and conformation are.

If the report is such that the Board will not register the stallion, the owner is informed why. If he is not satisfied, and produces a veterinary surgeon's certificate to say that the horse does not suffer from the defect on account of which registration has been refused, and deposits £2, the horse is re-examined by another veterinary surgeon appointed by the Board. If he gives the result of his examination in favor of the horse, the deposit is returned to the owner and the horse registered. Surely this would appear to be perfectly fair. The time will soon be round again when breeders will have to choose suitable horses for their mares. It costs the owner nothing to have his horse registered. Breeders should make the registration compulsory by refusing to use any stallion which is not officially registered.—Yorkshire, England.

Horsemen Attention!

Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Thier use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pinkeye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Troubl, Fevers, Cuts, Sores and will remove bunches of all kinds.

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Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

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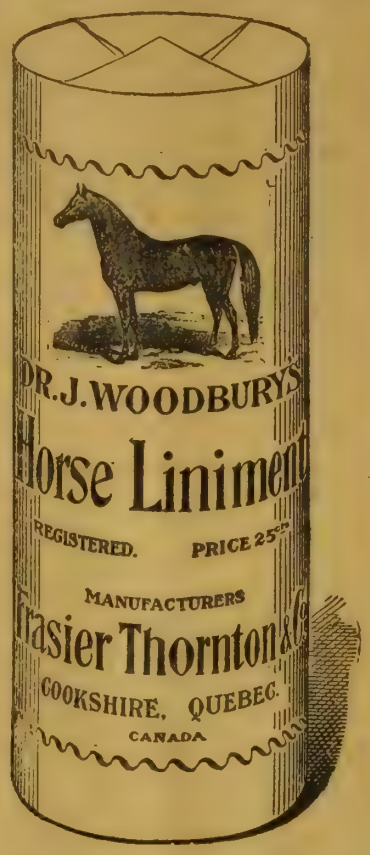

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Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

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The Maritime Farmer

SUSSEX, N. B.

Temperament of Horses.

The temperament of a horse is best understood when we take into consideration the anatomical structure of the animal. For the present we will consider the seven different systems that have a direct bearing on the character of the animal. The bony muscular, nervous, alimentary or digesting, respiratory or breathing, circulatory and lymphatic systems. The real character of the animal will depend greatly upon which system or combinations of these systems are in the lead, or rendering a dominant influence.

When we have large bones there is a large frame work that will carry the animal. But it is necessary to have the muscles to move the bones, so when we have large bones overlaid with, and controlled by, large large muscles, we have the instruments of motion in the lead and consequently we have motive temperament. Of course, there are several degrees in which the motive temperament is possessed, and the real character of the animal will depend on the degree in which he carries these characteristics. There are various modifications like the quality of the bones, the quality of the muscles, and the degree in which the nervous system acts upon the animal which should be taken into consideration.

The brain and nervous system wield such a dominating, or controlling influence over the animal that when it is in the lead, it is designated as the nervous temperament, usually carrying with it an air of refinement; there are small bones, dents, wiry muscles, with ease of action. The head is wide at the eyes, the eyes open and bright, manifesting an intelligence. There is proportionately a considesable space between the eyes and the poll, giving ample room for a large, active brain. The ears are moderate or small in size pointed at the end, and carried as if listening for the word of command. When possessed in a great degree it renders the animal restless and impatient. The thorough bred or running horse and some of the modern trotters and roadsters are good examples to illustrate this temperament.

VITAL TEMPERAMENT TO BE DESIRED.

The next we will describe properly a compound temperament. It is seen where all the vital organs are large and active, together with an active lymphatic system. We will call it the vital temperament, because the vital organs, the stomach, lungs, heart and lymphatics dominate and fix the

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character of the animal. With such horses the bones are medium in size, the muscles are not so dense and hard as with the other temperaments mentioned, but give rotundity to the general form, and add grace and beauty to the animal. Such animals are tractable in disposition, easily broken to work, and are kind and faithful servants in all places where they are called upon to do service.

Horses of the vital temperament are such as are known as easy keepers. Their large vital organs enable them to utilize all the nutrient elements in their feed and the lymphatics store up all that is not needed for immediate use. They make flesh and blood rapidly when not in active service, and are the ones that fall victims to azoturia, if kept on full feed during a period of rest, and then driven or put to active work. The system becomes pletoric, more blood being formed than the system can dispose of, the vascular organs are overloaded, and, increased action, caused by exertion, they become congested.

The number of horses of the vital temperament have increased very rapidly in this country since we began to use the sires selected from the draft breeds. The grades make fine looking and serviceable animals on the farms and there is a great demand for them in the market at high prices.

To avoid heavy losses it is well to follow the following precautions' feed such horses moderately when not at work, and be sure and give them exercise at least every other day. To give such horses full rations during periods of rest, is to waste feed and endanger their lives. It is worth the while to study the characteristics of the different temperaments, and act to meet their requirements.—W. H. Underwood.

Essential Things That are Sometimes Overlooked in Grooming Farm Animals.

A good grooming is worth half a horse's feed. This saying though often quoted is seldom taken at its real value. Many a farmer who feeds his work stock with great care is often lax about seeing that their coats, manes and tails are properly cared for. With most farmers the daily grooming consists of a currying, a brushing, or a combination of the two. This is all right as far as it goes, but it is not complete enough for horses doing heavy work.

A good outline for grooming might be divided into five operations; (1) Currying; (2) Wiping with a straw wisp; (3) brushing; (4) rubbing with rags; (5) care of mane, tail and feet.

The use of the curry-comb is for the purpose of loosening up the dirt and filth adhering to the skin. It should be held firmly, but we should be careful in currying tender skinned animals not to scratch too hard as a scratched skin often results in infection.

The straw wisp is generally used just after going over with a curry-comb and consists in going over the entire horse with a little handful of

(Continued on page 588)

New Vitality For Men

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Vitality gives you the manly courage to protect those depending upon you, as portrayed in the picture. No matter what thoughtless action or early indiscretion may have sapped your strength, vitality restores it to you. It makes you over into a strong, vital, manly man, without an ache, pain or weakness. Vitality puts the real VIGOR OF YOUTH into your blood; no matter how nervous or debilitated you may be, it puts the sunshine of vigorous manhood into your life; I make you feel young and keep you feeling young, without the use of drugs, without the necessity of dieting, without one bit of change in your present mode of living, except, of course, dissipation must cease. Just lead a manly life and use my HEALTH BELT; everything else will come. My HEALTH BELT, worn at night, pours a great, soft stream of VITAL STRENGTH into your blood, nerves and organs during all

the hours you sleep; in one night it takes the kink, pain or weakness out of your back, ere long friends will be saying: "How well you look," and you are answering: "Never felt better in my life!" Your eyes will sparkle with health; you will have that pleasing influence to fascinate and control which comes to all full-blooded, strong, vital, manly men. Thousands upon thousands are now using my Health Belt all over the world. With special attachments it cures rheumatism, kidney, bladder, stomach disorders, etc.

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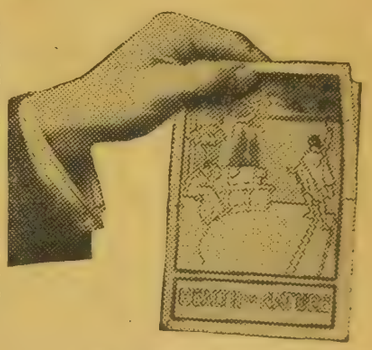

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OF ALL the losses owners are liable to, none can be **less prevented or modified** in any manner whatsoever **than loss by foaling.** Notwithstanding the best care and attention, although a mare **may have foaled** many times successfully, she is always a cause of worry and anxiety to the owner through the fear of **losing by death** the often very **high cash value of the Beast,** not to mention service fee, care and expenses incurred for no avail. **Why risk such loss** when a payment of a few dollars in premiums would **cover you** should it happen. Reduce the amount **of the RISK** by insuring, only risking thereby the **loss of the Premium** if the mare foals allright. We issue 30 days, 6 months and 12 months policies with or without cover on foal.

Write for address of nearest agent. All kinds of live stock insurance transacted.

THE GENERAL ANIMALS INSURANCE CO. OF CANADA, Head Office: 71a St. James St., Montreal, Que.

The Man Who Drives An Automobile Finds

SNAP

The Only cleaner that will effectually remove grease, oil or paint stains and leave the hands smooth and soft. 100% better than soap.

Your Dealer Sells Snap.

15c. a Can. Save the Coupons.

Snap Company Limited, Montreal

Protect Your Property With Peerless Lawn Fencing

Ornamental fencing serves a double purpose. It not only enhances the beauty of your premises, but also protects it and your children, as well. It keeps out marauding animals and trespassers. It protects your lawns and flowers and always gives your property that orderly, pleasing appearance.

Peerless Ornamental Fencing

is the result of years of fence building. It is built to last—to retain its beauty and grace for years to come and should not be confused with the cheap, shoddy fencing offered by catalog houses. Peerless fence is built of strong, stiff wire which will not sag and the heavy galvanizing plus the heavy zinc enamel is the best possible assurance against rust.

Send for Literature

Shows many beautiful designs of fencing suitable for lawns, parks, cemeteries, etc.

Agencies almost everywhere. Agents wanted in unassigned territory.

The Banwell-Hoxie Wire Fence Co., Ltd.
Winnipeg, Man. Hamilton, Ont.

POULTRY.

Sicilian Buttercups.

Since the Indian Runner duck craze has subdued somewhat, no other breed coming before the public, have made such a strong bid for favor as the beautiful new breed called Silician Buttercups.

It is true that Italy has not sent us much that is praiseworthy with her "Black Hand" but twelve years ago, she began to redeem her reputation by sending us her first consignment of these delightful "Flower Birds" from sunny Sicily.

Like many other desirable things they simply "happened. There was no astute poultryman behind the importation on the look out for something "new."

They were bought in the open market by the captain of the steamer "Fruiter" and were destined for food on the trip home, and not for the purpose of creating a sensation among our Uncle Samuel's poultrymen. How the buttercups saved their necks will always be told in their favor, and was due to the fact that they became so valuable as producers of eggs, Captain Daws decided to keep them. When he arrived in Baltimore he turned the crate of fowls over to his family, so these birds became the foundation of one strain of Buttercups. although they were not always called by that name, that was added in this country.

The other Buttercups which came by direct importation was through the late James S. Dumor, Esq., at one time U. S. Consul-General to Italy. In a recent letter from his wife, she tells me her husband kept these fowl in Italy thirty years "simply for eggs, eggs, eggs" as she puts it, and he decided to keep them in this country for the same purpose.

From an unpretentious beginning the Buttercups have been climbing upward, simply on their own merits. There has been no one behind them to boom the breed with pages upon pagesof advertising, as for instance, did Kellerstraus with the White Orpingtons, turning loose a river of printers' ink, every year, until he was selling eggs for thirty dollars a setting, two dollars an egg.

About a year ago a Buttercup Club was formed and a committee appointed to prepare a standard. But it was the avowed purpose of these men to preserve the splendid utility qualities, and not sacrifice anything to fine feathers, for finest of all the Buttercup is a utility bird, whatever they may have in the way of fine feathers is just so much to the good; as good measure heaped up and running over. As this breed has been developed for the producing of eggs, and a nice plump body, there is little variation in coloring, as not much attention has been paid to their exhibition or or show qualities. However, they breed as true to variety, as for instance, the Rhode Island Reds. They are of the same general style and type as the Mediterranean class.; but unlike them, they are quiet, and quite docile. They are splendid foragers; and it has been urged in their favor, that given good range they require no other feed than they pick themselves in summer. But if one feeds them, it costs much less to keep up a flock, and have them laying steadily, than the generality of breeds. They seem to be hardy, and in quite a large flock, they have been uniformly healthy with me, and thrive well in this climate.

In Italy they are known as "Flower Birds" and in the Island of Sicily are are sometimes called "Sicily Spots."

Mr. C. C. Loring, who is on the standard Committee, was the first to call them Buttercups, swayed, I suppose, by the American desire to improve "everything upon which it gets its hands."

There is no doubt but the breed is destined for an immense popularity in this country, due not so much to its splendid laying qualities, as to the fact of their unlikeness to any other breed, and their attractive appearance. There is no other breed witn a comb like the Buttercups, it is not single, double, rose or pea, but in its finest development looks exactly like a full blown flower—a buttercup—hence the name, that seems almost an inspiration.

The males are rich red in general color, with black tail and wing feathers; the females golden buff, with black tail, and backs more or less sprinkled with black dotes. They mature early, and there are cases on record, when birds have layed in 127 days.

The avove is a brief description of a coming breed. Birds of great beauty and utility, great layers, splendid foragers, gentle and easy to manage. Given a chance, this breed will make friends everywhere, and justify all that has been said in its favor.—Sarah E. Moses Smith, Woodwards Cove, Grand Manan, N. B.

Suggestions on Poultry for May.

Do not give any food to the chicks until they are from 24 to 36 hours old. Warmth is more important than food.

Feed them a little every two hours for about a week. After that time feed every four hours until they are a month old, then three times a day. Chicks do not eat much at a time but they eat often. Feed them at regular times and do not omit a meal.

Keep a box of fine charcoal, small grit and dry bran before them all the time and on the floor of the coops sprinkle fine sand in the cut clover and alfalfa leaves. Plenty of fresh water at all times. Give them water in something that only the beak of the chicken can become wet. Do not let the chicks walk in the water. Keep the coop and yard dry, for damp places prove fatal.

A prepared chick food, if properly balanced, contains bone, muscle and feather making properties, and can be fed for the first two or three weeks with splendid results. Just give them what they will clean up nicely.

Stale bread that has been dried in the oven and then rolled fine and moistened with milk or water enough to make the mixture crumbly is good.

Hard boiled eggs are good if you let them cook long enough. Sprinkle a little fine sand on the eggs before feeding.

Never feed raw corn meal stirred into water or milk. It causes bowel trouble and perhaps a loss of half and sometimes all your flock. Corn bread dried and rolled fine, then moistened with milk or water until it is crumbly is a good change. Never feed sloppy feed. Have it dry and crumbly.

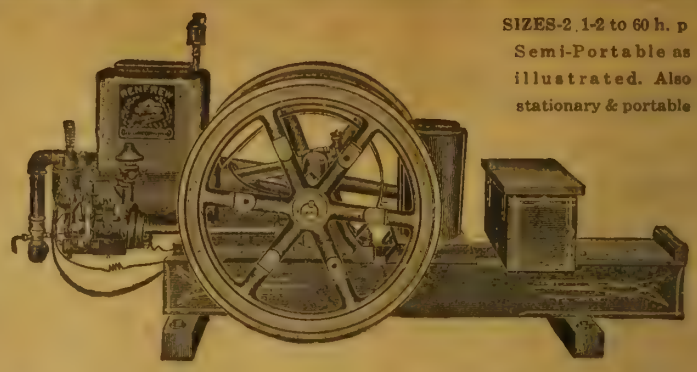
After the third week any wholesome food can be fed with good results.

Be sure to keep all feed and drinking dishes clean. Wash and scald the dishes, keep coops and yards dry, warm and clean, and you will have no trouble raising the entire flock.

A chick should weigh a pound at 5 weeks and ready for market at 8 weeks.

It pays to hurry the growth of chicks so don't let them shift for themselves as soon as you think they are well started.

When you see the chicks busy and scratching it is a sign they are happy



SIZES-2 1-2 to 60 h. p
Semi-Portable as illustrated. Also stationary & portable

Note Its Compactness

Look at the above illustration. It gives you a fair idea of the clean-cut, well-balanced, compact design of the Renfrew-Standard gasoline engine. But what we would like you to do would be to go to our agent's in your locality and see the

Renfrew-Standard

It will speak for itself. This engine has, we firmly believe, no equal in Canada. In fact, we are very sure of it.

Where, for instance, will you find another engine that starts easily without cranking in zero weather ?

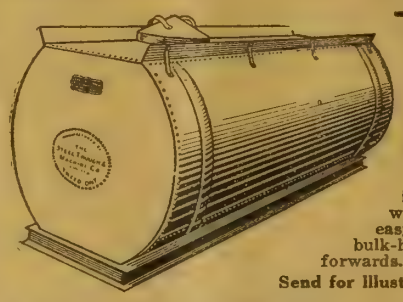
Where will you find another gasoline engine with a governor equal to the Renfrew-Standard fly-ball system steam engine type ? Where, too, will you find another engine that requires so little water for cooling, or that has no pipes, fittings, cooling pumps or fans to freeze up or get out of order ?

We've no space for further particulars, so be sure to go and see the engine, or write for catalog if not convenient to call on agents right away.

The Renfrew Machinery Co., Ltd.

Head Office and Works, Renfrew, Ont.

Agencies Everywhere in Canada



Threshers' Steel Tank

This Tank is for drawing a supply of water for Boiler of Thresher's outfit. These tanks carry a small quantity of fuel on top where traction engine is used.

Made of heavy galvanized steel. Built on Steel Channel frame, strongly hooped. This

"TWEED-MADE" Tank

is a clean, sanitary proposition. Does not get water-soaked like the wooden ones. Is light and easy to handle. Has large man-hole. Fitted with bulk-heads to prevent water rushing backwards and forwards. Strongly riveted and soldered, so cannot leak.

Send for Illustrated price list and Catalogue.

Steel Trough & Machine Co., Ltd., 9 James St., TWEED, Ont.

A COLD

However Slight

MAY TURN INTO BRONCHITIS.

You should never neglect a cold, however slight. If you do not treat it in time it will, in all possibility, develop into bronchitis, pneumonia, asthma, or some other serious throat or lung trouble.

On the first sign of a cold or cough it is advisable to cure it at once, and not let it run on for an indefinite period.

For this purpose there is nothing to equal Dr. Wood's Norway Pine Syrup, a remedy that has been universally used for the past twenty-five years.

You do not experiment when you get it.

Mrs. Louis Lalonde, Penetanguishene, Ont., writes:—"When my little boy was two years old he caught a cold which turned into bronchitis. I tried everything to cure him, even to doctor's medicine, but it did him no good. One day I was advised to give Dr. Wood's Norway Pine Syrup a trial, and before he had half a bottle used, he was cured. I would advise all mothers to try it, as good results will follow. My home is never without it."

See that you get "Dr. Wood's," as there are numerous imitations. It is put up in a yellow wrapper, 3 pine trees the trade mark; the price, 25 and 50 cents. Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

HAWK BICYCLES

An up-to-date High Grade Bicycle fitted with *Roller Chain, New Departure Coaster Brake and Hubs, Detachable Tires*, high grade equipment, including Mudguard, Pump, and Tools, **$22.50**

Send for **FREE 1913 Catalogue,** 100 pages of *Bicycles, Sundries and Repair Material.* You can buy your supplies from us at Wholesale Prices.

T. W. BOYD & SON,
27 Notre Dame St. West, Montreal.

Minard-s Liniment Co., Limited.

I was very sick with Quinsy and thought I would strangle. I used MINARD'S LINIMENT and it cured me at once.

I am never without it now.

Yours gratefully,
Mrs. C. D. PRINCE.

Nauwigewauk, Oct. 21st.

TRADE MARK

Ploughs—Wilkinson

REGISTERED

U. S. S. Soft Centre Steel Moldboards, highly tempered and **guaranteed** to clean in any soil. Steel beams, steel landsides and high carbon steel coulter. Clevises can be used either stiff or swing. Each plough is fitted especially with its own pair of handles—rock elm, long and heavy and thoroughly braced. The long body makes it a very steady running plough. Shares of all widths—specials for stony or clay land. The plough shown turns a beautiful furrow, with minimum draft and narrow furrow at finish. Ask for catalogue

The Bateman-Wilkinson Co., Limited
431 Campbell Ave., Toronto, Canada.

No. 3 *Sod or General Purpose Plough. 25 styles to choose from.*

and thriving.

Spray the coops often and the hen houses once a week and continue to do so through the warm weather. Dissolve ½ oz. of corrosive sublimate in a pt of hot water, then add 1 oz. of carbolic acid. Stir this into 2 gals. of kerosene. Keep it well stirred all of the time. Spray coops, roosts and houses with this several times during the summer and use it generously.

You can't neglect the chicks while they are growing and get good breeding stock by feeding them good a month or so before laying. Give them plenty of feed, good care and clean houses and yards at all times.

Do not put chickens hatched at different times together. The older ones will crowd out the younger.

Give the chicks plenty of shade to run in on warm days.

Chicks hatched this month will lay in November if you care for them right.

Mindful of Small Matters

As a rule, beginners are not mindful of the small details, and this fact has probably led up to more disaster than anything I might name. The poultry business will not suffer leaks. At the end of the first year the average beginner classes himself as an expert, and maps out a course entirely different from that followed by the practical man who has spent years of hard work and study. He will theoretically lay the foundation for an income which the expert has never been able to attain. It is not necessary to dwell upon the results.

Why is it that the fowls in the yards of successful poultry men show that healthy, pink condition? It is due to their constant watch, and promptly nipping in the bud "the first symptoms" of all ill health. The beginner aims to acquire the art of poultry doctoring—the expert exercises his wits in the art of prevention.

The expert does everything in a systematic way, is regular in all his duties, never postpones any duty, is constantly looking ahead, and stays ahead in his work. He makes repairs before they become dangerous leaks, and in a rather slow but careful tread goes about his work that he may do all things well.

The amateur, especially if his living does not solely rely upon his labors, looks upon the mindfulness of these small matters as trivial, but sooner or later he finds that they mean good health, good condition, and good returns.

It is not such a severe task to drive out a small army of lice, but when house is filled to overflowing it becomes hard work and work that is not always completely satisfactory.

Allowing dirt and filth to accumulate, is not only a breeder of lice but also of disease.

Allowing piles of wood and rubbish to heap up nearby the buildings, affords a safe hiding place for rats, minks, weasles, and other poultry enemies.

Allowing houses to remain open at night, nothing secure, affords a strong temptation to midnight "poultry raisers."

The price of roofing may be saved for the time being by not repairing the holes here and there, and some labor may be avoided by allowing the cracks to remain in the walls, but when the rain comes down, and the drafts of cold air blow through, there may have to be double the amount of labor spent to save the afflicted stock. For surely such conditions must have their dire results.

How revolting is a hen house where the manure is allowed to pile in pyramids under the roosts, where cobwebs form draperies, where lice and mites find roosting places. Can such a condition speak well for the enterprise of the man in charge?

If idleness, shiftlessness and uncleanliness were roads to wealth, what a large array of rich men we would have. He who is a shiftless business man, a poor manager, one of those forgetful, inactive kind will find the poultry business is one of the worst businesses for him.

If a gradual growth is made, the start being limited, all the details watched and the lesson studied well, the business is surely started on a firm foundation. Anything else makes a risk.

Geese do not relish tall woody grasses, which have become tough, In a wild state they devour large quantities of roots of grasses and acquatic plants which they dig from the banks and borders of streams and wash free from earth in the shallow water. Domestic geese generally feed upon pastures, preferring moist, rich localities where the grass is kept short and sweet by constant feeding and rapid growth.

The hen furnishes a manure rich in nitrogen, and to get the most benefit out of it there should also be applications of potash and phosphate. Wood ashes will supply the potash, and can be mixed with the manure, it having a tendency to conserve the ammonia. Lime should never be mixed with the manure.

It is claimed that a freshly laid egg placed in bucketful of water will sink to the bottom; one day will sink nearly to the bottom; two days old about half way up; three days old, will float not quite at the top; four days old, just touch the top; five and six days, rise a little above the top, rising a little higher as it daily grows older.

It requires three months or more to grow a broiler, much depending upon the weight desired, the stock and the care. Broilers shrink about a half pound each when dressed.

In killing and dressing poultry, handle gently to avoid bruising. Discoloration quickly follows a bruise, and diminishes the market value of the property.

A broiler should have a good, plump breast, broad back, clean yellow legs and yellow skin, and small comb. Such is the American epicure's idea, but these requirements bar out such breeds as Brahmas, Cochins, Langshans, or any crosses on them, on account of the feathers on their legs. They bar out all white-skinned fowls, and put a damper on all large comb birds, like Leghorns, Minorcas, etc. Such being the case, the Wyandottes have easy sailing; and, besides being quick growers are more desirable for this purpose. Markets are, as a rule, very particular and while

(Continued on page 594)

COLONIAL FERTILIZERS

"The Best"

For Potatoes For Grain For Fruit

The base of our formulas is Bone-Blood and Tankage—with Chemical Salts added to give the crops an early and vigorous start.

Our fertilizers will not cake and will run in the planter.

Write for prices and agents terms

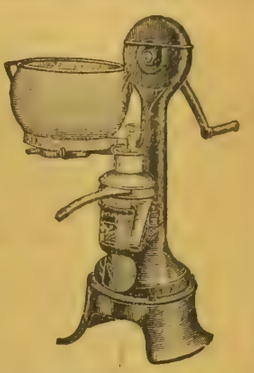
COLONIAL FERTILIZER CO., WINDSOR, N. S.

Buy a "Made in Canada" Fertilizer

Cut Your Work in Two

By starting in to use a large capacity

Waterloo Boy Cream Separator



The favorite everywhere it goes. Note the heavy compact construction, with low down handy supply can.

The 900 lb. size Waterloo when at speed and skimming takes no more power than the ordinary 500 lb. size separator of other makes.

The large capacity Waterloo hand separator will save you time, labor and expense, because it will cut the labor of skimming the milk more than in two, not only because it turns easier than most other hand separators, regardless of capacity, but because it does the work in half the time.

In these busy days, when labor is so scarce and so expensive and so unsatisfactory, a saving in time is a great direct saving in money to you.

Please write us a post card to-day, asking for Free book describing this cream separator.

The Sussex Motor Co., Ltd.,
SUSSEX, N. B.

We have for sale a few second hand machines of other makes that we have taken in exchange for our Waterloo Boy. Come in and see them.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

The Man Who Wins.

The man who wins is an average man
Not built on any peculiar plan;
Not blest with any peculiar luck—
Just steady and earnest and full of pluck.
When asked a question he does not "guess;"
He knows, and answers "No" or "Yes";
When set a task that the rest can't do,
He buckles down till he's put it through.
Three things he's learned—that the man who tries,
Finds favor in his employer's eyes;
That it pays to know more than one thing well;
That it doesn't pay all he knows to tell.
So he works and waits, till, one fine day,
There's a better job with bigger pay;
And the men who shirked whenever they could,
Are bossed by the men whose work made good.
For the man who wins is the man who works,
Who neither labor nor trouble shirks;
Who uses his hands, his head, his eyes—
The man who wins is the man who tries.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

"Now, David," said Mr. Murdstone, "a sullen obdurate disposition is, of all tempers, the worst."

"And the boy's is, of all such dispositions that I have ever seen," remarked his sister, "the most confirmed and stubborn. I think, my dear Clara, even you must observe it?"

"I beg your pardon, me dear Jane," returned my mother, "but are you quite sure—I am certain you'll excuse me, my dear Jane—that you understand Davy?"

"I should be somewhat ashamed of myself, Clara," returned Miss Murdstone, "if I could not understand the boy, or any boy. I don't profess to profound; but I do lay claim to common sense."

"No doubt, my dear Jane," returned my mother, "your understanding is very vigorous."

"Oh dear, no! Pray don't say that" interposed Miss Murdstone angrily.

"But I am sure it is," resumed my mother; "and everybody knows it is. I profit so much by it myself, in many ways—at least I ought to—that no one can be more convinced of it than I am myself; and therefore I speak with great diffidence, my dear Jane, I assure you."

"We'll say I don't understand the boy, Clara,'- returned Miss Murdstone, arranging the little fetters on her wrists. "We'll agree, if you please, that I don't understand him at all. He is much too deep for me. But perhaps my brother's penetration may enable him to have some insight into his character. And I believe my brother was speaking on the subject when we—not very decently—interrupted him."

"I think, Clara," said Mr. Murdstone, in a low grave voice, "that there may be better and more dispassionate judges of such a question than you."

"Edward," replied my mother timidly, "you are a far better judge of all questions than I pretend to be. Both you and Jane are. I only said—"

"You only said something weak and inconsiderate," he replied. "Try not to do it again, my dear Clara, and keep a watch upon yourself."

My mother's lips moved, as if she answered "Yes, my dear Edward," But she said nothing aloud.

"I was sorry, David, I remarked," said Mr. Murdstone, turning his head and his eyes stiffly towards me, "to observe that you are of a sullen disposition. This is not a character that I can suffer to develop itself beneath my eyes without an effort of improvement. You must endeavor, sir, to change it. We must endeavour to change it for you."

"I beg your pardon, sir," I faltered. "I have never meant to be sullen since I came back."

"Don't take refuge in a lie, sir!" he returned so fiercely that I saw my mother involuntarily put out her trembling hand as if to interpose between us. "You have withdrawn yourself in your sullenness to your own room when you ought to have been here. You know now, once for all, that I require you to be here, and not there. Further, that I require you to bring obedience here. You know me, David. I will have it done."

Miss Murdstone gave a hoarse chuckle.

"I will have a respectful, prompt, and ready bearing towards meself," he continued, "and towards Jane Murdstone, and towards your mother. I will not have this room shuned as if it were infected, at the pleasure of a child. Sit down."

He ordered me like a dog and I obeyed like a dog.

"One thing more," he said. "I observe that you have an attachment to low and common company. You are not to associate with servants. The kitchen will not improve you, in the many respects in which you need improvement. Of the woman who weakness respecting her which is not abets you, I say nothing—since you, Clara," addressing my mother in a lower voice, "from old associations and long established fancies, have a weakness which is not yet overcome."

"A most unaccountable delusion it is!" cried Miss Murdstone.

"I only say," he resumed, addressing me, "that I disapprove of your preferring such company as Mistress Peggotty, and that it is to be abandoned. Now, David, you understand me, and you know what will be the consequence if you fail to obey me to the letter.

I knew well—better perhaps than he thought, as far as my poor mother was concerned—and I obeyed him to the letter. I retreated to my own room no more; I took refuge with Peggotty no more; but sat wearily in the parlor day after day looking forward to night and bedtime.

What irksome constraint I underwent, sitting in the same attitude hours upon hours, afraid to move an arm or a leg lest Miss Murdstone should complain as she did on the least pretense of my restlessness, and afraid to move an eye lest she should light on some look of dislike or scrutiny that would find new cause for camplaint in mine! What intolerable dullness to sit listening to the tick of the clock; and watching Miss Murdstone's little shiny steel beads as she strung them; and wondering if she would ever be married, and if so, to what sort of unhappy man; and counting the divisions in the moulding on the chimney-piece; and wandering away, with my eyes, to the ceiling, among the curls and corkscrews in the paper on the wall.

What walks I took alone, down muddy lanes, in the bad winter weather, carrying that parlor, and Mr. and Miss Murdstone in it, everywhere; a monstrous load that I was obliged to bear, a daymare that there was no possibility of breaking in, a weight that brooded on my wits and blunted them!

What meals I had in silence and embarrassment, always feeling that there were a knife and fork too many, and those mine; a somebody too many, and that I!

What evenings, when the candles came, and I was expected to employ myself, but not daring to read an entertaining book, pored over some hard-headed harder-hearted treatise on arithmetic; when the tables of weight and measures set themselves to tunes as Rule Britannia, or Away with Melancholy; when they wouldn't stand still to be learnt, but would go threading my grandmother's needle through my unfortunate head, in at one ear and out at the other!

What yawns and dozes I lapsed into, in spite of all my care; what starts I came out of concealed sleep with; what answers I never got, to little observations that I rarely made what a blank space I seemed, which everybody overlooked, and yet was in everybody; what a heavy relief it was to hear Miss Murdstone hail the first stroke of nine at night, and order me to bed!

Thus the holidays lagged away, until the morning came when Miss Murdstone said: "Here's the last day off!" and gave me the closing cup of tea of the vacation.

I was not sorry to go. I had lapsed into a stupid state; but I was recovering a little and looking forward to Steerforth, albeit Mr. Creakle loomed behind him. Again Mr. Barkiss appeared at the gate, and again Miss Murdstone in her warning voice, said: "Clara!" when my mother bent over me to bid me farewell.

I kissed her, and my baby brother, and was very sorry then, but not sorry to go away, for the gulf between us was there, and the parting was there, every day. And it was not so much the embrace she gave me, that lives in my mind, though it was as fervent as could be, as what followed the embrace.

I was in the carrier's cart when I heard her calling to me. I looked out and she stood at the garden gate alone, holding her baby up in her arms for me to see. It was still cold weather; and not a hair of her head, nor a fold of her dress, was stirred, as she looked intently at me, holding up her child.

So I lost her. So I saw her afterwards, in my sleep at school—a silent presence near my bed—looking at me with the same intent face—holding up her baby in her arms.

CHAPTER IX.

I Have a Memorable Birthday.

I pass over all that happened at school, until the anniversary of my birthday came round in March. Except that Steerforth was more to be admired than ever, I remember nothing. He was going away at the end of the half-year, if not sooner, and was more spirited and independent than before in my eyes, and therefore more engaging than before; but beyond this I remember nothing. The great remembrance by which that time is marked in my mind, seems to have swallowed up all lesser recollections, and to exist alone.

It is even difficult for me to believe that there was a gap of full two months between my return to Salem House and the arrival of that birthday. I can only understand that the fact was so, because I know it must have been so; otherwise I should feel convinced that there was no interval, and that the one occasion trod upon the other's heels.

How well I recollect the kind of day it was! I smell the fog that hung about the place; I look along the dim perceptive of the schoolroom, with a sputtering candle here and there to light up the foggy morning, and the breath of the boys wreathing and smoking in the raw cold as they blow upon their fingers and tap their feet upon the floor.

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

THE BLESSING OF MOTHERHOOD

Healthy Mothers and Children Make Happy Homes

Motherhood is woman's highest sphere in life. It is the fruition of her dearest hopes and greatest desires; yet thousands of noble women through some derangement have been denied this blessing.

In many homes once childless there are now children because of the fact that Lydia E. Pinkham's Vegetable Compound makes women normal, healthy and strong. This is evidenced by the following letters which are genuine and truthful:

London, Ont.—"I wish to thank you for the benefit I received by taking your famous medicine, Lydia E. Pinkham's Vegetable Compound. Before my baby was born I was so ill I could not stand long or walk any distance. I had to lie down nearly all the time. After I took your medicine I felt like a new woman. I could work from morning till night and was happy and well. I certainly think it relieves pain at childbirth and recommend it to every woman who is pregnant. You may use this testimonial if you like. It may help some other woman."—Mrs. FRANK CORBIN, 132 Adelaide St., London, Ont.

Brooklyn, N.Y.—"I was ailing all the time and did not know what the matter was. I wanted a baby but my health would not permit it. I was nervous, my side ached and I was all run down. I heard that Lydia E. Pinkham's Vegetable Compound was good and took the medicine. I have now a beautiful baby and your Compound has helped me in every way."—Mrs. J. J. STEWART, 299 Humboldt St., Brooklyn, N.Y.

CHALLENGE COLLARS

Are a boon to every man who cares for his personal appearance.

Challenge Collars are not shiny rubber collars. They have a dull linen finish. In fact, you can't tell them from linen. Keep up appearances—keep down laundry bills.

Sold at all Gents' Furnishing and Dry Goods Shops, or send 25c. for sample collar.

The Arlington Company of Canada, Limited, TORONTO 3

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CALFINE

CALVES LAMBS COLTS PIGS

GUARANTEED ANALYSIS	
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FAT	8 " "
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Save $15.00 to $20.00 a Ton on your calf meal

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The same enterprise, earnestness, ability and devotion to students' interests which have given this college its present standing, will be continued and every effort made to be worthy of the generous patronage enjoyed.

Next term will begin Thursday, January 2nd. Send for Catalogue.

THE ST. JOHN BUSINESS COLLEGE S. KERR Principal.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

It was after breakfast, and we had been summoned in from the playground, when Mr. Sharpe entered and said:

"David Copperfield is to go into the parlor."

I expeced a hamper from Peggotty, and brightened at the order. Some of the boys about me put in their claim not to be forgotten in the distribution of the good things, as I got out of my seat with great alacrity.

"Don't hurry, David," said Mr. Sharp. "There's time enough, my boy, don't hurry."

I might have been surprised by the feeling tone in which he spoke, if I had given it a thought; but I gave it none until afterwards. I hurried away to the parlor; and there I found Mr. Creakle, sitting at his breakfast with the cane and a newspaper before him, and Mrs. Creakle with an opened letter in her hand. But no hamper.

"David Copperfield," said Mrs. Creakle, leading me to a sofa, and sitting down beside me. "I want to speak to you very particularly.I have something to tell you my child."

Mr. Creakle, at whom of course I looked, shook his head without looking at me, and stopped up a sigh with a very large piece of buttered toast.

"You are too young to know how the world changes every day,'- said Mrs. Creakle, "and how the people in it pass away. But we all have to learn it, David; some of us when we are young, some of us when we are old, some of us at all times of our lives."

I looked at her earnestly.

"When you came away from home at the end of the vacation," said Mrs. Creakle, after a pause, "were they all well?" After another pause, "Was your mamma well?"

I trembled without distinctly knowing why, and still looked at her earnestly, making no attempt to answer.

"Because," said she, "I grieve to tell you that I hear this morning that your mamma is very ill."

A mist rose between Mrs. Creakle and me, and her figure seemed to move in it for an instant. Then I felt the burning tears run down my face, and it was steady again.

"She is very dangerously ill," she added.

I knew all now.

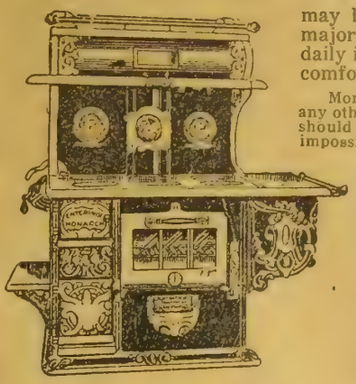
"She is dead."

There was no need to tell me so. I had already broken out into a desolate cry, and felt an orphan in the wide world.

She was very kind to me. She kept me there all day, and left me alone sometimes; and I cried, and wore myself to sleep, and awoke and cried again. When I could cry no more, I began to think; and then the oppression of my breast was heaviest, and my grief a dull pain that there was no ease for.

And yet my thoughts were idle; not intent on the calamity that weighed upon my heart, but idly loitering near it. I thought of our house shut up and hushed. I thought of the little baby, who, Mrs. Creakle said, had been pining away for some time, and who, they believed would die too. I thought of my father's grave in the churchyard, by our house, and of my mother lying there beneath the tree I knew so well. I stood upon a chair when I was left alone, and looked into the glass to see how red my eyes were, and how sorrowful my face. I considered, after some hours were gone, if my tears were really hard to flow now, as they seemed to be, in connection with my loss, it would affect me most to think of when I drew near home—for I was going home to the funeral. I am sensible of having felt that a dignity attached to me among the rest of the boys, and that I was important in my affliction.

A Get-Rich-Quick Scheme



may be all right in some cases, but the majority of us have to practise economy daily if we ever want to be rich, or even comfortably well off.

More money is wasted in the kitchen than in any other part of the home. That is where economy should be practised, but without a good Stove it is impossible. If you use an

ENTERPRISE MONARCH STEEL RANGE

you will save in food, fuel and repair bills, (not to speak of time and labour) enough to pay for the range itself in from one to two years.

Remember, even 2c saved on one meal is 6c a day or nearly $22.00 a year—and the MONARCH will save you that all right.

We are preparing a very attractive booklet explaining how this is done and illustrating some of the many good features of this celebrated range. Send your name in early and we will reserve a copy for you.

Enterprise
FOUNDRY CO. SACKVILLE, N.B.

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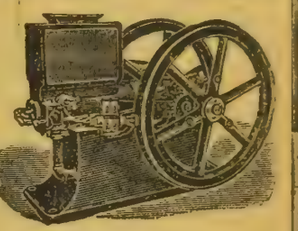

A willing, easily-moved "Monarch" Engine saves hours of work sawing wood, pumping, grinding, cutting silage, cream separating, etc. It pays to have one. The "Monarch" has spark retarder, throttle, speed regulator priming cup, carbon-steel shaft, sight fuel gauge, etc.--the quality features of an automobile engine. Sizes from 1 1-2 h. p. to 35 h. p.

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FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, **free** of any charge, **my home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure — **you**, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience**, we know better than any doctor. I know that my home treatment is a safe and sure cure for **Leucorrhoea** or **Whitish discharges, Ulceration, Displacement** or **Falling** of the **Womb, Profuse, Scanty** or **Painful Periods, Uterine** or **Ovarian Tumors** or **Growths**, also **pains in the head; back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar** to our sex.

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address**, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost**, my book—**"WOMAN'S OWN MEDICAL ADVISER"** with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers** of **Daughters,** I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all woman's diseases and makes women well, strong, plump and robust. **Just send me your address**, and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 309 - - - - WINDSOR, Ont.

If ever child were stricken with sincere grief, I was. But I remember that this importance was a kind of satisfaction to me, when I walked into the playground that afternoon, while the boys were in school. When I saw them glancing at me out of the windows, as they went up to their classes. I felt distinguished, and looked more melancholy, and walked slower. When school was over, and they came out and spoke to me, I felt it rather good in myself not to be proud to any of them, and to take exactly the same notice of them all, as before.

I was to go home next night; not by the mail, but by the heavy night-coach, which was called the Farmer, and was principally used by country-people travelling short, intermediate distances upon the road. We had no story telling that evening, and Traddles insisted on lending me his pil-

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MAXWELL'S
Favorite Churn.
It makes the smoothest, richest, most delicious butter you ever tasted.
The roller bearings—and hand and foot levers—make churning an easy task, even for a child.
All sizes from ½ to 30 gallons.
Write for catalogue if your dealer does not handle this churn and Maxwell's "Champion" Washer.
David Maxwell & Sons,
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low. I don't know what good he thought it would do me, for I had one of my own; but it was all he had to lend, poor fellow, except a sheet of letter-paper full of skeletons; and that he gave me at parting, as a soother of my sorrows and a contribution to my peace of mind.

I left Salem House upon the morrow afternoon. I little thought then that I left it, never to return. We travelled very slowly all night, and did not get into Yarmouth before nine or ten o'clock in the morning. I looked out for Mr. Barkis, but he was not there; and instead of him a fat, short-winded, merry-looking, little old man in black, with rusty little bunches of ribbons at the knees of his breeches, black stockings, and a broad-brimmed hat, came puffing up to the coach window, and said:

"Master Copperfield?"

"Yes, sir."

"Will you come with me, young sir, if you please," he said, opening the door, and I shall have the pleasure of taking you home?"

I put my hand in his, wondering who he was, and we walked away to a shop in a narrow street, on which was written Omer, Draper, Tailor, Haberdasher, Funeral Furnisher, &c. It was a close and stifling little shop; full of beaver hats and bonnets. We went into a little back-parlor behind the shop, where we found three young women at work on a quantity of black materials, which were heaped upon the table, and little bits of cuttings of which were littered all over the floor. There was a good fire in the room, and a breathless smell of warm black crepe. I did not know what the smell was then, but I know now.

The three young women, who appeared to be very industrious and comfortable, raised their heads to look at me, and then went on with their work. Stitch,stitch, stitch. At the same time there came from a workshop across a little yard outside the window, a regular sound of hammering that kept a kind of tune: Rat-tat-tat, rat—tat-tat, rat—tat,tat, without any variation.

"Well," said my conductor to one of the three young women. "How do you get on, Minnie?"

"We shall be ready by the trying-on time," she replied gaily, without looking up. "Don't you be afraid, father."

Mr. Omer took off his broad-brimmed hat, and sat down and panted. He was so fat that he was obliged to pant some time before he could say:

"That's right."

"Father!" said Minnie, playfully. "What a porpoise you do grow!"

"Well, I don't know how it is, my dear," he replied, considering about it. I am rather so."

(Continued in next issue)

Rich AND Mellow

You'll Like the Flavor
35¢-40¢-50¢ Per Pound

Style Pointers

Another vital point in designs is the bulging or thick neck collar applied to so many of the bodices and coats. This is an effect taken wholly from the dress of the east, which, as will be readily recalled, is finished at the neck with a straight, curveless piece which rolls or bulges at will across the back of ehe neck, there being no attempt at fitting. This is just what is being attempted in the fashionable neck finish of the day.

Sleeves, generally speaking, will be long—that is, the fashionable effect for general street wear is the long sleeve. Separate waists as well as costumes of the simpler character will have full length sleeves, but there also will be very many of the more dressygowns with long sleeves.

The kimono form has been retained to avery considerable extent, but it is the kimono set on the dropping or extended shoulder and brought down into fitted form.

There are a hundred variations of this style of sleeve, some of which are straight hanging, others flaring and open, and still others in the bell shape. Designers will be allowed much leeway in sleeves, and it looks very much as if there would be a strong representation of fancy styles.

To describe in detail the various forms would be difficult, but a glance at the forms shown in the garments imported for illustrating this spring's fashions affords conclusive evidence of the sleeve variation that will be found in forthcoming fashions.

The Paris market shows considerable variation in suit coat lengths. Several of the important houses, notably Paquin and Cherult, are emphasizing the long jacket.

Most significant, however, is the fact that Callot, who, as everybody knows, is a great leader, shows many very short coats of the bolero or short blouse style. Thus it is evident that Paris makers have no intention of confining themselves specifically to one length.

However, for the general line of merchandise the recommendations that have been made by the leading factors in the American garment trade are absolutely correct.

Meats and their Cooking

The quick application of a high degree of heat sears over the cut surfaces of the meat pores and prevents the loss of juices. Therefore:

Meats roasted should be popped in a hot oven.

Meats broiled should be held at first as close as is safe to a hot bed of coals.

Meats boiled should be plunged into boiling water.

Contrariwise, to extract the juices, as for soups, meat must be placed in cold water and gradually brought to a boil.

Meats should boil gently, if they are to be tender or of even flavor.

The addition of a couple of tablespoonfuls of vinegar in the pot will go far to make tender a tough piece of meat boiled.

A large ham requires at least four hours' boiling; a small one, two hours.

Meats fried or broiled, (or even roasted) are better for searing over before salting.

Sticking a fork in meat already seared over permits the escape of the juices.

Meats should be fried always in butter; never in lard.

All fillets (tenderloins) should be cut across the grain, set on end (cut fibers setting on the block), and smashed with the flat of the cleaver. Otherwise they will be leathery.

Roast Beef

(Releve or Roast.)

Place the meat (loin or foreribs of beef) in roasting pan; sprinkle with salt; add a cup of water and roast in hot oven, allowing 15 minutes to the pound. Baste frequently. When well cooked, roast will be firm when pressed with the finger.

After removing roast from pan, add 1 cup stock or water; boil, while stirring, for a minute or two; skim off floating grease and pass the gravy through a strainer. This gravy is considered best to serve with roast beef.

Roast beef, when served as a releve, should be accompanied by a vegetable as a garnish, preferably potatoes fried in butter, stuffed tomatoes, or others similarily cooked. If served as a roast, it should be accompanied by a salad.

Braised Tenderloin

(Releve.)

Lard the tenderloin with bacon strips quarter inch thick; place in roasting pan and sprinkle with salt; add, in pan, 2 onions and 1 carrot, sliced, 2 cupfuls stock, and 1 cupful Madeira; baste frequently, allowing 15 minutes to the pound. Make gravy same as for roast beef; serve with Jardiniere Garnish.

Beef Saute

(Entree.)

Slice tenderloin or other steak in pieces the sizes of a half-dollar, but twice as thick; brown 1 chopped onion in butter; and sliced meat and fry for about 5 minutes; sprinkle with a little flour and add a cupful of cream.

Broiled Steak

(Entree.)

Have steaks cut 1 inch thick, and divide into individual portions before cooking. Broil on bright fire five minutes; put them on warm dish, and place on each one teaspoonful butter mixed with chopped parsley.

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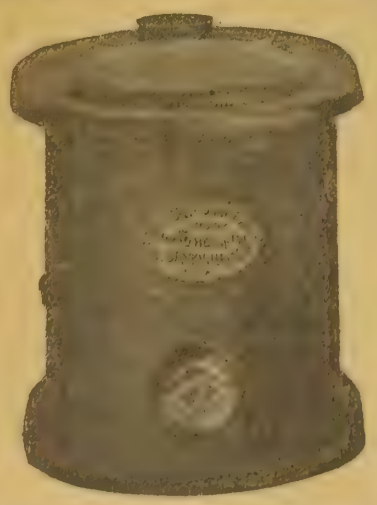
RURAL HOME



The installation of a GOOD HEALTH CHEMICAL CLOSET in your home means health--convenience--comfort--for the whole family. Not a luxury but a necessity. A postal will bring you full particulars. Address
THE NATIONAL MFG. CO., Limited. MONCTON, N. B.

Dr. Morse's Indian Root Pills

are just the right medicine for the children. When they are constipated —when their kidneys are out of order —when over-indulgence in some favorite food gives them indigestion —Dr. Morse's Indian Root Pills will quickly and surely put them right. Purely vegetable, they neither sicken, weaken or gripe, like harsh purgatives. Guard your children's health by always keeping a box of Dr. Morse's Indian Root Pills in the house, They 51

Keep the Children Well

HIGH CLASS

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18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....**68 cents**

18k Rolled Pendants, worth $3.00, our price..... ....**99 cents**

Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....**$1.36**

Boys Watch..... .....**69 cents** nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
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Sussex, New Brunswick.

Gates' Life of Man BITTERS

is made of the fresh Roots, Herbs Buds, Barks and Plants.

THE PEOPLES' MEDICINE

Expressly to cure disease, and in chronic cases the INVIGORATING SYRUP is used in connection to regulate the bowels. Everyone should take a few bottles

SPRING and FALL

to purify the blood. The cheapest and best on the market, and has been in use in Nova Scotia for over 70 years.

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NONE BETTER

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MIDDLETON, N. S.

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Send for Cut Price Catalogue. TORONTO

There never was a time when people appreciate the merits of Chamberlain's Cough Remedy more than now. This is shown by the increase in sales and voluntary testimonials from persons who have been cured by it. If you or your children are troubled with a cough or cold give it a trial and become acquainted with its good qualities. For sale by all dealers.

If You Have Live Stock For Sale Advertise it in the Maritime Farmer.

The Daughter in the Home

The profession of daughter is the highest, the happiest, the noblest that a young woman can follow, until she exchanges it for that of wife and mother, for which it is the best of all preparations.

This is the time to which your parents have been looking forward during the years of training while giving you every advantage that they could afford. You say, perhaps, "Mother will not let me help her. She prefers to keep house herself." That is because she fears that you may be thoughtless, careless or extravagant. Show her that she may be depend upon you by doing thoroughly and well whatever you are entrusted with, and and she will be glad to yield to you little by little the guidance and direction of the household with fond pride. A fresh mind brought to bear on housekeeping problems may find most attractive and novel solutions.

One sin against etiquette and the principles upon which good manners are based is the freedom with which the young persons of the family find fault.

It is fair to suppose in this country that by the time the children are grown the parents have reached the point of greatest financial prosperity. The children, therefore, have the benefit of the best that their parents have known. The elders are naturally disappointed and sometimes resentful when the children carp and critize, as though the family table and mode of living were not up to their standard —they who have supplied all being judged by those who have done nothing.

Democratic notions of equality have penetrated into homes, but it is a distinct loss to the young folk who have forgotten the habit of looking up to their parents as to superior beings, to be loved, trusted and obeyed. This attitude is the best rehersal for one's reverent relation to God.

We acknowledge it as a courteous obligation to express thanks for any service done for us. Your father lays down his life for you and the other dear ones day by day, year after year. His inspiration to unwearied perseverance has largely been his desire for your advantage. Thank him by loving, daughterly attentions. Humor his "little ways". If unpunctuality, or the use of slang, or any special thing irritate him, regard it is an obligation to avoid it. Make his home-coming a pleasure and his evenings a reward for laborious days, as far as in you lies.

In your intercourse with your brothers and sisters respect a closed door. Never ask questions that you think may be unwillingly answered. Avoid stock subjects of disputation.

Be punctilious in prefacing every request with "please," and acknowledging every trifling service with "thank you." Laugh with, but never at, others. Be quick to apologize if you have hurt any one's feelings, and never let the sun set without "making up" if there has been any disagreement. People are usually sensitive about their clothes; be therefore tactful in critism. Regard quarreling as the height of vulgarity. Do not betray to outsiders anything whatever that can in any way reflect at all upon the members of your family.

If with servants you are courteous as well as kind you will secure their loyal devotion. They like to serve a "real lady."

In short, be a well-bred gentlewoman at home as well as abroad.

Roast Tenderloin

(Roast.)

As for roast beef, but roast not quite so long in proportion to weight.

$15.95 AND UPWARD
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Thousands In Use giving splendid satisfaction justifies your investigating our wonderful offer to furnish **a brand new, well made,** easy running, easily cleaned, perfect skimming separator for **only $15.95.** Skims **one quart of milk a minute,** warm or cold. Makes thick or thin cream. Different from this picture, which illustrates our low priced large capacity machines. The bowl is a **sanitary marvel** and embodies all our latest improvements.

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Write today for our catalog and *see for yourself* what a big money saving proposition we will make you. Address,

AMERICAN SEPARATOR CO., Box 1212 Bainbridge, N. Y.

Recipes for Serving Pears and Grapes

PEAR MARMALADE—Pare, core and quarter ripe, juicy pears. To six pounds of fruit allow one pint of water. Cook slowly until reduced to a pulp. Add three quarters of a pound of sugar to each pound of fruit, and cook, stirring frequently, until the mixture becomes very thick. If desired to vary flavor, some lemon or orange rind may be steeped in the water before adding it to the pears. Can while hot.

PEAR CHARLOTTE—Pare and core twelve pears, put them in a saucepan with one tablespoonful of butter, and cook slowly until very tender. Butter a charlotte-dish m,ld and line with slices of buttered bread. Spread in a layer of pears, then a layer of bread, and so on until it is filled. Bake three quarters of an hour in a hot oven, and serve with liquid apricot sauce.

BAKED PEARS—Halve them, and cut off ends. Pack in earthen jar, half fill with molasses, then add water sufficient to cover fruit. Bake in a very moderate oven until pears are very tender. To vary flavor omit a small part of molasses, and add some sugar and a few whole cloves or some strips of lemon-peel. After cooking is finished, they may be placed over the fire, heated to boiling point and canned.

PEAR FLAVOR FOR ICE-CREAM AND ICES—Pare, quarter and core the pears, and cut in slices. Put into a preserving kettle, add enough water to keep from sticking, and cook until soft. Rub through a sieve, and measure. To each pint add one quarter of a pound of sugar, and stir until dissolved. Fill jars to overflowing with pulp, and seal them. Set the jars in a steamer, and steam for one hour and a half, then let them remain in the steamer until cold. Wipe and care for them as you would preserves.

GRAPE JELLY—Prepare the grapes as for grape juice. After draining, return the juice to the kettle, and place uncovered over the fire. Boil thirty minutes, then measure and allow one pint of sugar to one pint of juice. Boil twenty minutes longer, removing scum as it rises. Pour into hot tumblers, and set at once in the sun. If it should not be as firm as you wish by the next day, let it remain in the sun until of right consistency. When cold, cover with paraffin.

Grape Salad—Line a glass dish suitable for salad with crisp lettuce-leaves, then spread thick with halved and stoned grapes, any kind preferred, although the larger the better. When ready to serve, heap whipped cream on the salad, and drop chopped walnuts on top. This salad can be prepared in the winter from canned grapes.

Don't be content with skim milk profits from your livestock; get the best of it, all that is due you. Just put your horses, cattle, sheep and hogs **in condition** to do more work, produce more milk, make greater gains in flesh. That is the secret of success. This is easy! Just use

Pratts Animal Regulator

For forty years the standard stock tonic and conditioner. Progressive stock owners cannot afford to do without it. **25c, 50c, $1; 25-lb. Pail, $3.50** Keep on hand for quick use

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and **Healing Powder.** Good for man or beast. They quickly cure cuts, wounds, sores, galls, burns. **25c, 50c. Sample mailed for 2c "Your money back if it fails"**

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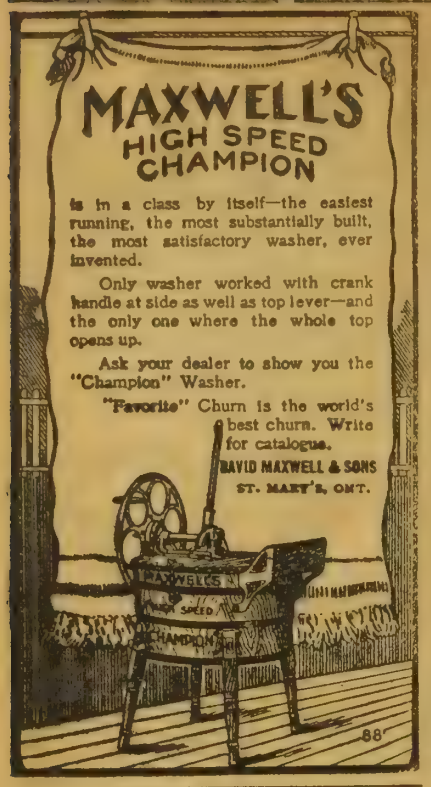
HANDY CLOTHES SPRINKLER

INSURES EVEN DAMPENING
NICKELED BRASS
25¢ POSTPAID
LASTS A LIFETIME
AGENTS WANTED
HOME MFG. CO. Box 772, HALIFAX, N. S.

Soak a quart of split peas over night in a large kettle. Pour off the water and rinse; cover with three pints of water and put on the fire with a spoonful each of salt and sugar. If you have a ham bone or a chicken bone to put in so much the better. Let the soup simmer for several hours on the back of the stove. Then add one or two cups of milk, a bit of butter and a dash of black pepper, and it is ready to serve.

Nothing is more important than the way the home is kept in order and the ease with which household duties are performed. The life and character of the children are largely dependent upon the protection given them in the home and the example placed before them while under parental protection.

Mint vinegar is a good substitute for mint sauce. This is made by washing the mint well and putting into a wide mouthed bottle with good vinegar. After three or four weeks pour off clear; put it into another bottle and keep well corked.



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FREDERICTON The Business COLLEGE

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for the months of January and February was 150% over that for the same months of 1912.

Spring term opens April 1st.

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Write us about our co-operative scheme.

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Fine French Field and Marine glass, large lenses and very powerful, 20 mile range. Just the thing for farm, boat and hunting trip. Nickle finish, fine Morocco leather covered and Morocco leather case with carrying strap. A regular $6.50 glass. Send $3.95 today and we will send to your nearest Express or Post Office, charges paid.

WRIGHT OPTICAL HOUSE,
653 Yonge St., Toronto, Ont.

Cruelties in the Poultry Yard.

It is surprising how many people, otherwise model citizens, are guilty of cruelty to both fowls and animals. It may not altogether be intentional on their part, but nevertheless they do things that call for censure.

One of the most common acts is to carry chickens by their legs, heads down. This cruelty has been practiced for years, and no one ever thought anything about it. They did not notice the rush of blood to the head of the fowl when carried that way. A neighbor just the other day was carrying a fat hen by the legs, and in a few minutes the bird was gasping and came pretty near choking to death. An equally cruel method is to carry fowls by the wings—especially so when the fowls are heavy bodied. The proper way is to allow the fowl to rest on the arm, and the legs held firmly by the hand; or it can be held between the arm and the body.

A dealer was one day noticed to yank killing stock out of a crate, by catching by a leg or a wing, and otherwise roughly handling them. When remonstrated with he replied that it did not matter as the birds would soon be killed.

With some people it is common to throw fowls over the fence into a yard. There is no telling in what manner they will reach the ground, and when this cruelty is performed while the attendant is in a fit of anger, there is considerable force put into the throw.

A very pious old gentleman was vexed to the cussing point because his chickens happened to get out of the yard, through a broken fence, in to his garden. In his anger he threw a stone and lamed one of the fowls. "There, it serves you right, I don't pity you a bit," was the only comment on the accident. How much better it would have been to have carefully driven these fowls back into the yard and at once repaired the fence.

Verily the contrariness of the hen is "not in it" with the contrariness and stupidity of some of the attendants.

A common cruelty is to overcrowd the flocks, especially in close, badly ventilated houses. Allowing the supply of drinking water to run out, and placing the drinking vessels out in the sun, are cruelties practiced by shiftless, lazy people.

Many acts of cruelty can be named in the methods employed in breaking up broodiness in hens. For instance, dousing them in water, tying them by one leg to a stake or throwing them into a yard of young cockerels to be knocked about right and left, are all practices that should be stopped. Broodiness is a provision of nature for rest, and certainly the industrious hen deserves it. But if it is wanted to have her change her ideas and condition, the only humane way is to place all such in a separate house where there are no nests nor male birds, and allow them to gradually have the fever pass off.

For some years back it was the custom to sell little (newly hatched) chicks at the poultry shows, and also at large bird stores around Easter. These innocents were bought by fond parents for their little tots, and carried to their houses in pasteboard boxes. Without the proper brooder heat, or the right kind of food, these little chicks would be slowly tormented to death, quite often, too, by the rough handling from the "cute baby" But it is not so now. The society for the Prevention of Cruelty to Animals has taken hold of the matter and will no longer allow this uncivilized cruelty.

Anything that will inflict needless pain, should be punishable. It is surprising how many people, who other-

DICKESON'S TEA

THE BEVERAGE of the OLD COUNTRY.

PURE FRAGRANT & DELICIOUS.

RICHARD DICKESON & COMPY., LIMITED. LONDON, ENGLAND.

THE FINEST TEA YOU EVER TASTED

Breakfast, Dinner and Supper taste better when you drink

DICKESON'S TEA

1-2 pound and 1 pound Packages also Bulk

25c., 30c., 35c., 40c., 50c. per pound according to grade you desire

Try it today and you will use no other

FOR SALE AT ALL THE LEADING GROCERY STORES

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MONEY IN POTATOES

Every Bag a DOLLAR

Get them all

THE farmer with a big crop of potatoes has a gold mine at his back door.

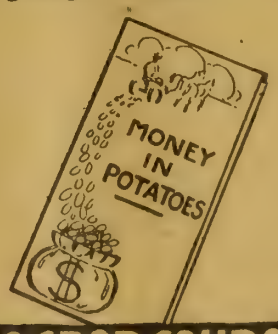
Every bag is a dollar.

Every bag left in the ground is a dollar **lost.**

Every bagful chopped by the plow is a dollar **lost.**

If it costs $5.00 too much an acre to harvest them it is $5.00 per acre **lost.**

To handle the **whole** crop and handle it **cheaply** is going to make a big difference in the profits.



We can help **you** there. Our book "Money in Potatoes" has ideas that will help you to mine that crop of potatoes to the last dollar.

Dollars saved in the potato field are as good as extra bushels to the acre. The "big crop" coupon will entitle you to a free copy of the book "Money in Potatoes." Send it in to-day. There is money in it for you. 16

BIG CROP COUPON

The Canadian Potato Machinery Co. Limited, Galt, Ontario F

As a Potato Grower I would like to have a free copy of this book.

Name.....

Address.....

wise are kindhearted and good, will not stop to think that their very acts are uncharitable and un-Christianlike. —M. K. B.

Large or Small Seed Pieces.

We had such a clear-cut experience in regard to planting small potatoes and cutting the large tubers into small pieces which had only one or two eyes that I believe it may be of benefit to some farmer readers to know how we came out.

Our potatoes had been sorted over and the very small ones were from one to 1½ inches in diameter. Cutting the seed fell to me, and when the piece was two-thirds planted word came that the potatoes would not cover the desired acreage unless cut finer. This was done, and some of the pieces were decidedly small—there were four rows of these. Finally it was necessary to use the small whole potatoes to finish out the last four rows.

The potato field was located so the ends of all rows were towards the house, giving us a good opportunity to observe the growth of the plants. The season was rather dry. The first plants to appear came from the largest seed pieces. When those from the last eight began to show many hills were missing, the plants did not grow as fast, and seem to feel the drougth more.

When harvested the yield of potatoes from these eight rows was decidedly less, also the tubers were smaller and fewer in the hills than in any other part of the field.

Those eight rows were noticeable from the house from the time the plants broke ground until after they were ripe. The seed pieces were too small to give the plants a good start. There was not substance or moisture enough to keep them going until the roots can take hold of the soil and strike out for themselves, and even when the root system was established it was small, weak, and never built up a strong plant as did the ones from the larger seed.

I would not cut a medium sized potato more than three or four times. Two good eyes are better than more, but I want a fair-sized piece of potato, even if there is but one eye.

It does not pay to use small potatoes for seed or to cut your seed too fine. You will raise just as many potatoes, if not more, to plant a smaller piece of ground and cut your seed the proper size.—D. M. G., Kennebec Co., Me. in Field and Farm.

Additional Facts in Regard to Tuberculosis.

How long and under what conditions the tuber bacilli live outside the body are questions of grave importance both to the farmer and to the keeper of his home. Unless the housewife is constantly on the alert she may administer contagion or even death at her table. How?

Dr. Charles F. Briscoe, in Bulletin No. 161 just published by the University of Illinois Agricultural Experiment Station relates that out of 1233 samples of butter offered for sale, 163 were contaminated by tubercle bacilli; in 7397 samples of market milk examined, tubercle bacilli were present in 502. This offers a dangerous source of contagion, especially for children.

The experiments showed that tubercle bacilli lived for ten months in butter in cold storage. They live in the tissues of a dead guinea pig exposed in the water, for more than 321 days. In sputum in running water, they live for more than 282 days. The tubercle bacilli, not in sputum, live for 441 days.

Tubercular animals alive or dead are a menace. They should, in the cause of common safety, be killed and their carcasses burned.

Human and bokine tubercle bacilli live for practically the same time and much longer than has been generally supposed.

The ultra violet rays of the sun deal sure death to the tuber bacilli. They cannot bear the light, for their deeds are evil. "Sunny up" the cow-sheds and the barns. Direct sunlight has a "toning up" effect that is more than imagination.

Turning Young Calves on Grass.

When you turn out your cattle in the spring make a little exception to the young calves. Those that are robust, and six, eight or ten months old, may be put out when the grass is good, but those under six months, especially if weak, will need feed and care in addition to the grass.

I know of some strong Shorthorn calves that were put on pasture May 15, when only about six months old, and they improved. Others, two or three months old, are less capable, and even at four or five months there is no advantage in making them find all their own feed in the fields.

Very young calves cannot be expected to do well on grass. Put them out more for air and exercise than for economy in feeding. Early in May is a good time to turn out as many as are fit. The grass is usually abundant and of good quality, and the fresh air and sunshine are acceptable to the young animals. Calves making little or no progress in the sheds will improve wonderfully when put on grass with good care.

To feed calves up to the time of putting them out and suddenly stop and rely on grass often interferes with their growth. Continue feeding to some extent after turning on grass withdrawing it gradually, and no check will then be experienced.

The youngest calves should never be turned out with the milch cows, as they are likely to suck. Neither is it wise to put the very small ones in with the large grazing stock, but give them a paddock, orchard, or little sunny, sheltered field, and they will enjoy its comforts. They may be left out night and day, but they should be given a little feed twice a day as long as necessary. A little feed morning and evening will suit them better than one big meal a day. They will not relish chaff or fodder, but will make good use of milk or meal.—W. H. Underwood.

It would surprise you to know of the great good that is being done by Chamberlain's Tablets. Darius Downey, of Newburg Junction, N. B., writes, "My wife has been using Chamberlain's Tablets and finds them very effectual and doing her lots of good." If you have any trouble with your stomach or bowels give them a trial. For sale by all dealers.

KA-LOR-OID
TRADE MARK REGISTERED
(Colored RU-BER-OID, Canadian Patents Nos. 93,027 and 93,160)

KA-LOR-OID, in its beautiful, soft shades of Red and Green, is the **only** prepared roofing made in permanent colors. In KA-LOR-OID Roofing the colors are not painted on, but by our patented process are made an integral part of the exposed surface. They last as long as the roofing itself—and that means longer than any other prepared roofing has lasted, for KA-LOR-OID is made of the same materials, and has the same wonderful durability as RU-BER-OID Roofing in the regular Slate color.

For Samples and Booklets write 110

Standard Paint Co. of Canada, Limited.
Montreal—Winnipeg—Calgary—Vancouver.

ROOFING

Did you send for that Catalogue we spoke to you about?

If not, let us tell you that it is not yet too late to get your copy, it was printed specially for you and is free for the asking--Send us a Post Card right away! Just imagine, 40 Stores under the one roof and every one different--the combined stock forms a mammoth display of quality Merchandise--garments for Men, Women and Children and a large variety of Household Requisties of the best make. Everything we sell is different and we believe to be a little better than that which is sold elsewhere.

Our prices too are fair and honest and we pay Mail or Express charges--both ways if necessary.

"Get it at Goodwin's" and save money.

Goodwins Limited
MAIL ORDER DEPT.
MONTREAL, Canada.

Commercial Fertilizer.

(Continued from page 567)

tions used and the difference in the character of the material.

That is to make a high grade fertilizer, on one that has in it the material to make a crop grow from start to finish, an abundance of high grade material must be used. And make a low grade fertilizer, which often sells at a high price, and does not contain but a very small amount of either high or low grade material but to fill up the bags a make-weight or filler is used.

The sources from which manufacturers get material is as follows:

Organic Nitrogen exists in animal and vegetable matter. The most valuable sources are dried blood, dried meat, tankage, dried fish, refuse from fish factories, cotton seed meal, etc. These materials are all rich in Nitrogen and decay rapidly and consequently give up their Nitrogen when conditions are favorable. Other materials less desirable as sources of Nitrogen are leather meal, wool waste felt waste, hair, horns and hoofs. Inorganic Nitrogen is obtained from Sulphate of Ammonia, Chloride of Ammonia. Ammonia Nitrogen is derived almost exclusively from Sulphate of Ammonia, one of the most concentrated materials which furnishes Nitrogen for fertilizers. It averages 2 p. c. of Nitrogen. This form of Nitrogen is readily converted in the soil into nitrates and is therefore available as a food supply for plants.

Nitrate of Soda and Nitrate of Potash are extremely soluble and the Nitrogen in them is directly and immediately available no further change being necessary. Nitrate of Soda contains 16 per cent Nitrogen. It is completely soluble in water, diffuses readily through the soil and forms no insoluable compounds with other substances.

The next material, Phosphoric Acid, is derived from materials called Phosphates. Phosphate of Lime is the form most largely used. The materials used by the manufacturers are Phosphate Rock of South Carolina and Florida. This material is acted on by Sulphuric Acid which changes the insoluble Phosphoric Acid in the rock into a soluble form and is known as Acid Phosphate. Ground bone is another source of Phosphoric Acid. It also contains from 2 to 4 per cent. Nitrogen. Basic Slag is a waste product of the steel works. Lime is introduced into the furnaces and tne Phosphoric Acid in the iron ore combines with it, and is drawn off as slag. This slag is very finely ground and contains from 12 to 14 per cent. of Phosphoric Acid, also some free lime, which in many instances corrects the acidity of the soil and is therefore valuable.

Slag should not be mixed with a fertilizer containg nitrogen, as the lime sets free the Ammonia and a loss of Nitrogen takes place. Potash exists in a number of forms as Muriate or Sulphate. All forms used in the fertilizer industry are freely soluable in water. The form of the potash influences the quality of the crops Potatoes for instance, are favorably influenced by the Sulphate. Miriate is the form most used in the orchards of the Valley.

The chief sources of Potash Salts are the mines of North Germany. Kainit and Sylvinit are crude products and contain a number of impurities. The principal impurity in Muriate is common salt. Both Muriate and Sulphate of Potash contain about 50 per cent of actual potash. As a rule, in the past, the farmer has been buying his fertilizers on the ton basis without sufficient regard to the amount or form of the constituents contained in them.

The direct value of a mixed fertilizer is determined by the amount of

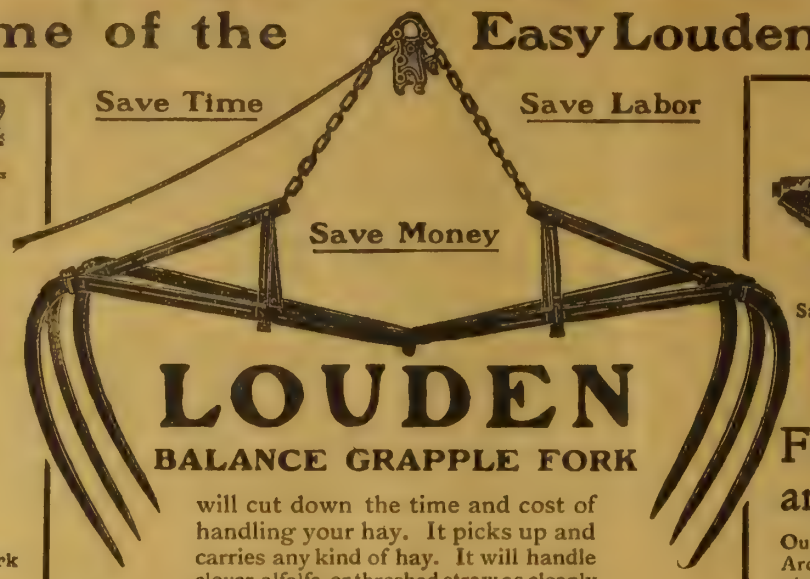
Making Farming Easier

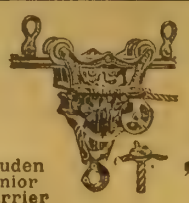
Some of the Easy Louden Ways

Save Time

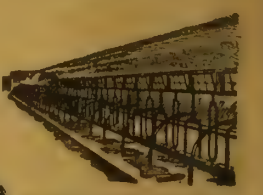
Save Labor

Save Money





Louden Junior Carrier



Sanitary Steel Stalls and Stanchions

Double Harpoon Fork

LOUDEN

BALANCE GRAPPLE FORK

will cut down the time and cost of handling your hay. It picks up and carries any kind of hay. It will handle clover, alfalfa, or threshed straw as cleanly and quickly as it handles long timothy.

Louden Bird Proof Barn Door Hanger

The LOUDEN LINE consists of Steel Stalls, Stanchions, Carriers, Hay Forks and Slings, as well as a line of Farmers' Hardware Specialties. Our latest Hanger, which is a Bird Proof Barn Door Hanger, runs in an enclosed Bird Proof and Weather Proof Track, and is positively the most perfect Hanger on the market.

Send now for our New Catalogue to

Write for Special Circular describing this Hanger.

The LOUDEN MACHINERY CO. - Dept. 38, GUELPH, Ont.

Free Advice and Plans

Our Expert Barn Architects will give you advice and plans for the building of your barn **FREE** for the asking. Tell us what you are going to build. We make a special study of means to save time, save labour, and save money for the farmer.

3

Concrete is the cheapest building material

WHETHER for a silo, a milk-house, or a million bushel grain elevator, concrete is the most economical building material in use to-day.

Concrete never requires repairs, and the saving in repair-expense alone makes the greater economy of using concrete more apparent every day.

The cost of other building materials is constantly increasing.

The cost of concrete is being reduced.

Canada Cement

which Canadian farmers use, with their own sand, stone and gravel to make concrete, is the only ingredient you have to buy.

We have, by reason of our large output and scientific methods, been able to bring the price of "Canada" Cement so low that it is within the reach of everyone.

An increase in demand results in a greater economy of production, and when conditions have warranted it, we have, from time to time, shared this saving with the consumer by reducing the price of Canada Cement. This demand will continue to increase—as fast as farmers learn of concrete's superiority over other materials.

When you buy cement, see that you get "Canada" Cement; by so doing you will assure the complete success of all your concrete work.

Send a post card for our book "What the Farmer Can do With Concrete." It is free.

There is a Canada Cement dealer in your neighborhood.

If this label is not on every bag it is not Canada Cement.

CANADA CEMENT COMPANY LIMITED PORTLAND CANADA CEMENT MONTREAL

Canada Cement Company Limited - Montreal

available plant food it contains; hence the buying of one or more of the constituents, Nitrogen, Potash and Phosphoric Acid. The more concentrated the material the less will be the proportionate expense of handling the constituent desired.

The following are illustrations of the methods by which different brands may be made. The difference in the quantity of actual fertilizing constituents used, which causes the variation in ton prices:

FORMULA I.

Nitrate of Soda 16 p. c. N, 500 lbs., having 80 lbs. N. or 4 p. c.
Acid Phosphate 16 p. c. Phos. 1100 lbs. having 180 lbs. Phos or 9 p.c.
Muriate Potash 50 p. c. P. 400 lbs., having 200 lbs. P. or 10 p. c.
Total, 2000 lbs.; 460 lbs. plant food.

FORMULA II.

Nitrate Soda 16 p. c. N, 250 lbs. having 40 lbs. N or 2 p. c.
AcidPhos. 16 p. c. 1000 lbs., having 160 lbs. Phos. or 8 p. c.
Muriate 50 p. c. P., 80 lbs. having 40 lbs. P. or 2 p. c.
Make Weight 670 lbs.
Total 2000 lbs.; 240 lbs. plant food.

Formula No. 1 shows a high grade product both as to quality of plant food and concentartions.

Formula No. 2 is only high grade in quality, and requires a make weight of 670 lbs. of worthless material in order to get the ton.

It will be observed that Formula No. 1 contains nearly twice as much plant food as No. 2, or in other words it will require the purchase of about 2 tons of fertilizer made from Formula No. 2 to secure the same amount of plant food as is contained in one ton of No. 1. Now the material in No. 2 other than the actual plant food possesses no fertilizing value, but the actual cost of the constituents is considerably increased because of the expense of handling, bagging, shipping and selling are just double what they would be for No. 1.

The manufacturers are in the business to cater to the demands of the trade. If consumers are intelligent, and have taken the trouble to look into the business; high grade, rather than low grades will be used. High grade mixtures cannot be made from low grade products.

Scarcely a farmer in the Annapolis Valley uses mixed fertilizers on their orchards. The articles used are Nitrate of Soda, Muriate and Sulphate of Potash, Bone Meal, Acid Phosphate and Basic Slag. These ingredients are not as a rule mixed before applying to the land, but are served in various proportions separately. A very good dressing for an acre of bearing orchard planted twenty-five years would be, 150 lbs. of Nitrate of Soda, 500 pounds of Acid Phosphate, and 150 lbs. of Muriate of Potash. These ingredients may be varied according to the character and condition of the soil and the general state of the trees. I have used 1500 lbs. of a fertilizer made from Formula No. 1 on potatoes with excellent results.

I am prosecuting farm operations with a view of improving the fertility of the land, growing good crops and making and saving money. If I went to a fertilizer vendor and bought mixed goods I would expect to pay $7.00 per ton extra, for the cost of mixing, handling, etc., over the cost of the ingredients. If I did buy a mixed fertilizer I would study the analysis on the bags, having in mind that the percentage of the ingredients determined the value of the fertilizer. I have never been offered a mixed fertilizer for less than $30.00 per ton. I have before me the guaranteed analysis of a certain manufacturer which reads as follows:

(Continued on page 591)

Finish This Story

A WORKMAN in an I H C wagon factory was explaining the various stages of wagon construction to an interested visitor. He picked up two pieces of long leaf yellow pine, which to all appearances were sawed from the same board, and asked the visitor to notice the difference in the weight of the two pieces. The lighter piece, he explained, was kiln-dried. The heavier piece was air-dried and more thoroughly seasoned. It had retained the resinous sap which adds strength and toughness, while in the kiln-dried piece of lumber this sap had been drawn out by the too rapid application of heat.

Every Stick of Lumber Used in IHC Wagons is Carefully Selected, Air-Dried Stock

Here was something to think about. The visitor asked for a test as to the relative strength of the two pieces of wood. The air-dried piece held up under nearly double the weight under which the kiln-dried piece of lumber broke. The workman explained how the comparative life of air-dried and kiln-dried lumber has about as great a difference.

To the eye there was no difference between these two pieces of lumber, but when put to the test there was a vast difference. So it is throughout the construction of I H C wagons—**Petrolia,** and **Chatham.** They are built for real strength, light draft, and satisfactory service.

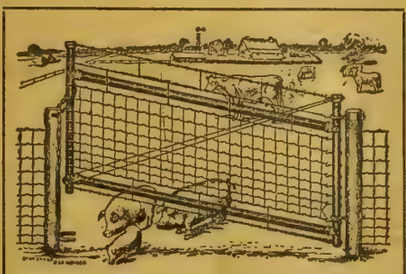
After seeing the care used in the construction of every part of an I H C wagon, the visitor asked: "Why don't you let people know of the great care used in selecting material and in constructing I H C wagons?"

This is what we have been trying to do, but we cannot tell it all in one short advertisement. I H C local agents handle the wagons best suited to your work. See them for literature and full information, or write the nearest branch house.

International Harvester Company of Canada, Ltd
EASTERN BRANCH HOUSES

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa; Ont.; St. John, N. B.; Quebec, P. Q.
Built at Chatham and Petrolia, Ont.

Ending Your Gate Troubles



This Gate is made of tubular steel of large diameter—far superior to gas pipe or tee or angle iron, and of heavy wire mesh fabric. Will last a lifetime. Can be raised as shown, by simple adjustment. Clay Gates are wonderfully light and strong, and always swing true.

ISN'T THE KIND OF GATE ALL GOOD FARMERS WANT AS FOLLOWS:—a Gate (1) that won't sag, break, bend, burn, blow down or rot; (2) that can be raised (as shown) to let small stock through, yet keep back large stock; (3) that will raise to lift over snow in winter; (4) that will positively keep back breachy cattle; (5) that will last a life time; (6) that is guaranteed.

Clay Steel Farm Gates

meet all the above requirements. This is why the leading stockmen, with scarcely an exception, have Clay Gates on their farms. This is why farmers who once try them, keep them, being delighted with them. The O. A. C. has them; so have the Experimental Farm at Ottawa, and the Macdonald College Farm. 30,000 Clay Gates were sold in 1912. They cost a little more than other Gates, they are worth much more.

60 Days Free Trial

One or a dozen Clay Gates will be sent, freight paid, to any farmer willing to try them. Keep them 60 days without expense or obligation. Send size of opening when writing. Send today for illustrated price list.

I GUARANTEE every Clay Gate to be free from defects in material or workmanship. I will replace free any parts, or the entire gate, giving out for such reasons.
H. RALPH STEELE, Manager.

The Canadian Gate Co., Ltd., 54 Morris St., GUELPH Ontario

Agents for Maritime Provinces, F. E. COPP Oxford, Nova Scotia

Put Any Weight on a Maritime Fence

and it stands the test. Man or beast can't break it down. Maritime Fence never sags or gets out of shape. Made from extra heavy imported hard drawn steel wire, thicker, stronger and galvanized so it is peel-proof. It is the last word in strength and durability.

The staying quality of Maritime fence is in the simple lock with the bull dog grip. It never lets go—never lets the fence get crooked. Maritime Fence is always sightly; always straight—always best. The quality of material and construction makes it best.

Don't buy fence until we have put our catalog and price list into your hands, postpaid, by mail. Costs you nothing to find out all you want to know about wire fence. Get your pen now and write on a postal "Send the catalog." 9

MARITIME WIRE FENCE

New Brunswick Wire Fence Co., Limited
Moncton - New Brunswick

Essential Things That are Sometimes Overlooked in Grooming Farm Animals.

(Continued from page 577)

clean straw wiping up the material loosened up by the curry-comb. The work of the wisp is facilitated by the spreading of a thin coat of damp sawdust over the horse before rubbing.

A thorough brushing is one of the most important steps in the care of a horse. The brush should not be too stiff and is best with a curry-comb. The purpose of the brush is to clean out the hair and work up the skin into a soft pliable condition. In this way the pores of the skin are opened up and the secretion of the oils that produce a gloomy coat is stimulated.

The rag used for the rub-down should be of cotton cloth, and should be clean. The rub rag simply lays the hair and brings out the gloss. It has best results when slightly dampened.

CARING FOR THE FEET, MANE AND TAIL.

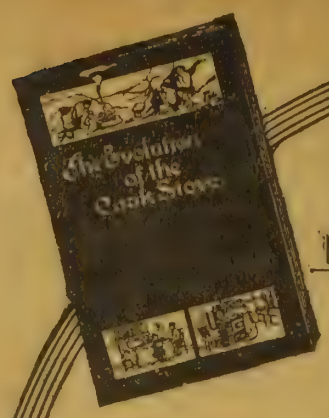
The last process, the care of the feet, mane and tail, is probably more often neglected than any other step. Besides the usual daily brushing of the mane and tail, we should at frequent intervals wash them. Washing with warm water and castile soap, rinsing with cold water, and then rubbing till almost dry gives good results. Washing not only cleanses the tail thoroughly but induces a great growth of hair. The care of the hoof embraces cleaning out of the sole with a hoof hook, washing out the sole and the outside of the hoof with water and sponge and wiping them quite dry with a rag. Many times this process is the means of discovering nails picked up, or stone bruises and if carefully followed we will have little trouble with hoof diseases. It is quite essential that the hoof be wiped dry after each wasning for if it is left to dry alone the hoof soon becomes brittle and liable to cracks. The use of hoof preparations is seldom profitable. A very light application of vaseline is all that is ever necessary for a healthy hoof.

When to groom the horse is a question that each man will have to answer for himself. With a hard working farm horse it is always best to care for them twice a day. That is a currying and brushing in the morning before work; and a brushing and cleaning out of the hoofs at night. With many farmers it is hard to find the time for such attention after work hours. This, however, is the time that most animals most need care. Coming in from a hard day's labor, covered with dust and sweat, the evening meal and the night's rest are no more refreshing to the horse than they would be to you or me under the same circumstances. These little attentions only take 20 or 30 minutes a day and your horse will pay you back many times in increased efficiency, value and looks.

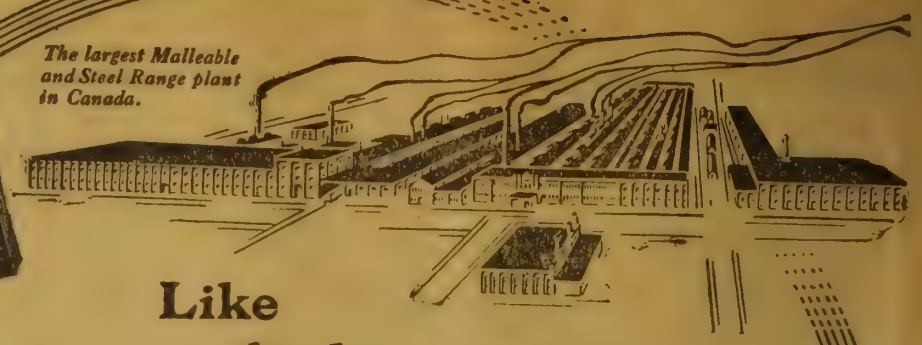
Milk Fever Now and Then.

Professor P. M. McConnell answers in the London, (Eng.) Dairy World an inquiry as to the former and present status of that once dreaded disease, milk fever, he says:

There is not so much milk fever about in the country now as there used to be some years ago. We know a great deal better how to feed milk cows now, and we take care never to have them in a plethoric state when they come onwards to the calving time. Under the old regime it was the custom to physic the cow tremendously before she came to the work, and if she took this disease afterwards— well, more physic was poured into her by the bucketful, with the usual or general result that the animal died all the same. The tackling of this disease must have prevented a lot of work. The writer has sat up many a night with a cow infected with this disease trying to get her to come round and to get her on her feet as it were. Now the disease gives us no trouble whatever, because, apart from the fact that we do to a large extent prevent it, if an animal does take it after parturition, we can almost cure it in a few hours. The trouble is believed to be due to the presence of either a microbe or an enzyme in the udder, and these are of the anaerobic type—that is, they will not live in the presence of fresh air. The first kind of treatment attempted was to inject a solution of iodide of potassium or chinosol into each teat. This generally cured the milk fever but very often ruined the udder of the cow, as she was of little use as a milker ever after. Nowadays we inject simply common air into the teat, although this has to be done with a special injector which passes the air through cotton-wool to purify it. The writer, however, knows of a case where a cow was saved by the use of a bicycle pump by which a quantity



Cash or Credit



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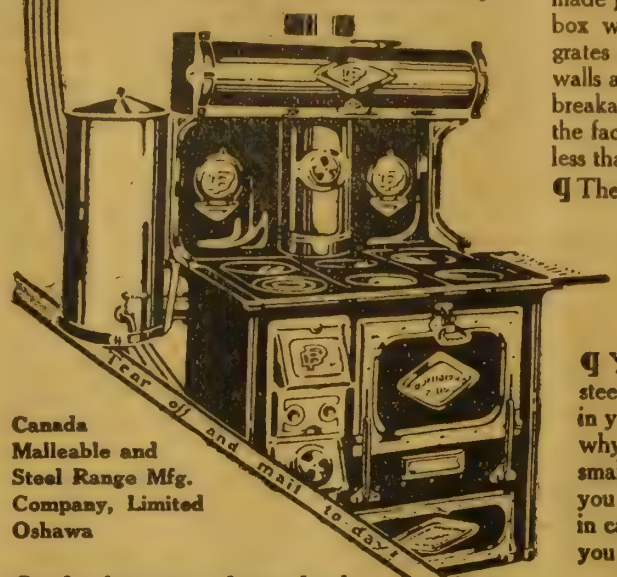
GETTING a Dominion Pride Range at the factory price puts about $20 in your purse. That's a clear saving to you.

¶ It's hard to compare prices because no other range is made just like the Dominion Pride. For instance, our fire-box weighs over 100 lbs., and with ordinary care the grates and fire-box linings will last a lifetime. The steel walls are three-ply—the tops and doors are made of unbreakable malleable iron. ¶ Even so, buying this range from the factory will land it at your station, freight paid, for 30% less than the next best range you could buy.

¶ The Dominion Pride range is unconditionally guaranteed.



Dominion Pride Range

54

¶ You would like to have a beautiful steel range like the Dominion Pride in your kitchen, and there is no reason why you should not have one. A small cash payment will secure it and you can pay the balance either in cash or on easy terms, as you choose.

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TURNIPS FOR FALL FEEDING.

Our **TURNIP SEEDS** have made the name Steele, Briggs a household word in Canada. Here is a selection of Swede Turnips that possess no rivals. They are the newest and most vigorous production of celebrated growers.

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They are fine grained and clean varieties and produce bountiful crops. To guard your interests and our own we seal the packages. These are the aristocracy of root seeds and no others are "just as good."

SOLD BY ALL LEADING MERCHANTS

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The Sta-Rite Is Trouble-proof

CARBURETOR troubles, ignition troubles, and all the other worry-makers have been done away with in the *Sta-Rite* gasoline engine, by its simplicity of construction, its high grade materials and workmanship and its eleven proven features. Its reliability, durability and low cost of operation make it an unbeatable engine. Stationary and portable models, 1½ to 16 h. p.

The *Sta-Rite* book tells the whole story in detail. Write for it today. **Agents Wanted.**

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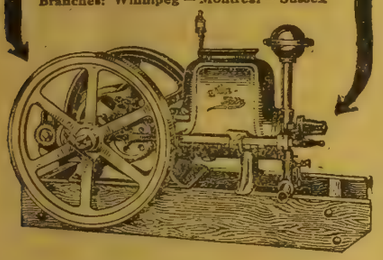
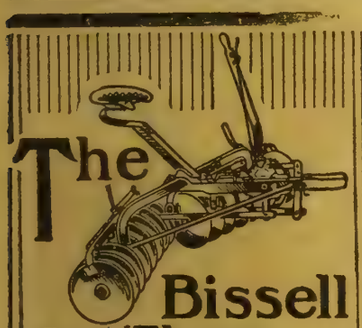




The Bissell Out-Throw Disk Harrow

To settle all doubt about which is the BEST OUT-THROW DISK HARROW, we ask you to test the "Bissell" Out-Throw in a field competition with other Out-Throw Harrows.

The "Bissell" Out-Throw has many features that have made the name "Bissell' famous in connection with Disk Harrows. It has plates of the correct shape. One gang is set slightly ahead of the other. The gangs cannot crowd or bump together and cause the Harrow to rock when you come to hard soil—a new feature in Out-Throw Harrows. The hitch is well back, the draught is light and there is no neck weight.

The machine in actual use is our best advertisement. No need to send special travellers to sell the "Bissell." We put our name on every Harrow. If you would like to learn more about Disk Harrows, send to Dept. M for free booklet of both out-throw and in-throw styles. 72

T. E. BISSELL CO. LTD., ELORA, ONT.

of air was forced into each teat. There is sufficient oxygen in the ordinary atmosphere to prevent the evil action of the microbe or enzyme which causes the trouble, and if the animal is taken in time she is usually up in a few hours. It is necessary to beware of complications, as very often this disease is followed by pneumonia, and therefore the animal must be kept comfortable until she is really past all danger. There must have been a tremendous lot of money lost by this disease before the cure was found, and it is certainly a great advance in being able to tackle it.

Clean Cream.

(1) In favorable weather keep the cows in the pasture as much as possible, thus preventing an accumulation of manure in the stable or corral.

(2) Remove the dirt from the cows' udders and flanks before milking and wipe the udders with a damp cloth.

(3) Do not feed hay or dust feed just before milking.

(4) To clean pails and cans, first wash them clean with warm water and a mineral washing powder, then rinse them well, scald them, and allow them to drain.

(5) Skim about a 30 per cent cream.

(6) Take the separator apart and wash it thoroughly after each separation.

(7) Remove the cream to a milk house or cool place wnere the air is pure and where the can may be placed in a trough or barrel of cold water fresh from the well.

(8) Do not mix warm cream with cold cream, nor keep cream in cellars or caves.

(9) See that all cans and tinware coming in contact with cream are perfectly sweet and clean, especially in the seams and crevices.

(10) Deliver the cream in the morning during hot weather. Make at least three deliveries a week in summer and two in the winter.

(11) At all times protect the can containing cream against heat, cold and dust by covering the can completely with a clean canvas.—(Complied from Kansas Experiment Station Circular 24.)

Planting Hints.

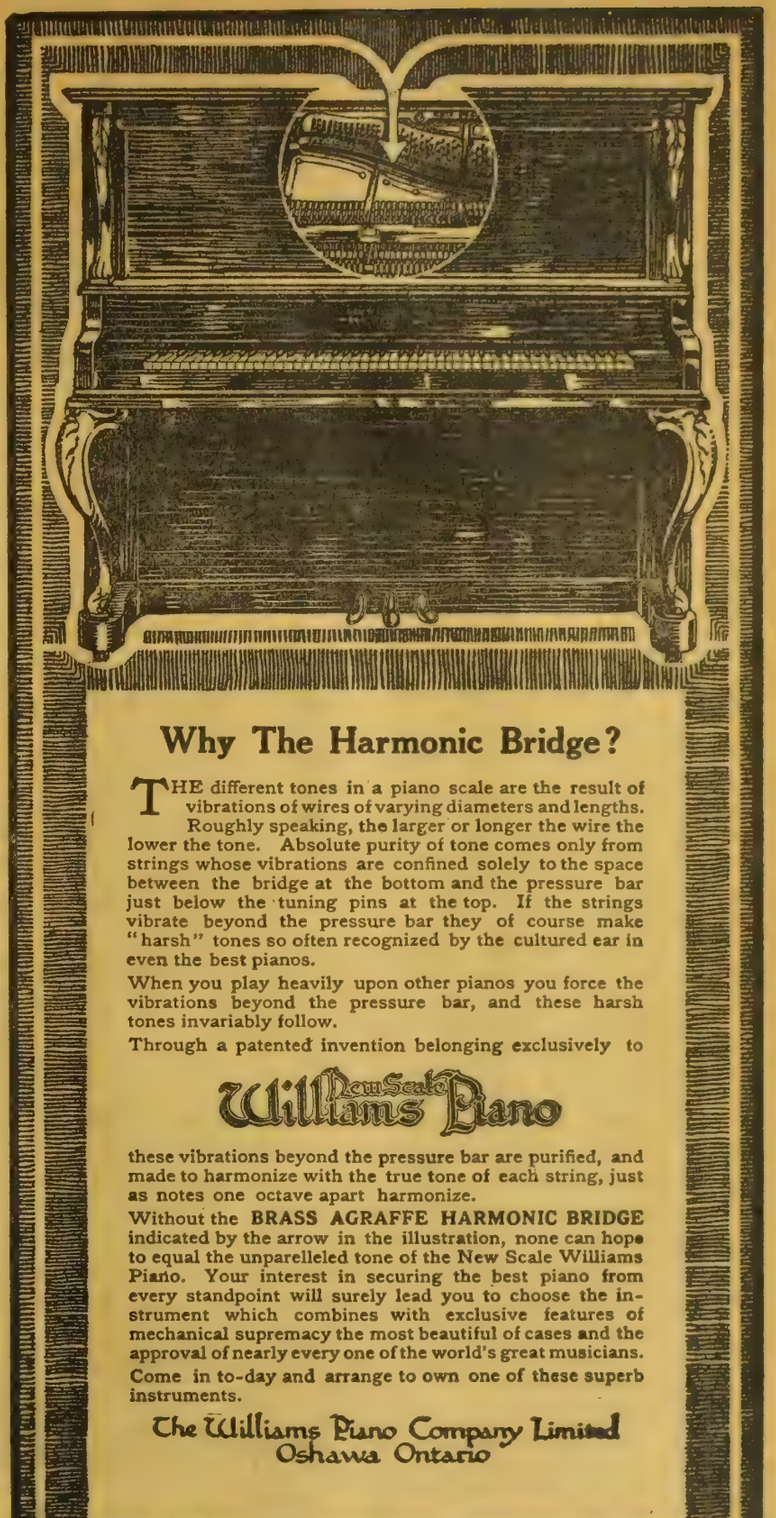
The average farmer doesn't seem to realize the importance and advantage always gained by making a thoroughly prepared seed bed before planting and careful seed selection. Do not try to prepare the soil or get it in condition for planting when it is not in proper shape.

If too wet when stirred, after it is dried out it will be a mass of fine clods, no matter how much dragging or harrowing we may give it. The roots of the plants cannot penetrate these lumps and they are a nuisance and bother in cultivating the crop.

With a thoroughly pulverized seed bed we get a better stand and the crops thrive and grow off more rapidly.

Never be in too big a hurry to plant before the weather gets warm and suitable for this work. Better delay the planting two weeks or more rather than plant before you have got the land in proper condition, or before the ground becomes warm.

The only safe way to tell whether or not you are making a profit on your farm is to begin a system of farm accounts. If you are to be fair with your farm you will keep accounts with it, charging it with the labor, seed and equipment and giving it credit for everything it produces. Incidently it may be worth much to you to have a record of your transactions, for it may show that you have not been giuing your farm a square deal.



Why The Harmonic Bridge?

THE different tones in a piano scale are the result of vibrations of wires of varying diameters and lengths. Roughly speaking, the larger or longer the wire the lower the tone. Absolute purity of tone comes only from strings whose vibrations are confined solely to the space between the bridge at the bottom and the pressure bar just below the tuning pins at the top. If the strings vibrate beyond the pressure bar they of course make "harsh" tones so often recognized by the cultured ear in even the best pianos.

When you play heavily upon other pianos you force the vibrations beyond the pressure bar, and these harsh tones invariably follow.

Through a patented invention belonging exclusively to

New Scale Williams Piano

these vibrations beyond the pressure bar are purified, and made to harmonize with the true tone of each string, just as notes one octave apart harmonize.

Without the **BRASS AGRAFFE HARMONIC BRIDGE** indicated by the arrow in the illustration, none can hope to equal the unparelleled tone of the New Scale Williams Piano. Your interest in securing the best piano from every standpoint will surely lead you to choose the instrument which combines with exclusive features of mechanical supremacy the most beautiful of cases and the approval of nearly every one of the world's great musicians.

Come in to-day and arrange to own one of these superb instruments.

The Williams Piano Company Limited
Oshawa Ontario

$200.00 IN GOLD GIVEN AWAY FREE

LPAPE	NREOCA	UPML	ATSWRYREBR
CPAHE	RCYREH	YBRAPRSRE	ERPA

Can you arrange the above sets of jumbled letters into the names of eight well known fruits. If so, YOU CAN SHARE IN THE DISTRIBUTION OF THE ABOVE PRIZE. It is no easy task. But by patience and perseverence you can probably make out 5 or 6 of them. To the person who can make out the largest number we will give the sum of One Hundred Dollars. To the person making out the second largest number the sum of Fifty Dollars. To the person making the third largest number the sum of Thirty Dollars. To the person making the fourth largest number the sum of Twenty Dollars. Should two persons send answers equally correct, the first two prizes will be divided between them, (each receiving $75.00) Should three send in equally correct answers, the first three prizes will have to be divided, (each receiving $60.00). Should four persons send equally correct answers, the whole sum of $200.00 will be equally divided (each receiving $50.00), and so on in like proportions, provided they comply with a simple condition about which we will write as soon as answers are received. WE DO NOT WANT A CENT OF YOUR MONEY WHEN YOU ANSWER THIS ADVERTISEMENT. If you can make out anything like a complete list, write us at once enclosing 2-cent stamp for our reply. DO NOT DELAY, WRITE AT ONCE. Address, CANADIAN MEDECINE CO., Dept. 81 MONTREAL, QUE.

Advertise in The Maritime Farmer.

FLORICULTURE.

I have received many inquiries in regard to the time for planting annuals, etc., in the beds. I would say that the time depends altogether on the weather we have for the next few days. If warm it would be safe to plant hardy annuals, such as Carnations, etc., as early as the 20th or 25th of May. But if it should be cold, wait a week longer. The season for planting will certainly be earlier this year than it was last year.

"A Gardener," West-end, St. John, writes: What plants would you recommend an amateur to plant in a small bed in a sunny back yard to grow flowers for cutting, white flowers preferred? I would like plants that are easily grown and inexpensive.

I would recommend Drummond Phlox, White Verbena, White Asters, White Stocks, Princess Alice and Mignonette. These are all inexpensive, hardy and produce a large quantity of bloom and the more flowers that are cut the better they branch and bloom.

Henry, of St. John, writes:—"We have a large bush of Golden Elder in the garden. Could branches of the Hardy Hyderangea be grafted onto it?"

The branches of the Hyderangea could be grafted onto it, but they would not grow as the habits of growth of the plants are not alike in any respect. Of course I have never tried it, but would not think there was a shadow of a chance.

A Rothesay correspondent writes:—Would a root of Golden Glow look well in the centre of a bed? How high does it grow?

The Rudbeckers or Golden Glow should stand on the lawn by itself or be used as a background against a fence or wall. It grows quite high, under favorable circumstances, and would not make a good centrepiece for a bed unless quite large.

Hampton, writes:—I have a large clump of Rose Paeonies in my garden that have been there a good many years. It did not bloom last season for the first time in years. Should it be divided? If so, how and when? Can you recommend a good, hardy shrub for the garden, one that will not grow too high? I am advised to try Cedar. What plant would be the best to hide an unsightly fence, some four feet high—one that will bloom during the summer.

The Paeonie should be divided, cut down through the top and roots, leaving about three buds or eyes in a branch. It should be done as soon as possible. Water well after planting. The Syringa, Snowball, Weigella Lilacs and Sambucus Aurea are all good, hardy shrubs and the size can be regulated by judicious pruning. The first four all produce flowers; the latter is grown for its beautiful golden foliage.

The shrub for hedge purposes would depend somewhat on your situation. I would not advise cedar unless you were in the limestone section of the city, where they undoubtedly do well. The Hawthorne and Berberry make good hedges, and also the Honey Locust in some situations, but these latter are somewhat uncertain. The best general hedge plant for city use is probably the Lilac. It can be kept neatly pruned and in any shape desired. It is not affected by any variety of insect, a fault of all others, and it is hardy everywhere. Planted thickly it soon makes a hedge of glossy leaves from top to bottom and it makes a close and perfect screen.

As regards a plant to cover fence. Climing Nasturtiums would probably do the work quickest and cheapest. Sow early. Hollyhocks make a beautiful background and soon obtain a height of four to seven feet in good soil and will give a mass of bloom all the season. Charlers strain of Hollyhocks are probably the best.

All hardy plants, shrubs, bulb beds, etc., should be uncovered at once if in sunny situation. Divide and replant hardy perennials as soon as frost is out. Sweet peas should be sown in every situation. Little is gained, however, if the soil is wet and frosty, better to wait till it warms up a little.

MOLASSINE MEAL

Made in England

is made in England and is recognized by the leading veterinary surgeons in Great Britain—used in all mounted departments of the British Army—large Cartage Companies—Omnibus Companies—and all owners of horses having heavy work to do or for show or breeding purposes. It is

Look for this Trade Mark

on every bag

A Splendid Economical Feed for Horses, Cattle, Sheep and Pigs

"MOLASSINE MEAL" is not only a good food itself but enables the animal fed on it to obtain the full nourishment from all other food. When MOLASSINE MEAL is fed regularly three times a day, you have no waste fodder of any kind. It costs you less for feed and the animals obtain more nourishment.

Get some from your dealer to-day. If he has not got it, write and let us know at once.

There are dozens of molasses preparations on the market but only **one** MOLASSINE MEAL

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Write to the Department of Inland Revenue, Ottawa, for their Bulletin No. 241, on Registered Stock Foods, and see the Government analysis of MOLASSINE MEAL. It is better than its guarantee and away ahead of any other molasses food.

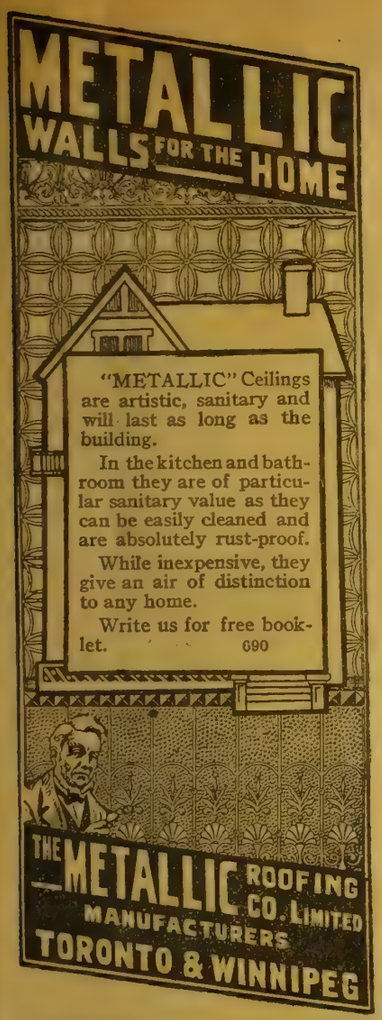
Amatite Roofing--Samples Free!

Do you know that you can investigate the new type of roofing very easily by simply sending a postal to the manufacturers of Amatite asking for one of their free samples? The manufacturers are very anxious to distribute these samples, because they want people to see what the new idea in roofing is.

Amatite is the new mineral-surfaced roofing which is becoming so popular because of its low price and the fact that it needs no painting nor care.

The mineral surface of Amatite is a practical, durable thing because it is embedded in a pitch matrix.

A sample of Amatite Roofing can be obtained by simply asking for it. Address the nearest office of THE CARRITE-PATERSON MFG. CO., Limited, St. John, N. B., Halifax, N. S.



Commercial Fertilizer.

(Continued from page 587)

Nitrogen—.82 per cent.
Sol. Phos. Acid—4.00 per cent.
Potash (K2O—2.00 per cent.

This fertilizer is recommended where the land is in good natural condition or where manure is so plentiful and cheap that a fertilizer is chiefly used to start the crop. It says that there is enough Nitrogen to start the crop growing and recommends 1200 lbs. with manure. If 1200 lbs. was used on an acre just 9.84 pounds of Nitrogen would be spread over that acre and then the buyer would get 4 lbs. of Phosphoric Acid to the 100 pound bag and 2 pounds of Potash. The farmer who buys the above grade of fertilizer will have to look to some other source for profit beside the crop he would grow from it.

If a farmer would know the value of any fertilizer he is asked to buy, let him multiply out the value of each of the three ingredients offered and expressed in the analysis on every bag denoted by the percentage, by the price of plant food per pound which can be obtained from any fruit company in the Annaplis Valley.

I have written this article with the sole object of trying to help the farmer of moderate circumstances, or the man who has generally bought on the ton basis never asking the question what quality of goods he was getting—W. H. Woodworth, Berwick, N. S.

Flash Favorite Comes to Sussex

Mr. Hugh R. McMonagle, of Sussex Corner, N. B., has purchased the famous Clydesdale Stallion, Flash Favorite to use in the stud and cover the routes in Kings and Queens Counties formerly travelled by his popular stallion Stanley, which has recently been sold to Mr. Donkin, of Cumberland Co., N. S.

Flash Favorite is by Royal Favorite, whose colts won so extensively over the get of some of the most popular Scotch Stallions at the recent Castle Douglas and other Scotch spring horse shows.

Flash Favorite was imported from Scotland by Prof. M. Cumming, to head the Clydesdale Stud at the N. S. A. C., Truro, where he gave a good account of himself as a sure sire and the getter of quality stock. Prof. Cumming was offered fifty per cent. over the purchase price for Flash Favorite the next day after he purchased him in Scotland.

Following the tracks of Stanley, whose get are in high demand in New Brunswick and where they change hands at top notch figures, Flash Favorite has a foundation where he will have ample opportunity to uphold his past good record as a sire.

Sicilian Buttercup Fowls.

These are now in the "spot light." The peculiarity of these fowls is the comb, which resembles the buttercup in shape.

The pullets are said to lay 300 good sized eggs yearly. They are said to be the most active breed on earth; anyway they are being largely boomed, and birds are changing hands at good rices. The States seem to be the headquarters for this breed.

The Buttercups should be popular if they lay 300 eggs per annum as stated. I hope no one will bring out a "Daisy" breed that lays 301 eggs, we might doubt the extra egg. We are now only 65 eggs off getting an egg a day from each kullet, but as the Scotchman said "Surely ye wad no expect the hens to lay on the Sabbath day"—of course not, so we are nearing tne limit now.—from "Canadian Farm" February 7, 1913.

Making a Compost Pile.

To make a compost pile proceed as follows: Place a layer of sod with the grass side downward over about a square yard of level ground, then a second and third layer in the same way. On these place four inches in depth of either of the fertilizers named. Continue these successive layers of sod and fertilizer until the pile is three or four feet in height, finishing up with a layer of sod or soil on top. Fall or early spring is the best time to do this. Place wire netting over the pile to keep off chickens and animals. Throw a few pails of water on the pile in summer to hasten decomposition. Cut down with a sharp spade a portion of this from top to bottom of pile when ready for use, so as to get equal quantities of soil and fertilizer. It should then be passed through a coarse, three-quarter inch mesh sieve, or the material chopped or pulled to pieces before using, so as to retain all the fibry and organic part of the soil possible.—Wm. Hunt, O. A. C., Guelph, Ont.

Why Red Rose is a "Distinctive" Tea

Because it is largely composed of the fine teas of Northern India, which are generous in strength and richness. These, blended with the flavory teas of Ceylon, produce the qualities for which Red Rose is famed.

N.B.—Coffee users will find Red Rose Coffee as generously good as Red Rose Tea.

372

Potash Produces Profit

Intending Users of Fertilizer materials should purchase them at once. POTASH and Phosphatic materials cannot be applied too soon if this year's crops are to obtain full benefit from them.

Farmers are invited to communicate with us and we shall send, Free, any of the following bulletins. State which are required:—

"Artificial Fertilizers; Their Nature and Use"
"The Principal Potash-Crops of Canada"
"Potash in the Prairie Provinces"
"Fertilizing Orchard and Garden"
"The Potato Crop in Canada"
"Fertilizing Fodder Crops"
"A Farmer's Field Tests"
"Farmer's Companion"

Expert advice on all matters pertaining to fertilizing. Send us five or more names of your neighbor farmers and we shall send you a coloured wall placard.

GERMAN POTASH SYNDICATE

1105 I. O. F. Temple Bldg., Toronto

Romance in an Apple Orehard.

BEN DAVIS was an awful flirt. He was a TALLMAN and handsome, a native of SPITZENBURG HOLLAND. He became hopelessly smitten on BELLFLOWER, who looked like a DUCHESS, dressed beautifully in a RUSSET gown. His attentions to her were so SWEET that he made the MAIDEN BLUSH.

Now she was engaged to another MANN. Although he was a BALDWIN, he was WEALTHY as a KING, and when he was advised of this he SWAAR, and with rage turned white as SNOW, and nearly took an APPLE-eptic fit.

He at once engaged a SPY, who soon informed him that he need SEEK NO FURTHER for her affections. He immediate left ONTARIO for a NEWTOWN down on the ST. LAWRENCE, where he met a ROME BEAUTY, and now he declares there are NONSUCH as she.

Udder Trouble.

R.F.—We are experiencing more and more trouble with udders caking or getting hard from two to four weeks before the heifers drop their calves. We have had an idea that if we treated such udders very long before the cow calves, say, two or three weeks, that it would be likely to start her milking and we have been of the opinion that it is not a good thing for a cow to start milking before she drops her calf.

Watch young heifers to see that they do not suck one another's udders. This is a common habit and a fertile cause of spoiled udders in cows. Separate calves at the first sign of the habit when a heifer's udder becomes enlarged before calving. Reduce feed, increase exercise and two or three times a day massage udder thoroughly but do not attempt to milk. But toward the body to stimulate flow of venous blood from the udder toward the heart. At night rub in warm melted lard or sweet oil or soft soap. Do not use camphor. It dries off milk.

Troubled With Weak Heart.

Was All Run Down.

Many people are unaware of having anything wrong with their heart till some excitement, overwork or worry causes them suddenly to feel faint or dizzy, and have an all-gone sinking sensation.

On the first sign of any weakness of the heart or nerves, you should not wait until your case becomes so desperate that it is going to take years to cure you, but avail yourself of a prompt and perfect cure by using Milburn's Heart and Nerve Pills.

Mr. Thomas A. Stevenson, Harris, Sask., writes:—"I was troubled with weak heart, and was all run down for a long while. I was almost in despair of ever getting well again, until a friend recommended me to try Milburn's Heart and Nerve Pills. After the first box, I was much better, and three boxes cured me. I am now, as well as ever, and will highly recommend them to any one else troubled with a weak heart."

The price of Milburn's Heart and Nerve Pills is 50 cents per box, or 3 boxes for $1.25.

For sale at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Alfalfa the Farmer's Friend.

In alfalfa we have a valuable leguminous food for all our live stock, and one that embodies many merits, namely, richness in protein, digestibility and palatability. For balancing the dairy ration, alfalfa is of the greatest value. It furnishes the most desirable bulky food for profitable poultry raising.

Alfalfa is not economical for fattening beef cattle, inasmuch as considerably less corn is needed when alfalfa is given as roughage. For hogs and for sheep it has proved the chepest feed we have, and its value for keeping our horses in good condition should not be lost sight of.

The fertilizing worth of alfalfa is very high when plowed under. Being a deep feeding plant, alfalfa sends its roots out in innumerable small branches, which gather more moisture and mineral matter than other plants can reach.

Alfalfa is not difficult to grow an lands of varying character, providing a few important points are observed. The first step to secure a successful stand is to sow good seed. There is much poor and sterile seed upon the market.

IT PAYS TO TEST THE SEED.

The writer has always made it a point to test out his seed, and the little trouble so taken is time well expended. Two years prior to seeding down ten acres, several sample lots of seed were obtained from as many dealers. A part of each sample was mailed to the state college for analysis, while I tested out the remainder. Of the six samples sent and returned with reports, but one lot of seed was marked A No. 1.

My own simple tests made by placing the seeds on a sheet of wet blottingpaper between two plates tallied with the college report. Needless to say the high test seed was purchased, although the dealer's price was somewhat higher for this lot than asked by any of the others. The seed cost me $15 per bushel of 60 pounds, and today my alfalfa field is considered the best stand in this section, yielding seven and eight tons to the acre.

Success in getting a good stand of alfalfa depends dpon the character of the soil and upon the thorough preparation of the seed bed. Alfalfa does well on nearly al, rich soils, with the possible exception of poorly drained and heavy clay lands. Limestone lands are ideal for producing a heavy crop, and, indeed, a sweet soil is necessary for success. If your soil is deficient in this element, lime should be added in sufficient amount.

SOIL FERTILITY AND INOCULATION.

Since alfalfa requires a rich soil, barnyard manure should be liberally and evenly spread and then plowed under. In the preparation of the seed bed it is important to free the field of weeds so far as possible, and this should be well done, because alfalfa will make a good stand for eight 10 years, and the farmer can afford to devote time enough to make a thorough job of it.

Another point in soil inoculation, and this may be regarded as an absolute necessity for establishing a good stand. The needed bacteria may be conveniently supplied by procuring a quantity of soil from an old field which has been seeded to alfalfa for several years. Use as much of this inoculated soil as possible: a wagonload to the acre will do the work, but double this quantity will be better.

The inoculated soil should be scattered over the field broadcast by hand or by means of an endgate seeder or a fertilizer drill. Another method of introducing the friendly bacteria is to innoculate the seed by using one of the preparations put up for this purpose.

If your land is clean and rich it maybe seeded down early in the spring. This may be in the latter part of April in some sections, while in less favorable climates and soils it will be safer to sow during June and July, or even wait until August.

The seed is generally broadcasted at the rate of 25 to 30 pounds to the acre,but may be drilled if cultivation is considered desirable. In either method of sowing, shallow planting is advisable, and aside from thorough soil preparation and inoculation, most failures to secure a good stand are undoubtedly due to improper and deep planting.

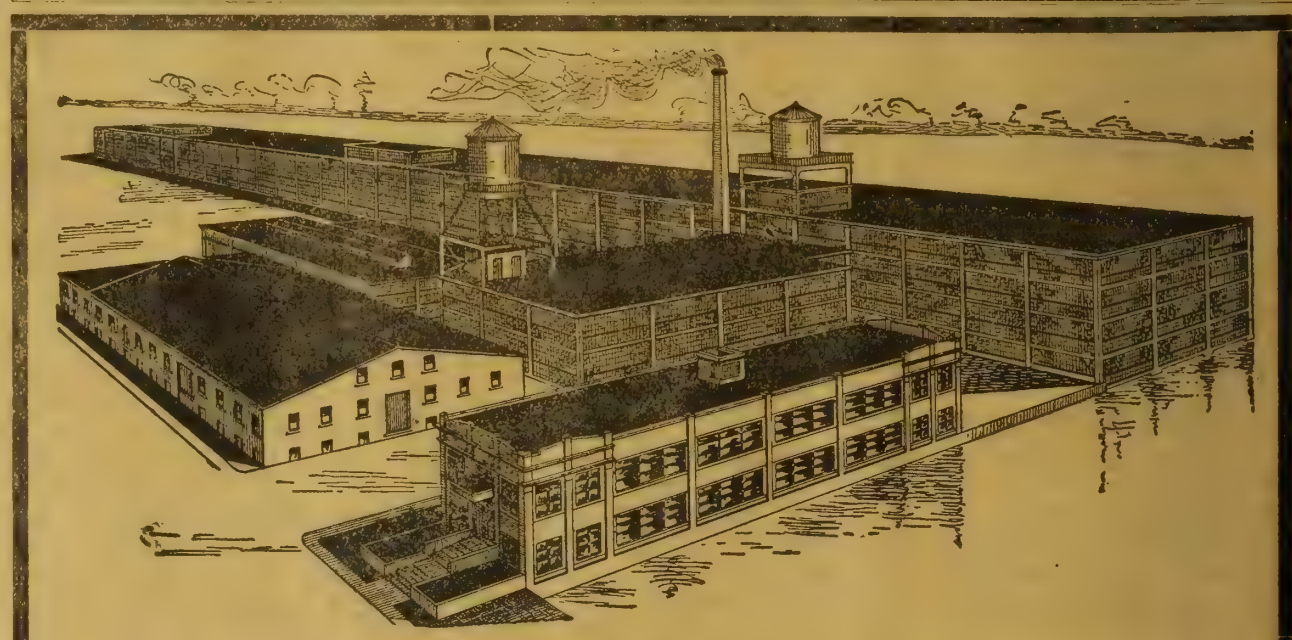
The writer's method is to plow in the spring as for corn, and run the harrow over the field every week to destroy weeds. The seed is then broadcasted and well harrowed in. A nurse crop to offset possible failure to secure a good stand appears of doubtful value and is, in fact, unnecessary if the land is properly prepared. A good seed bed is needed for the young plants are somewhat tender. But given a good start, it makes a wonderfully rapid growth and soon sends its roots deep down in search of plant food. With a good seed bed free from weeds, well inoculated soil seeded down with good seed, you wil, find that alfalfa will do as well and probably prove more profitable than any other crop.

Alfalfa stands cultivation better than most grains, and is benefited by frequent mowings. The point to be attended to is to keep the soil loose and open, and to disc it when it becomes too compact. In many cases it is of considerable value to run the disc harrow over the field after mowing. Alfalfa roots are deeply set and the disk will not reach them, providing it is set properly and in a fairly vertical position to avoid cutting the crown of the growing plants.—Chas. S. Taylor, Middlesex, Co., Ct.

To Women Who Dread Motherhood

Information How They May Give Birth to Happy, Healthy, Children Absolutely Without Fear of Pain—SENT FREE.

No woman need any longer dread the pains of childbirth. Dr. J. H. Dye devoted his life to relieving the sorrows of women. He has proven that the pain at childbirth need no longer be feared by woman and we will gladly tell you how it may be done absolutely free of charge. Send your name and address to Dr. J. H. Dye Medical Institute, Canadian branch, Dept. 110 St. Mary's, Ont., and we will send you, postpaid, his wonderful book which tells how to give birth to happy, healthy children, absolutely without fear of pain, also how to become a mother. Do not delay but write TO-DAY.



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Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire attle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

Stewart Bros., Alliston, P. E. I.
J. W. Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown. N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

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C. A. Archibald, Truro, N. S.

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Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

Springbrook Ayrshires!

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

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Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd.
Young Stock For Sale.

FRED S. BLACK, Amherst, N. S.

"HILLSIDE STOCK FARM"

We have for sale at right prices four Ayrshire bulls from twelve to fifteen mos. old. They are sired by the champion bull of 1911; a son of the renowned Scotch champion "Spicy Sam."

Prescott Blanchard, Truro, N. S.

Lawndale Stock Farm Shorthorns

We offer at present a few young heifers and bulls, as well as three cows, all bred in the purple.

Information cheerfully supplied to enquirers, Address,
I. M. LOVITT, M. D., P. O. Box 352, Yarmouth, N. S

Sea View Stock Farm

offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

Sgd. J. D. IRVING,
Buctouche, N. B.

ROSE BANK FARM
Jerseys & Yorkshires For Sale

Bull calves by Foxhalls St. John O'Dreamwold, and young pigs, both sexes, ready to ship in April.

JOSSELYN & YOUNG, Silver Falls, St. John, N.B.

FOR SALE!

A few choice White Leghorn Cockerels from prize stock. Eggs for hatching all breeds. Send for catalogue.

Maritime Poultry Supply Co.
MONCTON, N. B.

Ayrshire Bull For Sale

King of Islabank—381273

A choicely bred young bull rising 2 yrs, sire Cherry Bank Sunrise, dam Crouchville Lass that sold at the dispersion sale at Hill Grove Farm last May for $260.00, this is a rare chance to get a first class dairy bull.

For price and particulars write

EDWARD RILEY,
Coldbrook, P. O., St. John, N. B.

FOR SALE

We have a number of choice cockerels and pullets of Barred Plymouth Rock, White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Eggs for hatching $1.00 per setting. Apply to

Walter McMonagle & Sons, Sussex Corner, N. B.

Pure Bred Ayrshire Bull Calf

Dropped Jan. 12th, 1913. Bred from a daughter of Barcheskie Kings Own. Come and see him and his dam. Stables near the station.

ALLANDALE FARM, - Hampton, N. B.

We Duplicate All Infertile Eggs

White and Columbiam Wyandottes, Single Comb White Leghorns, and Light Brahmas. We use trap nests. In business over 30 years. Brahma eggs, $3 for 15; $5.00 for 30. The other varieties $2 for 15, $5 for 50, $10 for 100. Address,

MICHAEL K. BOYER, Box 27,
Hammonton, New Jersey.

Commercial Strawberry Plants
FOR SALE

Senator Dunlap—Perfect blossom, very vigorous, good size, good quality, very productive. $3.50 per 1000 f. o. b.
Sample—Imperfect blossom, very large, very productive, fair quality. $4 00 per 100 f. o. b.
Cash must accompany order.

L. D. ROBINSON,
Berwick, N. S.

EGGS FOR HATCHING

From prize mating Rose and Single Comb R. I. Reds and Buff Orpingtons and S. C. Brown Leghorns. Eggs $2.00 per 15. Send for mating list.

W. H. HENRY, Shubenacadie, N. S.

THIS is to certify that I have sold to Mr. W. H. Henry, Shubenacadie, N. S., all my flock of Rose Comb Rhode Island Reds, including all my prize winners at St. John, Halifax, Amherst, Fredericton and Moncton.

GEO. H. SEAMAN, Moncton, N. B.,
Sales Agent for Occulum

SHORTHORN CATTLE

To avoid inbreeding am obliged to offer my splendid. dark red, imported stock bull for sale. Bred by The Right Hon. Earl of Moray, Doune, Scotland, is of the low down kind and represents the best quality and families of this breed in Scotland. His color alone is worth his price to anyone wanting a head for a herd.

J. E. Hetherington,
Codys, N. B.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

DROP A CARD

KINGSDALE MATING LIST
Our mating list is now ready for 1913.

KINGSDALE POULTRY SUPPLY CATALOG
Fully illustrated 60 pages all up to date.

EVERYTHING FOR THE POULTRY KEEPER

KINGSDALE POULTRY & SUPPLY CO., SUSSEX, NEW BRUNSWICK

WISH-TON-WISH STOCK FARM
Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch; twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

AYRSHIRE BULLS FOR SALE

I am offering a two-year-old bull for sale. He is out of the famous cow White Heather of St. Annes. I have also two other choice bulls that are fit for service. Correspondence solicited.

J. FRANK ROACH, - - Sussex, N. B.

Custom Hatching and Day Old Chicks

We can supply Day Old Chicks from our Standard Utility Bred B. P. Rocks and White Leghorn Pens at rate of 20c apiece for April and 15c apiece for May delivery. Prices for Hatching Eggs supplied by customers is $3.50 per 100 eggs in lots of 75 or over.

With our modern Hatching Machinery, including new 3000 egg Candee Sectional Incubator, and long experience in the business we feel we can give satisfaction. Some 250 and 360 egg Model & Prairie State Incubator for sale.

Kinnear Poultry Company, Ltd., Sussex, N. B.

BRAMPTON JERSEYS!

Champions of Canada. **Champion of World.**

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

YOUNG HOLSTEIN BULLS!

We have lots of them, all ages, from one to six months. Show Calves from our best cows. Now is the time to get your choice. Females all ages, bred for the fall shows and dairy tests. Some excellent high grades fresh or springing. Also Three Draft Fillies rising two, three and four, and a quantity of Seed Potatoes.

LEA & CLARK, VICTORIA, P. E. I.

Rockview Farm, Welsford, N.B.

(Wm. S. Harding, Jr., Proprietor)

High Class Holstein Cattle. Young stock bred from heavy producing and showing ancestry for sale.

Cobequid Farm Holsteins

Present offering. One fine bull fit for service and several bull calves three or four months old, sired by Helbon Dehols Prince, and from cows that are producers. Among them one whose two nearest dams average over 26 lbs. butter in 7 days. For particulars and prices write

Samuel Dickie & Son, Central Onslow, Col. Co. N.S.

BELLEVIEW STOCK FARM
Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

C. A. ARCHIBALD, - Truro, N. S.

BARRED ROCKS
(Exclusively.)

Never beaten out in 15 years of competition. Now holders of Silver Cup for Best Birds at Amherst Fair, 1912. Offering eggs from six pens—every bird an exhibition specimen. Prices cheertully given on application. A few colonies of Bees for sale.

CRAIG BROS., Amherst, N. S.

Elmwood Stock Farm

offers for sale Bull Calves, from five to six months old. They are straight and right. Well marked, more white than black. From my stock Bull, Boron Posch (4852) which has won a number of 1st prizes at our Provincial shows.

W. L. ETTER,
Shubenacadie, N. S.

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This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Pure bred Shorthorn bulls, all ages. GUY DIXON, Point de Bute, N. B.

IMPROVED BERSHIRE PIGS for sale. Choice Stock.—Highland Stock Farm, Victoria, Car Co., N. B.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

SHORTHORN BULLS FOR SALE whose sires, dams, and grandam were bred in Ontario and Scotland. WALTER EATON, Upper Canard, N.S.

FOR SALE—Four Ayrshire bulls, five to eleven months old from good producing stock. JOHN F. FROST, Hampton, N. B.

MY BARRED PLYMOUTH ROCKS are bred to lay. Extra large. Narrow Barred. True Rock Shape. Eggs for hatching, $2.00 for 15. C. CAREY, Yarmouth, N. S.

FOR SALE—Two yearling pure bred Guernsey Bulls from good size stock. T. D. BLAIKIE, Great Village, N. S.

FOR SALE.—One pure bred Shorthorn bull, eighteen months old, color red, good size. Apply to C. H. RIPLEY, Rossendale, Cum. Co., N S.

CHEESEMAKER—Wanted for Season, 1913, at the Salmonhurst Cheese Factory. Apply stating particulars to A. J. JENSEN, Salmonhurst, Vic. Co., N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R. J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

FOR SALE—One pure bred Jersey bull, one pure bred Shorthorn bull, each 16 mos. old, sires of both from College Farm, Truro. Write A. JOLLYMORE, Brule Shore, N. S.

WANTED—The name and addrees of the party who mailed Postal Note No. H 998512 at Moncton, N. B., on March 15th, so we may give proper credit for same.—THE MARITIME FARMER, Sussex, N. B.

ENGINES for all purposes such as pumping water, spraying, wood sawing, motor boats, etc. Cut out the drudgery and let the engines do the work.—GUARANTEE MOTOR CO., 371 Bay N, Hamilton, Ont.

EGGS FOR HATCHING, One Dollar per setting. Single Comb Brown Leghorns, White Wyandottes and Houdans. See our win at Amherst in Christmas issue. WOLFVILLE POULTRY YARDS, Wolfville, Nova Scotia.

GUERNSEY BULLS FOR SALE—We have on hand 1 bull 2 years old in May; 2 bulls 14 months also 1 ten months. All good quality stock and from good dams and sires. We must sell to make room for young stock and will sell right. Come and see them or write us. WILLIAM COX & SON, Canard, Kings Co., N. S.

Annapolis Valley Fruit Farm
115 Acres, Only $2700

A quick buyer will get a big bargain; near store, schools, neighbors and only 2 miles to depot; 20 acres rich tillage; 50 acres valuable wood and timber; all good orchard land, 100 trees now in full bearing; brook pasture for 12 cows; splendid 9-room house with 28 ft. piazza, 40x50 ft. barn with cellar, shingled and painted; piggery and carriage house; another set bldgs. consisting of 9-room house with barn and shed; view is of water and other farms; long list household equipment will be thrown in; part cash, easy terms; for traveling instructions to see this and a 220-acre farm for only $3200 from which year's income was $3050, see page 67, our "New Mammoth Farm Catalogue No. 36," just out; beautifully illustrated and filled with a wonderful assortment of money-making farms; send today for your free copy, it will save you lots of time and money. Box D., Sussex, N. B.

BARB WIRE BARGAIN

10 tons new Barb Wire only 2c. per lb., 50 kegs new mixed size Wire Nails $2.00 per 100 lb. keg. 100 rolls 5 line Wire Fencing 42 in. high, all No. 9, special 15c. per rod. Other bargains in Fencing, Piping, Belting, etc. Send orders at once before sold out. Catalog free.

Imperial Waste & Metal Co., 3 Queen St., Montreal

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

Mindful of Small Matters.

(Continued from page 579)

the other breeds may make just as good broilers, if they do not come up to the standard required for their appearance, they are apt to be severely cut in price.

Never introduce a new bird into the regular yard until it has been duly quarantined. Keep it alone for a week and note its condition, appetite, etc. Disease is often introduced into a flock by carelessness in this matter.

As a general thing, not enough attention is paid to the family history of fowls for breeding purposes, as regards their health. Constitutional weakness, though it be apparently overcome, should never be allowed to enter the breeding pen.

To perpetrate health in a flock of fowls breed only the robust and healthy specimens, making sure that both parents are of healthy and prolific ancestry. Never under any circumstances use a male that is unsound, but rather seek to have him as nearly a perfect specimen as possible.

Fowls have no sense of smell. They have nostrils, but not noses.

Anna C. Webster says nearly all the diseases of poultry, summer and winter, can be put under one or two classes; inherited or caused by unnatural conditions of food. If we classify them thus broadly, it may be simplifying matters for some so they can more intelligently stamp them out.

Naturally, fowls are healthy, and no other stock on the farm has been so much abused. Yet in spite of all the ill-treatment they receive they do much better than any other stock on the farm of equal value.

A gill of linseed meal contains more bone-forming matter than a pint and a half of corn, and as much nitrogen as three gills of corn.

In selecting ducks for breeding, size of frame, length of body and general activity should be looked for. Without size of body we cannot expect to obtain large ducklings.

In Iceland the Eider duck is a great source of wealth as a producer of the famous Eider-down. They are large and easily handled, having been domesticated thoroughly. The color of the duck is a grey and brown mottle, while the drake is black and white.

The Vale of Aylesbury is the great center of duck raising in England. None of the duck farms are large—probably from half an acre to an acre. This is utterly devoid of vegetation on the surface, the grass being worn away by the dabble of countless feet. The ducks that are confined to orchards are, as a rule, much more healthy looking than those which are kept in the open. Doubtless the trees take up as a food much of the manurial foulness of the soil.

Both sexes in geese are feathered exactly alike, which makes it difficult to distinguish ganders from geese, especially when young.

Some poultrymen, in order to have a regular supply of eggs throughout the year, have a pen of two-year-old hens, one of yearlings, and one each of February, March, April and May hatched pullets.

The three sizes of roasting fowls—small, medium and large—can best be secured by the Wyandottes, Plymouth Rocks and Brahmas, respectively. The Rhode Island Reds can be substituted for the Plymouth Rocks if desired.

In market quotations the term "Asparagus chickens" is often used and not understood. It refers to chickens large enough to broil with early asparagus. They are usually hatched in late July and August, pushed along till November, then killed and put in cold storage for the winter. They are taken out and eaten in the spring.

JOHN RICHARDS,
Bideford, P. E. Island,
Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand. Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

HOMESTEAD FARM

Holstein-Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

LOGAN BROS. *Long distance 'Phone*
R. R. 1.
Amherst, N. S.

HEREFORD STOCK FARM

Let us know how much money you want to invest in Hereford bulls, heifers, or cows with calf by her side or bred to "Prime Lad".

Buff Orpingtons and White Wyandottes, good laying and Utility strains, eggs $1.50 per 13.

R. R. BLACK, Amherst, N. S.

Cattle and Sheep Labels

Size	Price doz.	Fifty tags
Cattle.....	75c	$2.00
Light cattle...	60c	1.50
Sheep or Hog.	40c	1.00

No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample mailed free.
F. G. JAMES, Bowmanville, Ont.

$3.00 and $1.25

Per setting is all I am asking for eggs from my 2 pens of Noted Prize Winning Rose Comb Rhode Island Reds. I will guarantee you cannot get eggs for less than $10. from breeders outside the province that will hatch chicks as good as my $3.00 pen. This pen is headed by 1st. Amherst Cock mated to 10 winning females. Pure American Beauty Strain. Will sell pen for $50.00, any 4 of the pullets are worth this.

GEO. H. SEAMAN, MONCTON, N. B.

CORNING TURNIP SEED
FOR SALE

About 1000 lbs. of the famous Gr. Top "Corning" Turnip Seed, crop 1912, grown from selected roots. Price 50c., postpaid 55c.

S. P. GOUDEY, Yarmouth, N. S.

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

¶An Advertisement in the Maritime Farmer will sell your surplus stock--Try it.

NORTHERN GROWN TREES

Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery—no agents. Send list of your wants for prices, etc.

E. L COLPITTS
Petitcodiac, New Brunswick

Holstein Bulls For Sale

We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

Price if taken before April 1st, $40.00

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
Loch Lomond West Nova Scotia

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

C. C. H. EATON,
Canard, N. S.

Raspberry Plants!

Wishing to remove all Raspberry stock from ground they now occupy, we are making the following low prices for April: King (early), $1.25 per 100. The celebrated "Herbert," $2.00 per 100. Hiram, $1.00 per 100. Cuthbert, $1.25 per 100. Eaton (new), $1.50 per 100. Any variety mailed, postpaid, 50c per doz.

Orchard Hill Farm,
Brown's Flats, N. B.

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months. A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.B.

1870 1912

Mumford Bros.

PRODUCE COMMISSION MERCHANTS

141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.
DR. BELL, V. S.
Kingston, Ont.

Fullline of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

Say I Saw It in The FARMER

DISPERSION SALE OF

60 Head of

High Class and Show Ayrshires

We purpose dispersing our entire herd of pure bred and Grade Ayrshires now on our farm at

FOREST GLEN

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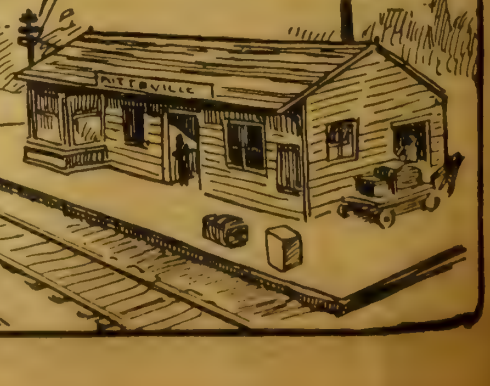

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Vol. 18. SUSSEX, N. B., MAY 27, 1913 No. 16

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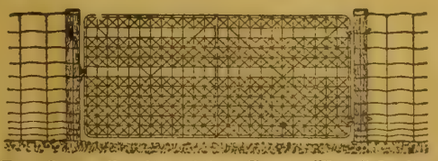

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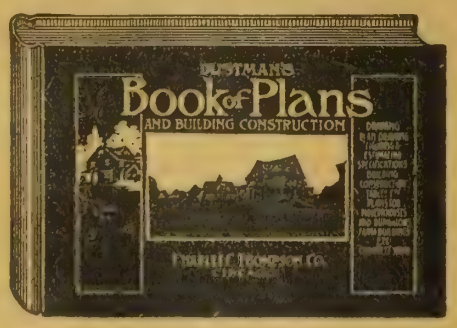

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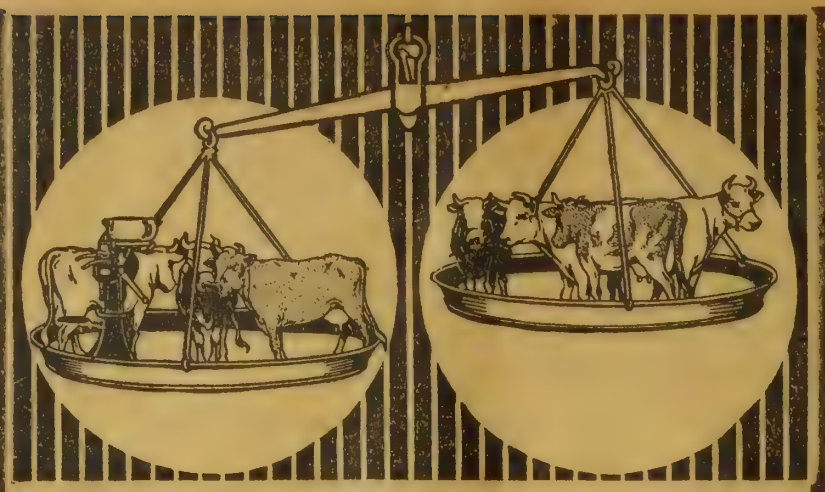

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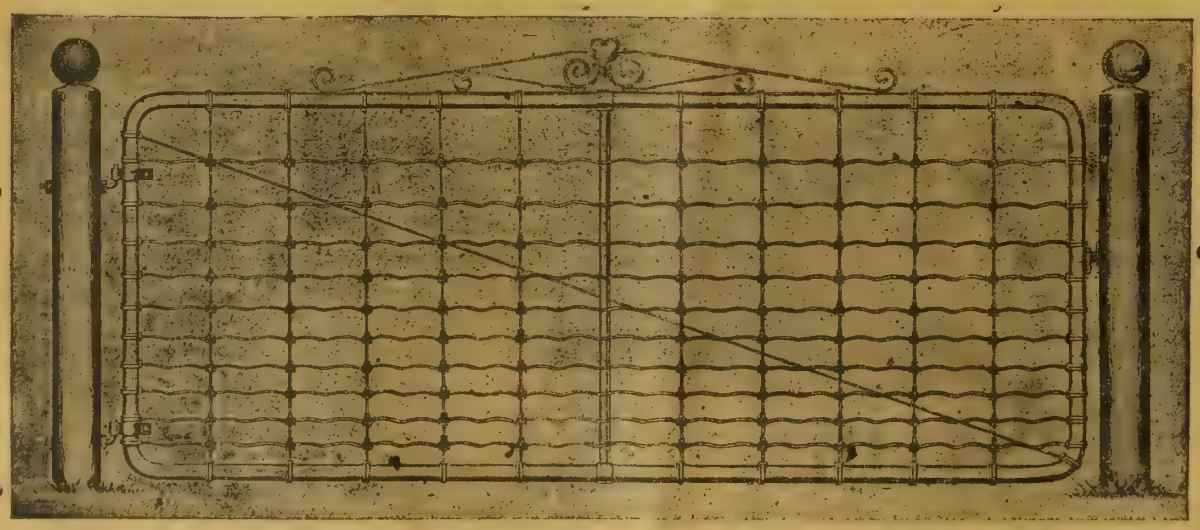

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Volume 18. SUSSEX, NEW BRUNSWICK, MAY 27, 1913. Number 16.

Care of Milk and Cream on the Farm

By J. H. Frandsen, of the Nebraska Agricultural Station.

MODERN methods and machinery have done much to improve the quality of creamery butter, but the most skilful buttermarker using the best of machinery cannot overcome the evil effects arising from the filthy methods followed by some cream producers.

Unfortunately many dairymen do not realize this condition of interdependence which really exists between the creamery and the cream producer. Good butter cannot be made from an inferior grade of cream. The better the quality of the butter produced the greater will be the demand. The high grade butter commands the highest price, even when the market is well stocked with the lower and cheaper grades of butter. If the creamery is forced to sell at a lower price owing to the poor grade of butter produced, it follows that the creamery cannot pay as much for the butter fat. Dairymen lose thousands of dollars annually, due to the lower price paid for poor butter.

CLEANLINESS.

It is not easy to say just what is the most important feature in the production of clean milk. Special stress may be placed upon some particular step, yet if carelessness is allowed to rule at other steps much of the most painstaking care would count for naught in the final results.

Clean and sanitary conditions are factors of first importance upon which too much stress cannot be laid. It is impossible to produce good milk or good cream if dirt of any kind is allowed to get into it. Unless some precaution is taken at milking time, dirt and dust will be sure to fall into the milk from the flanks and udder of the cow. The greater part of this filthy matter dissolves in the milk, giving it not only undesirable odors and taints, but also inoculating it with various kinds of bacteria.

These germs may have been gathered from stagnant water, muddy pools, or miry yards. While the majority of them may not be disease-producing or especially harmful should they be transmitted to the human system, yet, to say the least, they are factors in bringing about decomposition of the milk. Filth and disease germs go hand in hand; the same carelessness that allows the one is likely to give access to the other. Hence, it is of the highest importance that the cow be kept as nearly clean as possible. This can be accomplished largely by brushing off all the loose dirt and dust from the flanks and udder, but it is even better to wipe the udder with a damp cloth. This will take but a moment and will prevent large quantities of filth from getting into the milk.

The Illinois Experiment Station has carried on some experiments to determine the amount of dirt that falls from the cow's udder and flanks during milking time. The following quotations from Bulletin 84, Illinois, give some interesting results.

"It was determined after several trials with three different milkers on thirty cows that it requires an average of 4½ minutes to milk a cow. A glazed dish eleven inches in diameter, the size of an ordinary milk pail, was placed in the top of a pail and held under the cow's udder in the same position as when milking. For 4½ minutes the milker went through the motions similar to those made in milking but without drawing any milk. The amount of dirt which fell into the dish during the operation was, of course, approximately the same as would have gone into the milk during the milking process. The dirt caught in the dish was then brushed into a small glass tube, the udder washed and the process repeated. The dirt which fell from the washed udder was also carefully brushed into a weighing tube. Both tubes were then placed in a desiccator and after drying twenty-four hours were accurately weighed on a chemical balance."

"Sixty trials were made at different seasons of the year. With udders that were apparently clean it was found that an average of 3½ times as much dirt fell from the unwashed udders as from the same udders after they were washed. With soiled udders the average was 22 times and with muddy udders the average was 94 times as much dirt from the unwashed udders as from the same udders after washing."

It should be well understood that the amount of dirt that gets into the milk is one of the chief causes of its rapid spoiling. Although some farmers think that the creamery-man can, in some mysterious way, remove the dirt and all its attendant evils, it remains a fact that the contamination resulting from dissolved filth cannot be entirely eliminated.

Many milkers have not as good a conception as they should have of the ease of contaminating milk from their person or clothing. After doing such work as feeding, cleaning the barn, or other dirty work, the hands and clothing are sure to have on them dirt and filth, which in many cases abounds in disease germs. The milker interested in a pure, wholesome product should insist on always washing his hands before milking and on wearing a special suit while milking. This suit need not be a white one, but such a suit has the advantage of at least showing when it has become soiled; and furthermore, if the milker is to keep it clean he will soon be forced to keep everything about him clean. Milking with wet hands is a dirty practice, especially when the udder or hands are dirty as the filth is washed into the pail.

The warm milk as it comes from the cow offers a splendid medium for the favorable growth of all kinds of bacteria that may gain access to it. In order to lessen this development, milking should be done as carefully and quickly as possible and the milk strained through a metallic strainer. Do not use a cloth strainer, for even under good conditions this soon becomes a hotbed of bacteria. The milk should be removed from the barn and barn atmosphere as soon after milking as possible.

CARE OF MILK UTENSILS.

To thoroughly clean milk utensils they should first be rinsed with cold water to remove all particles of milk. Then they should be thoroughly scrubbed with a brush in warm water to which a small quantity of good washing powder has been added. A washing powder free from grease is much to be preferred. After this they should be steamed or at least rinsed in boiling water. No wiping cloth of any kind should be allowed to come in contact with them after the scalding process. Sunlight is one of the best disinfectants and when possible all utensils should be placed in good sunlight and pure air.

The separator, of course, must also be thoroughly cleaned. No one should place any confidence in an agent's claim of separators being able to wash themselves by simply running water through them. Such claims are not made by men who have the dairymen's interests at heart. Washing a separator is not a very difficult task if done soon after separat- The water for washing should be warm, but not hot enough to cook the curd on any of the parts. If it is not convenient to wash the machine immediately after separating, the bowl should at least be taken apart and immersed in water. This will loosen all the curd and make washing comparatively easy. If the parts are scalded with hot water or steam after washing and left in a sweet, clean place to dry, no wiping with a cloth will be necessary.

The best milking pail is the one so constructed that it will reduce to a minimum the amount of dirt falling into the milk during the process of milking. The small-top pail may have some objections, but its advantages are so evident that it is rapidly being adopted by most of our prominent dairymen.

All milk utensils should be heavily tinned and as free from seams as it is possible to get them. All crevices and seams should be flushed full and smooth with solder. If pails of this kind cannot be purchased, take your pails to a local tinner and have him fill up all crevices with solder. Wooden pails readily absorb milk particles, making it almost impossible to keep them sweet and clean, and for this reason they should have no place in the dairy.

SANITARY MILK PAILS.

The milk house or milk room should be separate from the barn, so that no odors from the barn will penetrate it. It need not be expensive but should be built so that sunlight and ventilation are not obstructed. It should be provided with plenty of cold water, and there should also be some method of providing hot water or steam for cleaning the utensils. It should have smooth walls and ceiling such as can easily be kept clean, and should be so built as to provide an abundance of light. During the summer time the windows and doors should be so screened as to exclude all flies. The milk house should not be used as a general store room.

CARE OF CREAM.

Investigators have found that nearly all the chemical and bacteriological changes in cream take place in the serum or milky part; therefore the richer the cream the better it will keep, other conditions being the same. By skimming a rich cream, more skim milk is left at home for feed and there is also smaller bulk on which to pay express charges. For these reasons it is generally advisable to skim cream testing from 35 per cent to 45 per cent butter fat.

Frequent experiments have shown that cool (low) temperatures will

greatly retard the growth of most germs, and that cream quickly cooled will keep sweet much longer than when it is allowed to coll gradually.

The practice of adding warm cream to cream that has been previously cooled is recognized as being extremely undesirable, because the warm cream raises the temperature of the whole mass sufficiently to start the dormant bacteria to activity, causing them to multiply rapidly, producing large amounts of acid and also other undesirable fermentatfons before the cream is again cooled to a point where their growth is checked. Warm cream should be thoroughly cooled before it is added to the cold cream.

This department has carried on experiments to determine the value of cooling. A can of warm, fresh milk was divided into six lots and held at different temperatures as shown in the following table:

Table 1.—Showing the importance of holding cream at low temperatures.

Temperature of milk	Time held	No. of bacteria per cubic centimeter
32 degrees F	10 hours	3,300
50 degrees F	10 hours	11,580
60 degrees F	10½ hours	15,120
70 degrees F	11 hours	188,000
80 degrees F	11 hours	2,631,000
90 degrees F	11½ hours	4,426,000

A very simple and efficient way of cooling the cream quickly as it comes from the separator is by means of a small "Baby Cooler". A cooler of this kind costs about $2.50 and may be used with running water, crushed ice, or cold well water.

As soon as separating is finished, the cans containing the cream should be placed in cold water and the contents well stirred.

A very efficient and satisfactory cooling tank has been in use here, and in a modified form is used by many practical dairymen. The tank should be not less than 18 inches wide and 26 inches deep, and as long as desired. The length will depend upon the number of cans to be taken care of. It is made of 1½ inch material, and is fitted inside with a slatted bottom made of 1-inch strips. This slatted bottom is to allow the cold water to pass under as well as around the sides of the cans. The cold water supply pipe is connected directly with the pump and discharges within about 5 inches of the bottom of the tank. At the opposite end is an overflow pipe to carry off the surplus water. This overflow is piped to the stock tank, so there is no unnecessary waste of water. The cool water directly from the well enters by the inlet pipe, and being discharged near the bottom it is distributed through the tank and displaces the warmer water, which rises and is carried off by the overflow pipe. In this way the water is changed frequently and the cream kept quite cool. A tank as described may be built on the farm at a small cost. Where such a cooling system is used and other necessary precautions observed, it is possible to keep cream in good condition for several days, even in very warm weather.

In those parts where it is exceedingly difficult to secure a good supply of cold water, or in the newly settled sections where as yet not enough dairying is done to warrant the building of a milk house and cooling tanks, pits or shallow wells could be used for storing milk and cream. Experiments indicate that these pits may have a temperature of less than 70 degrees when the actual temperature in the shade was 104 degrees F. When these special pits are used for no other purpose, the milk and cream is usually of a much better quality than would be the case is it had been stored in the ordinary cave or root cellar containing vegetables of all sorts. It is a well-known fact that milk and cream readily absorbs odors from anything that may stand near them.

A well or pit suitable for the cooling of the cream should be about ten or fifteen feet deep and can be cemented, bricked, or boarded up as seems best under local conditions. It is not expensive and no particular skill is required to construct a pit of this kind. A simple hoisting apparatus with counter weight is easily arranged. Two guide wires running from the upper framework to the two stakes in the bottom of the well will keep the elevator in place. The size of the elevator and of the counter weight depends of course upon the load to be carried, and can be varied to meet the needs of practically all conditions.

The writer knows of dairymen, who because they realize the importance of quick cooling, and by keeping the cream in cans surrounded by ice-cold water until time for delivery, have worked up a trade for sweet cream which brings them fully twice the usual butter-fat price.

It is well to remember that it is the cooling of the cream and not the mere fact of getting it into water that is so important.

If the cream is stirred faithfully it will in a few minutes be reduced to the same temperature as the water in the tank, while if put into the tank without stirring it may remain warm for several hours. It is needless to say that just so long as the cream remains warm the bacter,a which even under the most sanitary conditions have gained access to the cream will not be hindered in their growth. The vast majority of milk bacteria, however, grow very slowly at the temperature of ordinary cold water; hence the importance of cooling the cream very qyickly.

In all parts of the provinces, ice may be put up at a very small cost during the winter. Farmers should avail themselves of the opportunity and put up a supply for the dairy and family use. Aside from its use in the dairy there are many places where a supply of ice could be used to good advantage; such as for ice cream making and for cooling the refrigerator so much desired by the housewife on the farm.

While the cream is cooling, the lid should always be removed from the can, thus giving the animal odors a chance to escape. A clean, dry cloth may be substituted as a protection from flies and dust. No vegetable or an- substance having strong odors should be allowed close to the cream as such odors are readily absorbed.

The cream should be delivered not less than three times a week during the summer. If cream is hauled to the station early in the morning and the cans protected by covering with a wet sack while on the road to the creamery or station, the farmer will be enabled to deliver the cream at a much lower temperature than would otherwise be possible. During the winter time the cream need not be delivered oftener than two or three times a week.

Some one has well said, "Clean cream, cold cream and rich cream are the three words which tell the secret of producing good cream.

It is believed that these few suggestions and such others as will occur to the intelligent farmer will aid him in producing a cream that will be sanitary and wholesome, and one that should easily secure the highest market price, whether it is sold for direct consumption or whether it is used for butter-making purposes.

SUMMARY.

It is impossible to produce clean milk and cream unless the cows, stable, milker, utensils and separator are clean.

To wash milk utensils use, first, cold water for rinsing; second, warm water containing a small quantity of good washing powder, for cleaning; third, boiling water or steam for sterilizing.

Use a metallic strainer; it is practically impossible to keep cloth strainers sweet and clean and free from bacteria.

Skim the milk as soon after milking as possible, and cool the cream at once.

Skim a cream testing from 35 to 45 per cent—the richer the cream the better it will keep. By skimming a rich cream, more skim milk is left at home for feed, and there is also smaller bulk on which to pay express charges.

Do not mix warm new cream with cold cream until it has been cooled.

Keep the cans of cream in a tank of cold water until time of delivery.

Wash the separator thoroughly after each separation.

Deliver the cream to the creamery or cream station early in the morning.

Deliver the cream not less than three times a week during the summer, and twice a week during the winter.

Protect the cans of cream from the sun by covering with canvas or with a wet sack while en route.

Silage Crop Advantages.

The soiling system offers a great many advantages over pastures. By "soiling" is meant the growing of a succession of crops, cutting them and feeding green to animals in an inclosure. First, it saves land; second, it saves fences; third, saves food; fourth results in better condition and more comfort for the farm animals; fifth, a greater production of beef, milk, wool or mutton; sixth, increased quality and quantity of barnyard manure; seventh, more animals can be kept on a small area of ground, and eighth, the boys are kept busy on the farm.

Among the disadvantages may be mentioned increased labor. On small farms, however, there is no question that increased profits more than compensate for the extra labor. In the thickly populated sections of Europe the soiling and tethering systems are used altogether. This enables the people there to keep up the fertility of their ground and to keep a large number of cows on a few acres.

To determine what soiling will do on our western irrigated farms, the following work was undertaken in Salt Lake valley, Utah, during the season of 1912. A man had 30 dairy cows. Feed was scarce because the alfalfa weevil had destroyed his alfalfa field, so he let us have the use of six acres of good ground near his barn upon which to grow feed for his cows. The land was divided into one acre tracts and planted to crops with results shown in the accompanying table:

The peas used were the ordinary Canadian field pea drilled in one direction first, and the oats drilled in at right angles to the peas afterwards. The vetch used was the Hairy or sand vetch. The corn was drilled in rows two feet apart. The drill was regulated so that a kernel of corn would drop every four inches in the row. The millet was the ordinary Russian variety. In field "H", the corn was drilled in as in field "D" and then the soy beans planted between the corn rows. The rape used was the Dwarf Essex.

On July 1st we began cutting field "A". Enough was cut in one day to feed the cows two days. Each cow was fed 40 pounds of green feed per day, eight pounds of dry alfalfa hay, and a small quantity of grain. By July 10th the peas and otas on field "A" were beginning to get too old, so the part of the field still standing (about one-half of it) was cut and dried for hay. We then began cutting field "B." The same method was followed in all of the fields. When the feed began to get a little old, the remainder was cut and dried for hay. All of field "J" was fed green. As soon as the peas and oats were removed from field "A" the land was replowed and harrowed and put into the crop as indicated in the table. The same is true of fields "B", "C" and "D."

Field	Crop	Rate of Seeding.	Time of Seeding.	Depth of Seeding.	Time of Cutting.	Yield in tons per acre.	Remark.
A	Peas and oats	1½ bu. 1½ bu.	April 16	3 in. 1½ in.	July 1-10	12 green	
B	Vetch and oats	1 bu. 1½ bu.	April 16	1½ in. 1½ in.	July 10-20	14 green	
C	Peas and oats	1½ bu. 1½ bu.	May 1	3 in. 1½ in.	July 20-30	12 green	
D	Fodder Corn	2 bu.	April 24	3 in.	Aug. 1-10	25 green	
E	Millet and vetch	1 bu. 1 bu.	May 15	1½ in. 1½ in.	Aug. 10-20	22 green	
F	Peas and wheat	1½ bu. 1½ bu.	June 10	3 in. 1½ in.	Aug. 20-30	10 green	
G	Peas and barley	1½ bu. 1½ bu.	July 14	3 in. 1½ in.	Sept. 1-10	8 green	Same as field A
H	Fodder corn & Soy beans	2 bu. 3 pks.	July 25	3 in. 2 in.	Sept. 10-20	32 green	Same as field B
I	Peas and barley	2½ bu. 1½ bu.	August 3	3 in. 1½ in.	Sept. 20-30	8 green	Same as field C
J	Vetch and rape	1 bu. 6 lbs.	August 14	1½ in. 1½ in.	Oct. 1	6 green	Same as field D

Total, 149 tons of greeen feed-

Of the 149 tons of green feed produced, 74 tons were fed to the cows in the green state. Seventy-five tons were dried for hay. Ordinary green crops at the time of cutting for hay contain about 70 per cent water. Hay as it is put into the barn or into stacks contains about 10 per cent of water. Our 75 tons of green feed would therefore shrink about 60 per cent. in being made into hay. This would make 30 tons of hay.

Each cow received eight pounds of dry alfalfa hay per day. Figuring up for the 30 cows from July 1st to the last of October they would have eaten 14 tons of alfalfa. Subtracting the 14 tons of alfalfa from the 30 tons of hay, we still have 16 tons of hay to the good after feeding the 30 cows on the six acres from July 1st to the last of October.

Had we known the preceding fall that we were going to do this work we could just as well have fed the cows on the same land from the first of May to the last of October, as from the first of July.

We would have put field "H" to fall rye. We could have begun to cut this during the early part of May. Field "F" could have been chosen for an alfalfa field so that the first crop could have been used for feeding the

animals during June. This could easily have been done as the crops grown were not planted until the latter parts of May and June respectively. The land of course was in the highest possible degree of fertility or else these results could not have been secured.

Each crop was irrigated twice, once during the early period of its growth and again about two weeks before we began cutting it. This left the land in the best possible condition for the succeeding crop.

The total value of these crops was about $894; it cost about $150 to produce them and the value of feed after deducting cost was about $744.

This work would certainly indicate that soiling pays on our small irrigated farms, especially when fed to such concentrated machines as dairy cows.—Kimball's Dairy Farm.

Editor's Note.—While the readers of the Maritime Farmer are not obliged to irrigate their farms, the combinations for soiling crops indicated in the above article are well adapted to Maritime conditions.

Notes From The N. S. Agricultural College.

In accordance with the legislation for the encouragement of horse breeding passed by the Nova Scotia House of Assembly in 1912, all stallions offered for public service in Nova Scotia are required to be enrolled with the Nova Scotia Department of Agriculture. Up to the present time the enrolment, including applications, for enrolment, is 220, but the number should be considerably larger than that. Of this 220, seventy-six horses are Pure Bred, 76 Grades and 68 are either cross bred or Mongrel.

If the experience of Nova Scotia turns out the same as the experience of other countries, the time will not be long before the percentage of pure breds will be very much larger than it is now.

The law in regard to the enrolment of stallions was amended during the past session for the year 1914 provision has been made for Optional Inspection of Stallions for soundness, according to which any owner of a stallion wishing to have his horse inspected can have this done and a certificate issued in accordance with the report of the inspection by applying and by paying the necessary fee to the Department of Agriculture.

The correspondence received at the Department of Agriculture indicates that the present law is endorsed by the leading horsemen of the province, who evidently consider that it is a step in the right direction. The amended law, which will go into force in 1914, will strengthen the present one and will, it is anticipated, lead to a marked improvement in horse breeding in the Province of Nova Scotia.

That there is a very large interest in Nova Scotia in the growing of alfalfa and the various clovers is evidenced by the large number of applications which are being received at the Agricultural College for nitroculture for the purpose of inoculating these crops. The largest call is for nitro culture for alfalfa, but there are not a few applications for nitro culture for red clover, alsike clover, etc., and it is of interest scientifically to notice that many of those who are applying for these nitro cultures, state in their letter that they have previously inoculated their land with nitro culture and have had extremely satisfactory results.

On the College Farm the results have been much more marked in the case of alfalfa than in the case of any leguminous crops, such as red clover, etc., etc., but a number of correspondents state that from the use of nitro culture they have been able to get stands of red clover, alsike clover, etc., where formerly this seemed almost impossible.

The Department will continue throughout this year to supply nitro culture for all leguminous crops.—M. Cumming.

The Summer Silo

The summer silo is fast becoming not only popular but necessary because of its splendid aid in supplementing summer pastures and tiding the herd over the period of drouth, heat and flies. Experiment stations that have studied the subject strongly advocate its use.

The summer silo is certain to assert its value as agriculture is certain to go forward rather than backward. Pasture at present used— or abused—is a broken reed. An overgrazed acre is the costliest acre that the farmer supports. Even in normal seasons grass rests in the summer time and unless a fall and winter pasture is laid by, little good is derived from grass lands after the flush of spring. The silo supplements pastures and carries the burden of the winter's feeding.

The Indiana Experiment Station Bulletin No 13 says: "Too much dependence is usually placed upon pasture for summer feeding. Pasturing high-priced land is unprofitable in these times. If sufficient silage is put for summer feeding, which will be up each year, part can well be used found less laborious than the daily hauling of green crops for the herd. The herd must not be allowed to shrink in flow unduly, as it is difficult to bring them back during the same lactation. The young stock, destined for future producers, must not be neglected on short pasture, for the labor and expense of supplying their needs as above indicated for the herd is insignificant compared with the importance of their unimpaired growth.

who are providing a succession of fresh soiling crops and using them to

There are many intelligent farmers great advantage in helping out short pastures. "But," says Professor Frazer of the Illinois station, "there is necessarily much labor attached to prepariag the ground, planting, raising, and harvesting the common crops used for this purpose. There is usually much loss in being obliged to feed these crops before they are mature and after they are overripe. And for the farmer who can make the larger investment, the most practical way of all to provide green feed for summer drouth is to fill a silo with corn. It not only saves the labor and inconvenience in the putting in and cultivaiion of small patches of different kinds of crops, but also in harvesting from day to day in a busy season of the year.

"These soiling crops can be dispensed with and all the feed raised from one planting in one field, in the shape of corn. The whole field of corn for the silo may be cut at just the right stage of maturity when the most nutriment can be serured in the best possible condition of feeding. It also avoids the possibility of the soiling crops failing to ripen at the exact period when the drouth happens to strike the pasture. For the silo may be opened whenever the pasture fails, regardless of the date, and the silage will remain in the best condition as long as is needed. When the pasture supplies enough feed again, what is left in the silo may be covered over and thus preserved without waste, and added to when refilling the silo for winter use."

Professor Skinner of Purdee station says on this subject' "Many successful farmers with limited area of pasture make a practice of filling a small silo for summer use. It has been well established that silage properly stored in a good silo when the corn or other crop is in the most desirable condition, will keep well for several years. Many foresighted men taking advantage of this fact plan to have silage handy the year round. They are thus prepared for any unusual conditions such as drouth, scant pasture, excessively long winters, and it is altogether practical and profitable. It is desirable to have a silo of relatively small diameter for summer feeding as it is necessary to feed about three inches from the top of the silage each day in order to keep it sweet.

"There are three silos on the university farm and it is our aim to avoid having all these empty at the same time. A limited farm makes it necessary to supplement the pastures every year, and while soiling crops are grown in abundance they can not be relied upon because of the gravelly nature of the sub-soil underlying the farm, which means longer or shorter periods of drouth annually.

"It would be absolutely impossible to maintain the number of animals on the college farm that we are successfully carrying without the silage to supplement our pastures. Many farmers have come to look upon the silo as important in supplementing the pastures as it is in furnishing succulence during the winter season."

Aid in Difficult Parturition

When people breed two-year-old heifers, or rather heifers to calf at two years of age, they may expect trouble at parturition. Last year I got an idea from the GAZETTE columns which is worth the subscription price for ten years.

The majority of cattlemen on seeing a heifer in difficult parturition hasten for a rope and two or three hired men, tie the heifer's head to something solid, fasten a rope to the calf's legs and all pull together. Sometimes they secure results and as often not. In the latter case a block and tackle or a horse is the next move. All this is very brutal and equally needless, frequently paralyzing the heifers hind parts temporarily and often causing the calf to have weak ankles or crooked legs.

A far better way is to take but one assistant with an old soft piece of rope and approach quietly. Often one does not need to tie the head. By inserting the hand into the vagina one quickly ascertains if the presentation is natural. If it is, carefully fasten the rope above the ankle joint and have the helper pull, easily and steadily. The head is usually through the pelvic arch and by passing the hand around it while the man pulls gently it usually comes through in a short time. In these days of wide hipped calves there is frequently trouble in getting the hips through the pelvic arch. This is where my new idea comes in. Instead of hurting my fingers trying to work the bones past I simply have an assistant pull steadily, while I tip the animal up on its back and over on the other side. I have never known this to fail to release the hips.—Charles A. Myers, Unita Co., Wyo.

Remarks.—This correspondent is right in stating that men should not rush in and by main force attempt to extract the calf. Often parturition will be entirely successful, if the cow is given time. If help is given too early it is an easy matter to draw out the head and foreparts of the calf or foal, but the hips jam in the pelvis and the life of the young animal is sacrificed. This is especially apt to happen in mares. Time should be allowed for the pelvic ligaments and bones to relax at calving and foaling time. When help has to be given first examine to find out exactly what is wrong in the presentation, then figure out the right way to set matters straight. A change of position in the dam, as suggested by the correspondent, often helps to relieve the difficulty. It is well to remember that in every difficult protracted case of parturition the passages tend to become dry. Copious injections of a lubricant, such as warmed raw linseed oil, sweet oil, melted lard or slippery elm bark tea, will prove of the greatest assistance and, in fact, make parturition possible where otherwise it would fail.—Vet. Ed., Breeders' Gazette.

Equipping a Barn

Next to our homes, the apartments of the dairy cows should be exemplary of cleanliness and healthfulness. In cleanliness the dairy stable should be as nearly as may be the equal of the housewife's kitchen. Both are laboratories in which human food is prepared. Much of the food prepared in the kitchen is cooked and thereby sterilized, while the food prepared in the dairy stable is consumed largely in an uncooked state and the dirt and filth that has gotten into it from the surroundings remains unsterilized.

Few mothers will boil potatoes for themselves in the stable where the milk for their children is drawn from the cows, yet the potatoes would not be contaminated in the least.

In healthfulness the dairy barn should, as nearly as possible be the equal of our homes, for are not our dairy cows the feeders of many of babes and all of our children?

In order to secure this high order of cleanliness and healthfulness, the dairy barn must conform to certain general specifications. The floors, stalls, mangers, gutters, should be an equally sanitary substance. Concrete may be washed and disinfected, rendering it clean and free from disease producing organisms. The inside walls should be smooth that dust and dirt may be eliminated. Galvanized metal linings are desirable in this respect, and steel fixtures are most easily kept clean. The milk room should be separated from the main building by a well ventilated passage.

Hay should be put down in a closed feed room rather than in a passage, that the air may not be laden with dust at feeding time. The stalls should be well lighted that dirt may be seen and that the sunshine may exert its purifying and disinfecting powers. Six square feet of glass per animal or 15 square feet of floor space are usually provided. Ordinarily the lighting is more efficient from east and west windows than north and south.

Adequate ventilation should be provided for. An air flow of about 35,000 cubic feet per hour per animal should be maintained that the air of the stable may be pure and healthful. To secure this large flow of air and yet keep the stables reasonably warm is a problem. The King system with properly designed out-take and in-take flues, is at present the most practical system employed.—Prof. E. W. Hamilton, Idaho Experiment Station.

We regret to read in our Prince Edward Island exchanges that Mrs. Wm. Clark, North Wiltshire, P. E. I., passed away on the 18th inst. We have enjoyed the hospitality of the Clark home, at Maple Grove Farm, as have many other friends and strangers. Mr. Clark and family have the sympathy of a large circle of friends in their irrepairable loss.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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MAY 27, 1913.

DATES OF ISSUE.

June 10-24
July 8-22

PREVENTING FOREST FIRES

Lumbering is one of the main industries in certain sections of the Maritime Provinces, and not a few of ehe inhabitants of these sections are dependent almost entirely on it for a living. A large proportion of the residents of the towns and villages along the banks of our majestic rivers and at tide water where the mills are usually located are also employed in preparing the lumber for marketing. Thus both rural and urban dwellers, are either directly or indirectly benefitted by the lumbering operations and should ever strive to foster the industry.

The forest is also the balance wheel used by nature in controlling our climatic conditions. With the passing of the forest climatic changes occur that are not always beneficial to the best interests of our country. Thus every citizen of the Maritime Provinces whether he be engaged in the great lumbering industry or not is directly affected by the condition of our forests. How zealously then should our forests be guarded against anything that would tend to diminish their usefulness. There was a time when people thought the primeval forests of these Provinces would never be depleted and unthinkingly and sometimes wantonly the trees were slaughtered. What man failed to do along this line was accomplished by devasting fires. Thousands of acres of valuable lumber areas have been burnt over and millions of feet of merchantable timber and young trees were thus destroyed. What a tale of devastation is told by the vast stretches of burnt and barren trees one sees as he travels throughout the breadth and length of our land.

The worst feature of the whole aspect is that many of the fires causing this devastation were carelessly kindled. A smouldering, unguarded camp fire, a burning match stub carelessly thrown away, sparks from portable and passing railway trains, carelessness in burning brush when clearing land or bonfires carelessly guarded and sometimes malicious incendiarism have all lent their quota to the work of destruction.

Our lumber operators have, for some years, realized that if their industry was to be protected they, themselves must be more careful with their operations. They are now conserving the forests by protecting the young growth and in some cases they are reforesting burnt areas. Our laws are very stringent in regard to forestry regulations and fires and it behooves the rank and file of our citizens to do all that lies in their power to assist in the carrying out the spirit and letter of these laws.

We feel sure that not one of the readers of the Maritime Farmer would like to do anything that would reflect on his or her good citizenship. During dry seasons then, for your own sake, and the sake of generations yet unborn don't throw lighted match stubs where they are liable to start a conflagration. Don't leave camp or bonfires unguarded. Extinguish the fire before you leave it and in clearing land be particularly careful lest the fire gets away from you.

THE CLERGY AND AGRICULTURE

During the last seven years the editor of the Maritime Farmer has had an opportunity to visit a great many sections of the Maritime Provinces, where agricultural exhibitions, conventions and farmers' meetings are held. He has observed the interest or apathy evidenced towards agriculture by the clergy of all denominations.

The clergyman, no matter what denomination, always commands a great deal of respect in his community, and not infrequently, as he goes in and out among his people sharing their joys and sorrows, his advice is usually sought and often followed.

We have noticed that when a clergyman in a rural district takes an active interest in the temporal, agricultural conditions of his people, he is in every case more successful in getting nearer his parishioners in matters spiritual.

We have met some clergymen who are meritable leaders among their people in matters agricultural. They work with and for their people and their churches are in a flourishing condition.

On the other hand, we have met some clergymen who take no interest in the industrial affairs of their people and who seem to put on that air that leads me to think that they consider it infa dig to step dawn from their platform and occasionally get in touch with agriculture, the one great industry in which man has to co-operate with God and be his partner. Here we find a gulf between parson and people and church conditions not so flourishing as they might otherwise be.

We are glad to state that the number of clerymen and professional men who take an active interest in the work of the farmer is on the increase.

While we find a goodly number of interested clergymen in Nova Scotia and New Brunswick, our observations lead us to unhesitatingly making the statement that in this respect the clergymen of Prince Edward Island lead the way and nowhere in Canada can one find a more upright, law-abiding and God-fearing people—horsetraders excepted in all countries.

TOLL TAKEN BY WEEDS

Did you ever stop to think of the tax you are paying to keep up the weed crop?

If the township would levy a tax on your crops equal to 25 per cent of the value, you would rebel in righteous indignation, wouldn't you? Yet a good many of us permit a stand of 25 per cent weeds to occupy our fields and think we are doing pretty good farming, too.

Why not grow grain, or roots, or some other good crop, where that weed tax is now growing? The weeds give no return. They draw more heavily on the water supply and plant food supply than paying crops. Paying crops and weeds cannot occupy land at the same time. Let us grow paying crops and get profits, rather than pay taxes.

Pound for pound, the plant food required by crops and by weeds is almost the same, but weeds are better food gatherers. The greatest difference comes when the question of water arises. Weeds not only require more water, but are able to get it. From 300 to 700 pounds of water are used in producing a pound of dry matter in our common crops. We require even more. If it comes to a contest as to which will get it, the weeds will win.

BRICK AND TILE PLANT FOR P.E.I.

In the Summerside "Pioneer" we read: "Rev. "P. P. Arsenault, P. P., of Mount Carmel, has "taken steps towards the manufacture of bricks "and tiles by an improved process. He has sent "two young men to Stratford, Ontario, to learn "how to make bricks and tiles out of the superior clay known to be stored beneath the tract "of land lying between Fifteen Point and Grand "River, and he hopes to see, next year, a plant "on the shore of Lot 15 for the manufacture of "these important building materials. In this regard, it is about time that more attention was "paid in this province to brick making. The prices of building materials, lumber and carpenter's labor are already sky-high and the demand apparently unequal to the supply. The disastrous "fires in North Sydney and Moncton will conduce "to still worse conditions and the easier development of our natural conditions. Already it "costs more to build a wooden house here than a "brick one in any European country, even when "anyone can be found sufficiently condescending "to undertake the job at all."

We know Rev. Mr. Arsenault is a leader among men. He is ever ready to advance the cause of agriculture in his vicinity by prevent and example. We trust his venture along manufacturing lines will be just as successful as he has been along other lines and thus the cause of agriculture will still receive another great impetus. We feel sure the farmers will welcome the advent of a tile making plant and patronize it accordingly.

KNOW YOUR BUSINESS

Many a man knows his business from a practical standpoint who does not know the first thing about it from a business standpoint. Until a man knows how to do business as well as how to make goods he is a long way from success. One of the things most needed to-day amongst men in business generally is the cost of doing business—not so much what it costs to make goods as what it costs to put them on the market. It is a simple thing to calculate material and wages, but how few go into the intricacies of cost of distribution. Even in the cost of manufacture, how few figure on all that must necessarily enter into the actual cost of production, such as fixed expenses, rent, taxes, deterioration of plant, fuel, non-productive wages, interest on investment, until everything is in that can constitute an expense. Then the distribution cost is to be taken into account, including all that at the end of the year will accumulate against what may have come in as gross sales. The man who counts the cost is the only one who knows where he is in these days when the temptation is so great to let the other fellows make the selling price.

The Maritime Farmer cannot be made by its owners and editors alone. We need the help of many others—of you among the others. Give us the benefit of all you learn about farming and its kindred industries. If you learn something of value it is selfish to keep it from others, and besides, every man owes much to the occupation which gives him his living. All that you know is the result of experiments of yourself or of others. For these experiments made at much cost through many years you owe much and ought to pay the debt by helping others.

There is a land hunger among the people, but this is too much expressed in desire to own acres. Small farms produce large crops when managed with intelligence, and for the man who knows how to use his soils a few acres are enough. When farms are small neighbors live near each other, roads are better, schools and churches prosper and people live happy lives. The large farm is not a blessing to the country.

The most serious bar to co-operative effort amonb farmers is the distrust that most farmers feel for each other. Some farmers stand aloof from their brethern, apparently in order to prove that they know more about their business than others do. Here is a fact that they must all learn—that their interests are all mutual, identical and that they must work together in harmony if they are ever to secure and protect all their rights.

For young people who desire to prepare themselves for useful service the farm offers many opportunities not found in any other environment. Make the best use of your opportunities and prepare yourself for honorable and efficient citizenship where your character will live after you.

Where there are crops and animals to market at intervals during the year difficulties are not met in keeping up the cash expenditures of the home. Diversified crops with animal husbandry is the safest and best plan for profitable farming.

With a sincere desire to assist your neighbors there are many things that you can do. Tell them of the importance of keeping up with the progress that is being made in marketing farm products and urge them to read the farm papers.

Cost of Raising Weeds

A noted botanist of Iowa is credited with the statement that the state of Iowa is losing $25,000,00 a year because of the failure to eradicate noxious weeds. Just what basis of estimate has been used in arriving at this conslusion is not given. It no doubt is like many professional assertions arrived at by a "casual glance of inspection." It matters not, however, as to the accuracy of the statement. It serves the purpose of calling attention to the great waste of land, of soil, in the growing of a useless crop, a useless product—not only useless, but damaging to every feature of cultivated crops. Weeds are the one special feature of hindrance and annoyance in crop cultivation.

Noxious weed nuisance costs practically as much labor each year to keep down and under subjection, in most cultivated crops, as the labor in growing the crop would cost independent of weed extermination or weed suppression. The suppression of noxious weeds on most farms is not a systematic attack for extermination, but a spasmodic attack to suppress where crop demands make it compulsory in order that the crop be given a chance to struggle through to maturity, though seriously handicapped by reason of the weed interference.

State laws providing for noxious weed extermination are on the statute books of all agricultural states, or should be, even though not enforced. It is a good thing to be reminded that we are responsible, in the sense of the law, for the spread of noxious weeds from their growth on the public highways that pass through our farms, each land owner being held accountable for the suppression of the weed nuisance, so far as his land relation to the public road is concerned.

The futile effort at weed extermination on most farms, however, has made the public highway observance a ridiculous farce so far as the means of spread in a neighborhood are concerned, as the inclosed weed patches on the farms are usually a larger growthed, stronger, better quality of weed than that produced along the roadways, which are usually looked after by the road supervisors when all other means fail.

It might be a good stkdy for the farmer to take up the loss of soil fertility that he is permitting through the means of weed growth. It is possible to eradicate weeds by careful cultivation and observation of the waste spots about the farm in view of harvesting the weed crop at the proper time for killing the plant. It is not, however, so easy a matter to keep clear of weed seed where grass seeds are bought and brought onto the farm for seed purposes. — Twentieth Centurv Farmer.

Uses of the Disk Harrow

The disk harrow is one of the most valued implements on my farm. It is almost indispensable in the preparation of sod ground for potatoes or corn. Modern methods of tillage and cultivation are fast widening its scope beyond the preparation of the plowed field. Invented many years ago, its proper uses have not been discovered until quite recently.

One of the most important uses of this implement is to break up the surface sail into fine particles a few days in advance of the plow. This proves a great benefit in preparing the bottom of the furrow so that capillary attraction of moisture will be readily established with the subsoil. It effectually seals the surface of the unplowed land so that it will keep moist for a longer period of time, and consequently plow easier in case drouth comes on so as to seriously interfere with the work of plowing.

With ordinary plows, drags and spring-tooth harrows the furrows are turned over in rolls, clods and lumps and 2 or 3 inches of the upper surface prepared until it is smooth and fine. Superficial observers may think the soil is properly fitted because it looks fine and smooth on top after being harrowed and dragged; nature knows better, and yields begrudgingly to the man who plows under lumps and clods and scratches over the surface with a few light implements.

If the soil is not properly prepared to the full depth of the furrow the important details of moisture, heat, air and fermentation of the soil cannot be managed so as to give the growing crop a full measure of the necessities for growth.

When the crops are sown or planted on the upper fine surface they start quickly, but as soon as the growing roots begin to move their way downward in search of food and moisture they are frustrated by the air spaces which prevent the necessary contact with the soil particles from which water and food are derived. The free circulation of air dries the moisture out of the spaces between the lumps and clods.

Another valuable use for the disk harrow is to break down weeds and cut up trash and coarse manure. By cutting up this trash it does not seriously interfere with the capillary attraction of moisture between the subsoil and the furrow slice. The disk will at least chop up this trash and greatly reduce its capacity for damaging the growing crops. Compare a field that has been well disked and one that has only been plowed and dragged and you can readily understand the value of the implement.

In preparing oat stubble for wheat the thorough disking of the stubble land will greatly facilitate the work of plowing and prove of breat benefit to the subsequent crop of wheat. In many instances ground that is disked immediately after the oats harvest can be plowed while the adjoining fields are too dry.

The disk harrow is especially valuable in orchard cultivation, as it partially does away with the use of the walking plow, and for use among cherry and plum trees and in grape rows it is very convenient and efficient. It does not tear up large roots and can be easily adjusted to meet the varying condition of the soil in the rows. By careful driving one can work in close to the trees and vines.

For renewing old pasture and meadow lands where it is desired to reseed the ground without plowing a thorough disking and the sowing of grass seed will turn the trick. For renewing prairie pastures it is the best implement ever devised. For cultivating alfalfa fields where weed pests have gained a foothold it performs valuable sefvice.

On farms where quack grass, morning glories and some of the other common weed pests that spread from underground root systems have put in an appearance in certain parts of the fields, the use of the disk harrow prevents them from being transplanted to other parts of the field, while the ground is being prepared for a crop.. This one thing alone should commend the disk harrow on every farm where these weeds are growing. As an all around valuable farm implement I give a disk harrow the first place.—W. Milton Kelly in Field and Farm.

Tile Drainage

The cost of tile drainage will vary in different localities with the prices of labor, inequality of soils and cost of tile. Cement tile is often made at a much less cost than the farmer would be required to pay for clay tile. This is where the farmer owns his own cement tile machine and operates it at such simes when weather prevents work in the fields and elsewhere about the farm. The experience of one farmer who owns a small cement tile machine costing $60, is that one sack of cement will make 125 three-inch tiles, 75 four-inch and 55 six-inch tiles. At these figures the tiles were costing 37½ cents per 100 for 3-inch, 45 cents per 100 for 4-inch and 80 cents per 100 for 6-inch. This price is very low on account of the fact that labor or cost of sand is not taken into consideration. It requires two men to operate the machine with an output of between 50 and 60 tiles per hour. The mixture used was one part of cement to four parts of sand.

Local prices of clay tile have been variously quoted from 1½ to 3c per tile for the 3-inch size, 2 to 4c for 4-inch, 3½ to 5c for 5-inch. The cost of making tile is not the same at all factories, hence the reason for the variation in prices. Variable costs of transporsation also affect prices.

Ditches three feet deep and large enough to take the smaller sizes of tiles, cost in the neighborhood of 30c per rod, for excavating the trench and laying the tile. To this must be added the cost of the tile and backfilling of the trench. Where a plow or scraper is used to back-fill, the cost is about 3c per rod for a ditch three feet deep. Hand filling this same ditch would cost practically twice as much. The prices are proportionately higher for larger and deeper ditches.

There is no longer any doubt as to the profits accruing from the tile drainage of land. Often the benefits derived will increase the crops sufficiently to pay for the drainage in a single season. It will require rarely more than three or four seasons in any instance for the increase in yield to pay for the total cost of drainage. After this there will be a constant annual income. Drains properly laid out will last for an almost indefinite period. Certain drainage systems laid out 50 years ago are in excellent condition today. Any farmer who is in doubt about the profits of drainage should note the results obtained by other farmers who have tiled their farms. This should convince him of the practicability of tile drainage.

Pasture

There is room for a good deal of skill and judgment in the management of pastures during the grazing season. The welfare of the live stock is, no doubt, the prime consideration, but that of the pasture land is not of much less importance— in fact, the former is best served by proper attention to the latter.

Both over and under stocking are injurious to pastures. If there is too much stock, the herbage is kept too close, and suffers much from drought, and the animals do not get enough to eat. But too light stocking is worse for the land. It gives the stock the chance to pick and choose, with the result that they neglect the less desirable grasses, which run up, seed, and increase at the expense of the finer and more nutritious herbage. No one can tell, without experience of his land, how heavily it needs to be stocked, whilst the nature of the season also plays an important part. The ideal is just enough stock to graze the land evenly, and to eat it almost bare twice during the season. As in practice we can hardly ever attain the ideal, the tendency should be towards heavy stocking rather than the reverse. If there should come a period of drought it is always possible to help out the pastures with extra green food, though it is remarkable how well stock do in the scanty grass at such times.

It is good for both stock and pasture to change the stock round from one field to another at fairly frequent intervals. Continuous grazing is very bad. If the grass is cropped off as fast as it grows, it is greatly checked, and does not supply such a full bite as it would if given a chance to get ahead a bit now and then. The best plan is to stock a field for three or four weeks, and then give it about a fortnight's rest. At the end of that time there will be plenty of grass, and the stock will return eagerly to the fresh surface.

There is benefit also from change of the class of stock. They do not graze in the same way. Cattle take the longer grasses and cannot graze very low down. Sheep, on the contrary bite very low, and find plenty of keep on a pasture after cattle have done with it. They should therefore follow cattle, never precede them. Horses, also, may follow other stock. They are the very worst of grazers, as may easily be seen from a pasture which is grazed by horses only. We have such a pasture under observation. The horses always dung in the same parts of the field, and do not graze there, so that the grass grows rank and long. In other parts they can bite right down to the ground, having incisors in both upper and lower jaw. The pasture is therefore rank in some parts and thin and bare in others.

The spreading of droppings on the pasture is commonly advocated, but very few farmers can afford the time.

The men are always wanted elsewhere. But it is no doubt highly beneficial to the land if it can be managed. Rank grasses spring up around droppings, and are not relished by stock, so that they seed and increase. Spreading stops this, and manures the pasture evenly.

Unless there is natural shelter from trees in a pasture, much benefit to the stock results from the erection of a rough shed, in which they can shelter from flies in the heat of the day. In this may be placed a lump of rock salt, in a small rack, as this has a healthy influence on the stock. There should be an adequate supply of water in every pasture. It must be supplied if there is no natural service.

EMBER.

Feeding Plants

Plants, like animals, feed. They do not chew their food like most animals but drink it and take it from the air. There are ten essential elements of plant food. They are obtained by the plant from the following sources: Carbon comes from the air; hydrogen and orygen from water; phosphorus, nitrogen, potash, sulphur, calcium, iron and magnesium from the soil. The elements that concern us most are nitrogen, phosphorus and potash. These are the ones that are likely to be lacking in the soil and are purchased in the market in various forms.

The very fact that plants drink their foods makes it necessary to furnish it in solution. It is common to speak of available plant food, meaning the elements of fertility in the soil are soluble in water. They are made so by organic acids which are produced from the decomposition or rotting of vegetable matter, like roots, stems, leaves, etc. When the soil is deficient in these materials, fermentation and decay do not take place and the plant food is not made soluble, hence the plants are not fed properly. Furthermore, if the soil is lacking in an one of the elements it furnishes, it means decrease in crop production.

HORTICULTURE.

San Jose Scale Inspection in Nova Scotia.

During the past year (1912) a fairly careful inspection was made of the 1910, '11, and '12 plantings of fruit trees in the Annapolis Valley for San Jose Scale. This inspection was the result of the discovery of this serious pest early in the season by Mr. G. E. Sanders, Expert, Division of Entomology, Ottawa. Through the kindnets of Dr. C. Gordon Hewitt, Dominion Entomologist, Mr. Sanders took charge of the field work and a very careful inspection was made of the more resent plantings. A summary of the results of this inspection shows that some 150,000 trees were examined and out of this number 723 were destroyed on account of the presence of living San Jose Scale. Though all these trees had been supposedly fumigated with hydrocyanic acid gas, a very poisonous gas, before shipment from the nurseries, yet a comparatively large number bore living scales On hundreds ol the trees the scale was present but on close inspection was found to be dead. The inspectors report that from 25 per cent. to 30 per cent. of the trees recently imported bore San Jose Scale, either living or dead. On account of this high percentage and of the danger from the presence of this very serious fruit pest it has been decided to make a very thorough second inspection of the entire fruit belt during the coming season (1913). Other portions of the province will also be inspected as far as time permits. Any person who suspects that his orchard is infested with this pest should send portions of the infested branches to the provincial Entomologist, Truro, N. S.

The object of this second inspection is to eradicate this pest if it is at all possible. Stringent measures have been adopted already to prevent the further importation of this pest into the province. If we can locate and destroy all the San Jose Scale infested trees in the province there is no reason why we cannot eliminate this pest for all future time. It is a difficult task but is worthy of our best efforts. Of course, in the future constant vigilance will have to be exercised in order that this pest may not again be brought into the province.

During the coming summer inspectors will visit all the orchards in the fruit belt so far as possible and may I not ask the hearty co-operation of every fruit grower in this work? The inspectors will be required to secure certain information regarding the origin of the young trees, whether spraying is practiced or not, area of orchard, and a few other points which will be of value in making a general survey of the situation. This data will form the basis of future recommendations in regard to this work and the accuracy, completeness, etc., of this information will depend upon the hearty co-operation of every fruit grower. The fruit growing industry of this province is one of our basic industries and every bit of information gained will undoubtedly prove of value in its future development. It certainly will prove of great value in the study of the problems confronting the provincial entomologist. Your hearty co-operation is earne?tly requested and I have no doubt it will be given freely.—Robert Matheson, Provincial Entomologist, Truro, N. S.

Discovery of New Fruit Disease.

At a meeting of the National Fruit and Cider Institute at Long Ashton, near Bristol, held on April 25th, the discovery of a new fruit disease was reported, likely to be of great interest and value to fruit growers, and the result of research work carried on at the institute, which is connected with the University of Bristol. Fruit growers are probably familiar with the discolouration and blackening of pear blossom and foliage which is generally to be noticed every spring. This damage is regarded as the work of frost or cold wind. It is not. The trouble has been traced at Long Ashton to be due to bacillus, and a fortunate discovery it is, because now that the origin of this injury is known, it will not be long before Professor Barker and his staff will be ready with an antidote. The organism responsible for the disease has been isolated in the laboratories of the institute, and experiments with pure cultures of the bacteria have proved that the organism is the real source of the trouble. The disease is not limited to pears only. The bacteria have also been found in the institute plantations attacking apples and plums, and producing very similar damage. The result of the attack is that the fruits wither and die off, so that a considerable percentage of the crop is lost. Specimens of similarly-attacked pear blossoms have already been obtined from diffetent parts of the country, and in these cases also the organism has been found to be present. There is, therefore, no doubt that it is widely spread in the fruit-growing districts, and that it must cause very considerable loss to fruit growers. The life histry and characters of the bacillus are being examined, and in due course a full report of the disease will be published. During the course of the year experiments will be carried on to endeavour to find a method of dealing with the pest.

The particulars referred to in the above report will likely be of considerable interest not only to Canadian fruit growers but also to those who are carrying on experimental work at various points throughout Canada.—E. D. Arnaud, Bristol, Eng.

Cheap Apples Very Dear.

Up in New York State—in many near by States and even over our Northern border are great miles of perfectly good apples. Down at this end of the State there are likewise plenty of good apples yet, while the orchardist has far more than he and his pigs and his chickens and his other live stock can possibly use; down in New York's great city there are thousands of little people whose very health will be seriously injured during the growing years and in many cases for all time, because the means of their natural providers are too limited to permit them to furnish to their little ones, the most valuable of all fruit juices which the apple contains. Up in the orchards stand veritable hills of apples going to waste, because the food speculators offer in many cases but ten cents a bushel, and at this price the orchardist finds that he will have to lose even a portion of the price paid for barrels. He would lose the cost of the labor in putting them into the barrels; he would lose all it costs him to haul them to the station; he would lose the cost of picking the apples; the cost of the spraying and pruning necessary to get his crop—the interest on the original cost of the trees and their care until they came into bearing. He would also lose the interest on the acerage occupied and if chemical fertilizers, lime or manure were applied to fertilize them, he would lose the cost of those. As a result he is forced to let his apples rot, in spite of the fact that by so doing he is making a propagating bed for all sorts of bugs and blight which injure the apples. He is furthermore attracting various wild creatures which is the reverse of valuable in any orchard.

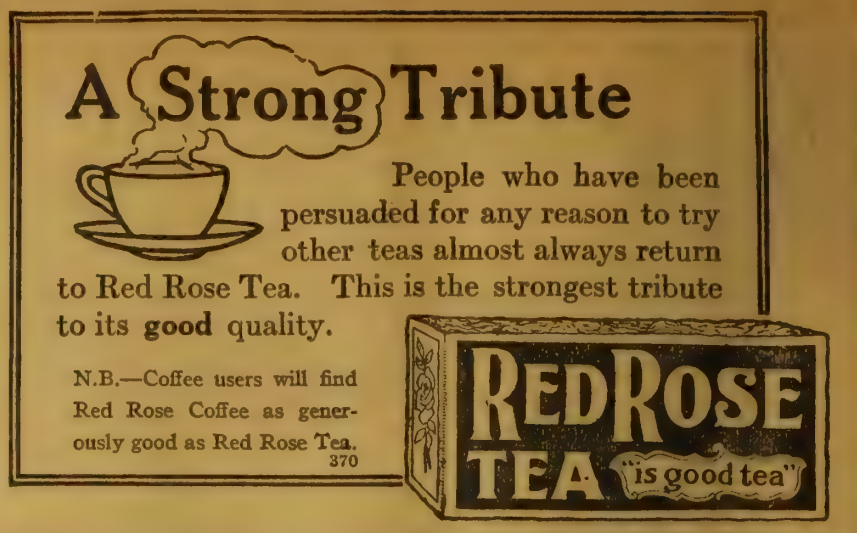
Down in the city, apples that have been sorted out from the orchardist's barrel and laid to one side as seconds or culls are selling at fifteen cents a quart, four to the quart—that is, the consumer is asked five cents more for a quart than the orchardist is offered for a bushel—(or thirty-two times as many) and elsewhere, those but a trifle larger are being sold at five cents and ten cents apiece or twenty-five to thirty cents a quart—two or three times as much as the orchardist was offered for thirty-two times as many. No one need be a deep student of economics to recognize the fact that there is absolutely no reason for an addition of two or three thousand per cent between producer and consumer.

The reason which the speculator craftily caused to be laid before both the producer and consumer is a very well organized campaign of misleading publicity, was that the railroads far reaching and exceedingly injurious were responsible. This resulted in a persecution of the railroads in the Uoited States. It went far beyond any possible meaning of the word "investigation," but it proved conclusively that the cost of transportation from producer to consumer was a percentage so small that it could only enter into calculation if placed in the fifth or sixth point in decimals. Then the same speculative distributors of false statements said that the farmers and orchardists of the country were amassing immense fortunes; were buying luxuries of Romanesque quality and receiving the lion's share of the consumer's dollar. The public woke up again and demanded investigation of this fable and they got it. And again was another false statement wiped off the slate. There was but one point left to investigate, which was the real and only root of the high cost of living evil (discovered by us in 1906 and respectfully submitted to the general public) began to receive distinguished consideration of the long-suffering producing and consuming public. The moated and buttress braced fortress of the speculative middlemen was found to be the sole cause of the soaring increase in the cost of living.

Up beyond the big lakes the same thing has been found to be the unnecessary root of the absolutely needless calamity, for it is found that a big percentage of the apple crop of Ontario is rotting, yet apples are selling three for ten cents and these were of the worthless family of Ben Davis at that. As the editor of the Ontario Agricultural College Review says "The life history of these three for ten apples would be of deep interest to the consumer particularly—bought by some shrewd buyer at a figure equal to or less than the cost of production—sold to the city speculator—sold again to a brother speculator and after adding several more 'minor commissions' finally reach the 'end of their journey" and are offered to the consumer with innumerable unearned speculative products and other unnecessary costs" and in practically the same words we have used so many times, our neighbor over the Northern border says:—"Greater production of farm products is not the prime necessity at the present time, but the elimination of the excessive number of grafting middlemen and the establishment of a more direct route from the farm to the city consumer." We find that our contention for the past six years is based on the firmest foundations and it is up to the great big general public, composed mainly of consumers, to get together as an organized army, consolidate the many earnest, hard-working small organizations, societies and associations, which are after all but merely scouts and forlorn hopes—demand wide open producers and consumers city markets and plenty of them absolutely closed to the handful of speculators now manipulating every variety of food consumed by city people and the price of living will promptly recede to the old time figures. For the producer is getting less today for the majority of food items than he was when the cost of living was anywhere from three hundred to three per cent lower than at the present day.—L. I. Agronomist.

Editor's Note.—We were favored with a visit by Sec. Ells of the N. S. F. A. some time ago. He was on his round of visits to the various Maritime Province towns, introducing to the retail grocers and fruit dealers, the business principles of the United Fruit Companies Ltd., of Nova Scotia. Their plan will to a great extent eliminate the great array of middle men and will be the means of ultimately getting the fruit direct from the producer to consumer as it will be possible to get it where quantities of a million packages are concerned. The work that is being done by the United Fruit Companies will ultimately result in better prices for the producers and cheaper prices for the consumers.

The extremely warm weather ten days ago, followed by the cold snap of last week, with touches of frost, will put the Ontario fruit grower in a somewhat anxious mood. Many trees came out in blossom, as it were over night, during the warm spell, only to run up against a cold snap, with will be anxiously watched. The injury, however, will not be anything like as severe as if it came later, when the fruit is set. Then is the time when frost plays havoc with the fruit crop. It may be a good thing too, that the cold snap came along when it did, as it may mean better weather conditions for the fruit later on.—Canadian Farm.



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Hand and Garden Tools.

Farmers are all too often neglectful of the importance of having suitable and high quality implements for hand and small garden work. They spend large amounts on big machinery for operations in the field, but cannot see the waste that is going on through their failure to use intensive tools in the small phases of production.

Aside from its purely attractive feature, the home garden can be made, proportionately, one of the most profitable things on the farm, and it requires but a small amount of labor and intelligence to bring truly wonderful results from it. The prime essential is, of course, a variety of good plantings. Almost equal to this, however, is the question of proper tools. Nine farmers out of ten will be amazed at the real saving that can be accomplished in the home economics by having a well kept, properly cultivated garden.

Small hand planters and cultivators, wheel and one horse ploughs, seeders, ridgers and rakes, hoes, spades and all the other appliances for this kind of work should be of highest quality—it will be found to pay in the end. And the amount of labor that can be avoided, as well as the number of operations that can be simplified and made easier is really wonderful.

One of the most complete and highest grade line of small hand and garden tools on the market is that made by the Bateman-Wilkinson Company, Limited, of Toronto. In this will be found every implement necessary for small, intensive tillage—the profitable handling of the small space. Every farmer should become acquainted with these tools, and should send for the series of illustrated booklets published by the makers. These booklets are free. They can be had by addressing a request to Bateman—Wilkinson Company, Limited, Toronto, Canada.

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The Tent Caterpillar.

The Division of Entomology of the Experimental Farms Branch of the Dominion Department of Agriculture, Ottawa, has recently issued a circular on "Tent Caterpillars," by Mr. J. M. Swaine, Assistant Entomologist for Forest Insects, in the Division of Entomology.

This publication discusses the defoliating Tent caterpillars which were so extremely numerous in parts of eastern Canada during the season of 1912. A description is given of the different stages of the insects, and their life histories and habits are discussed n considerable detail. The American Tent Caterpillar constructs the large silken tents in May and June, so well known by all owners of fruit trees, and from these retreats the caterpillars emerge to feed upon the nearby foliage. This species is found most commonly in orchards, although it also infests various shade trees. The Forest Tent Caterpillar spins no tent, but feeds in groups of several scores upon the foliage, and rests at intervals massed upon the trunk or lower branches. This species feeds chiefly upon deciduous forest trees, such as poplar and birch. Both these species were very abundant last season, particularly in Quebec Province, and their ring-like masses of eggs are to be seen in immense numbers upon the twigs of fruit trees and deciduous shade trees and forests in many districts. The circular referred to above gives a very complete account of the measures to be adopted in controlling these important insect enemies. They are briefly: The removal and destruction of egg masses, spraying infested trees with lead arsenate or Paris green, and banding the trees to prevent reinfestation by wantering caterpillars. Formulae for the spray mixture are given and directions for their preparation. Copies of this publication, Entomological Circular No. 1, Experimental Farms, may be obtained from the Publications Branch, Department of Agriculture, Ottawa.

Improve Pear Trees.

I have practiced spreading Bartlett limbs, which have a habit of growing up in thick, upright clumps, by putting light sticks from one to another This checks upward growth a little, induces the formation of fruit spurs and saves cutting back the long growth next year; also makes a more stocky growth. After these slender growing varieties like Clapp's Favorite, Bartlett and Sheldon come into bearing, it is not necessary to spread them by any such means for the fruit will hold the limbs down. If allowed to grow very slender they will make an ill-shaped tree, when the fruit pulls them down; whereas if kept stocky by spreading they will have a much better thape in later life.—Ira Pease, New York.

One of the ways to reduce the cost of living is to produce much of the living in the garden and the orchard.

Start a stawberry patch for home use if not for the local market. No home should be deprived of the luscious strawberries when they are so easily raised.

Encourage your daughters to plant and cultivate flowers. It will stimulate a love for plants and give the girls a chance to get needed exercise in the open air.

Spring is the season to prune fruit trees. See that the dead and dying branches are removed and take out all superfluous limbs and give the others a better chance.

A liberal supply of barnyard manure is very essential for a good garden unless the soil is naturally very rich.

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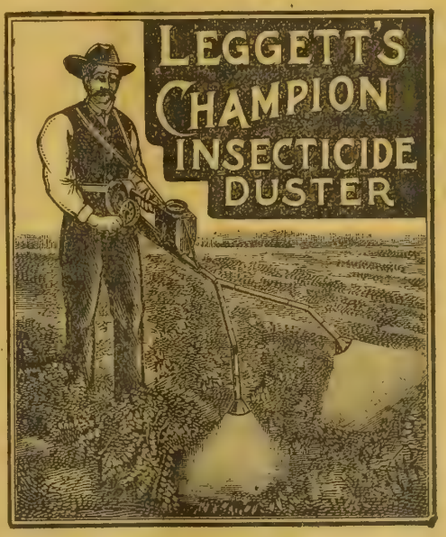

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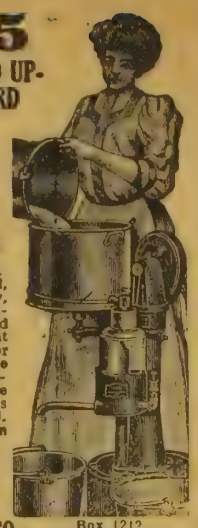

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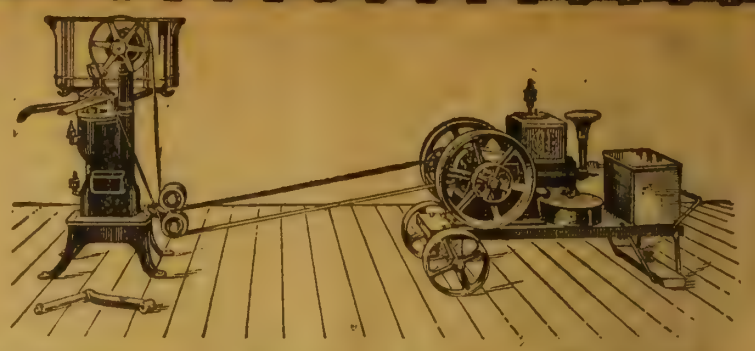
DAIRYING.

Developing the Heifer.

In a recent issue you mention the necessity of using great care in the development of heifers with their first and second calves. I have several very fine Holstein youngsters just coming in. I want to do everything in reason to make big producing cows out of them; as good and better than their dams. Can you give me any general rules to follow for their development? I know, of course, that each animal has peculiar characteristics of its own to which one must cater, but are there not general lines along which one should work? How long should the heifer be kept in milk? How much rest should she get between this and her next calf? How about feed? I have plenty of alfalfa and small grains, also all kinds and varieties of corn; but no silage as yet.—B. D. S.

There are a great many factors that have influence upon the value of a cow as a producer before she reaches maturity, as well as during the time she is actually producing milk. The breeding for generations back of the individual, for example, is an all important factor in determining her value as a dairy cow. Granting that the animal is so bred as to insure a pronounced dairy temperment, the factor of development should receive attention if maximum production is to be expected.

It is a well known fact that capacity is one of the essentials of a good dairy cow and in order to develop this characteristic the calf must be kept growing from the very beginning. A stunted calf will never recover from the handicap. The calf should be induced to begin eating grain and hay at as early a date as possible and there should always be an abundance of the hay accessible. Roughage develops capacity in the digestive organs—an item of importance—as the amount of feed that a cow will consume depends largely on the development of these organs. Heifers should not be bred too young, the age depending upon the breed to which they belong as well as the development of the individual. Holstein heifers should not be bred to freshen before they are 24 months old, as a rule, and a great many would do better if given 26 or 28 months. Heifers should be in good condition at time of freshening, although not fat from an excessive carbohydrate ration. After freshening, they should be worked up to full feed very gradually, receiving all the roughage they care to consume without waste; alfalfa or clover hay fed in



Cream Separator Savings

AN I H C cream separator saves money for you in more ways than most people know. It saves cream because it skims practically all the butter fat out of the milk. It saves on the feed bills. Calves and pigs thrive on the sweet, warm skim milk that comes fresh from the separator. It saves fertility. The dairyman who feeds the skim milk to animals parts with a very small amount of fertility. The man who sells whole milk loses close to $4.80 per cow per year in fertilizing matter. These three savings, while not all that a cream separator makes, are important enough to warrant the most thoughtful consideration.

I H C Cream Separators

Dairymaid and Bluebell

are also furnished as complete power outfits, as illustrated above. The engine is a one-horse power, back geared, hopper-cooled, I H C engine which can be detached and used to run any small machine. The separators are built for long life and skimming efficiency. They have heavy phosphor bronze bushings for bearings; a never-failing splash oiling system; trouble proof bowl spindle bearings; dirt and milk proof spiral gears which are easily accessible for cleaning. There are four convenient sizes of each style. Ask the I H C local agents who handle these machines for demonstration. Get a catalogue and full information from them, or, write the nearest branch house.

International Harvester Company of Canada, Ltd

BRANCH HOUSES

At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton

What The Dealer Can Show You

GO and see the Standard cream separator at our agents in your locality. It will strike you as being a handsome, compact, convenient-looking machine.

First appearances will delight you. And naturally you'll want to know more about the

Standard

You'll want to know why it has earned the title of "The World's Greatest Separator." Our dealer will be glad to show you.

He will show you the low supply can. You will smile cheerfully when you notice that it is over one foot lower than the supply can on ordinary separators. The high and awkward lifting of a pailful of milk are banished with the Standard.

Then he will get you to step over and turn the crank. You will see right away that you don't have to do any back-breaking stooping. The Standard eliminates that, by having the crank shaft four inches higher than on other separators.

Easy to Clean

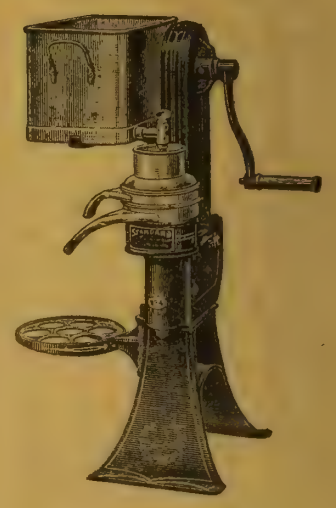
Next he will show you the wide open bowl. You will observe that there are no milk or cream tubes to clog up. And the discs, on a special disc holder, can all be washed in a minute. If your wife is present this feature will make her happy.

And when you are looking at the discs, the dealer will call your attention to the unusually wide open space between the discs and the bowl. This space accomodates the impurities in the milk and prevents the discs getting clogged. It means absolutely clean cream and no waste.

He will next direct your attention to the fact that the only visible moving part of the separator is the crank, the gearing being entirely enclosed, which banishes all danger of the children getting clothes caught or fingers crushed should they venture to touch the machine when it is running.

Self-Oiling System

He will ask if you can find any grease cups or glass lubricators on the machine. You can't because the Standard hasn't any. It's self-oiling system automatically supplies the working parts with a continuous bath of oil. And the oil cannot drip on to the floor and be wasted either.



He will show you—but we've not the space here to tell you all you'll see. But we've got a catalog that describes the Standard very fully. Also a folder entitled "Skimming Results" which gives what we believe are world's records for close skimming accomplished by the Standard. If you cannot conveniently visit the dealer write for this catalog and folder. Of course you'll want them right away, so mail us a card or letter promptly.

The Renfrew Machinery Co., Limited

Head Office and Factory, RENFREW, Ontario

15 **Agencies Everywhere in Canada**

WINDSOR DAIRY SALT

Is The Cheapest You Can Use

not alone, because it is the purest and best salt for salting butter. But because it will salt more butter, pound for pound, than any other salt you can use.

The big creameries will tell you this—and show you tests to prove it.

The Agricultural Colleges demonstrate this every day.

Every farmer and dairyman—who is getting good prices for butter—is using Windsor Dairy Salt.

It is pure—it makes beautiful butter—it works in quickly—and it is the cheapest in the end. Just try it yourself.

70D

Old Farmer Said: "You Are More Fussy Than I Am"

He was very critical and loved fine machines. He owned an EMPIRE and knew we were always trying to make EMPIRES better. He said "The EMPIRE is good enough; let it alone. Don't be so fussy."

That was years ago. If we could take that old gentleman through our factory today, he would see rows of finished

EMPIRE
Cream Separators

so perfectly made they start under the mere weight of the crank. He could hold his ear close to one, running at full speed, and hear the ticking of his watch at his other ear.

No medium priced separator equals the

BALTIC Cream Separator Prices—$25 to $45

STA-RITE Gasoline Engines
Simple and perfect, all the name implies.

Agents Wanted
We have a proposition that will pay good, reliable men well, yearly. Agents wanted in unoccupied territory. Agencies are going rapidly. Write us about the agency at once. Tell us which machine interests you.
Ask for Catalog 131

The EMPIRE CREAM SEPARATOR CO., Ltd.
Toronto Winnipeg

Poor appetite is a sure sign of impaired digestion. A few doses of Chamberlain's Stomach and Liver Tablets will stregthen your digestion and improve your appetite. Thousands have been benefited by taking tese Tablets. Sold by al, dealers.

connection with silage or roots being a very good combination. The grain should be light in character to begin with and gradually changed to a midture of grains that will supplement the roughage; 300 pounds ground oats, 310 pounds ground corn, 100 pounds wheat bran and 190 pounds gluten feed being a good combination to go with the roughage mentioned above. The grain can be increased a fraction of a pound a day so long as there is an increase in the milk flow, but as soon as there is no response to the increase it must be cut down until there is a falling off in the milk flow and then the increase may be begun again. When on full feed they will be consuming about one pound of grain to every 3½ pounds of milk produced. In the absence of silage or roots, dried beet pulp may be used, but if none of these are available or are to high in price, oil meal can be used in the grain mixture to advantage. In the absence or roots, the cows will consume a large quantity of alfalfa. Sometimes it is advisable to chaff and moisten a part of it when fed under these conditions.

The heifer should be milked up to within six or eight weeks of the time she is to freshen with her second calf, which should be about a year from the time of her first freshening. The method of feeding to pursue while the heifer is dry will depend upon her condition. If she is thin in flesh she should be fed a ration of grain sufficient to put her in good, strong condition before freshening. The grain fed to a dry cow is usually a good investment as it prepares her for the strain of parturition so that she soon recovers and is ready for good hard work at the pail.

Some think it valuable in the development of a heifer to milk her three times a day during the greater part of her first lactation period. Heifers handled in this way often make remarkbly well developed cows when they freshen the second time.

It is also advocated by some that a more pronounced dairy temperament is produced in a cow by breeding her so that she will freshen early. It is necessary to give cows treated in this manner a longer period between their first and second calves, usually 18 months, so that they may have an opportunity for further development. Cows are usually finer boned when handled in this way and very often under size.—Hoard's Dairyman.

Get All the Milk.

Careless milkers do not always get all the milk. It is a dangerous practice to leave the cow incompletely milked, as it not only robs the dairyman of the richest portion of the morning or evening supply, but damages the cow. If the milk is not all taken, so that the udder is completely empty, it tends to lessen her daily supply and shorten her period of lactation. It may require a little more time and patience to secure the last bit of milk from the udder: but this is as important as getting the first part, which comes easy. The cow that is only partly milked will soon be giving less milk. Clean milking does as much as anything to develop the cow into a heavy milker. This is especially true of the young cow or heifer with her first or second calf.

Boys and girls who are in a hurry to get off to school and are required to help with the milking should be cautioned about this fault, as it occurs very frequently with this class of milkers.

To be Healthy, Wealthy and Wise

depends somewhat on good cooking, and good cooking depends largely on a good Stove. If you provide your wife with a

Record Foundry & MachineCompany's Range

you can be sure she can get no better cooking Stove to work with.

The *Highland Grand Range* is one of our best, is economical on fuel, either with coal or wood, and we guarantee it to give good results.

If your dealer does not handle ***Record goods,*** write direct to us for a ***catalogue.***

We are the largest manufacturers in Canada of ***Cast Iron and Steel Ranges, Heating Stoves, Furnaces, Farmer's Boilers, Plow Shares, etc., etc.***

THE RECORD FOUNDRY & MACHINE CO.,
MONCTON, N. B.

SHARPLES
MECHANICAL MILKER

THIS equipment is revolutionizing modern dairy operation. During the four years since its perfection it has been installed with unqualified success in hundreds of the leading dairies throughout America and abroad.

The distinctive features of the SHARPLES MILKER, to which its complete success is due, are the Teat Cups with the Upward Squeeze and the Patent Pulsator operating them. This device reproduces nature's own method of milk extraction, which the most skillful hand-milking cannot do.

The cows are more contented. The teats and udder become far better conditioned. The milk product is absolutely uncontaminated—pure and more valuable. Labor cut to one third.

Sharples Mechanical Milking means the end of all drudgery of milking.

Practically every dairyman can visit installations of SHARPLES MILKERS within easy distance, where the actual operation of this equipment can be observed under conditions approximating his own. We shall be pleased to hear from dairymen with a view to their making such inspections.

OUR comprehensive Mechanical Milker Catalogue is the most important document to the dairyman now current. Forwarded on request.

The Sharples Separator Company
West Chester, Pa.

Branch Offices:
Chicago Ill. San Francisco, Cal.
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Manufacturers of SHARPLES TUBULAR CREAM SEPARATORS—the 100% efficient Separator with the 3-part easily washed bowl. Write for the Sharples Separator Catalogue.

Agencies Everywhere

The Patent Pulsator operating the Teat Cups with the Upward Squeeze.

Barn Roofing

"Eastlake" Metallic Shingles

Don't Forget when you want a good roofing to use "EASTLAKE" Metallic Shingles.

They protect you from Fire, Lightning and Leaks. Made of only the best zinc-coated steel sheets.

Our patent interlocking side joints make an absolutely watertight, rust-proof roofing.

"EASTLAKE" Metallic Shingles never need repairs.

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THE METALLIC ROOFING CO. LIMITED
MANUFACTURERS
TORONTO & WINNIPEG

FLEET FOOT

THE PERFECT SHOE for SUMMER SPORTS

FOR EVERYBODY

Made In Smart Styles, Suitable For Every Outdoor Occasion

YOUR DEALER HAS THEM

You Might As Well Get THE BEST

CANADIAN CONSOLIDATED RUBBER CO., LIMITED, MONTREAL.

2

Minard's Liniment Co., Limited.

Dear Sirs,—Your MINARD'S LINIMENT is our remedy for sore throat, colds and all ordinary ailments.

It never fails to relieve and cure promptly.

CHARLES WHOOTEN.

Port Mulgrave.

Now is the time to get rid of your rheumatism. You can do it by applying Chamberlain's Liniment and massaging the parts freely at each application. For sale by all dealers.

LIVE STOCK.

The Unfoutunate Pig.

The pig is perhaps the most misjudged of all our domestic animals. Because, for reasons of health he likes to "wallow in the mire," very much on the same principle that a fowl takes a dust bath, large numbers of people seem to think that he really likes to be continually in a state of filth. Because he is omnivorous and will eat of everything, he has all sorts of ill-smelling and unsuitable refuse given him to eat—hog's wash has indeed become a synonym for food that is unappetising in appearance. Though naturally a roamer in the forests, he is generally confined in a small and poky sty, which is badly lighted and affords little comfort; and while he is by nature, a lover of warmth he is kept shivering through the cold weather and suffers to an extent which few people probably realize.

It is well to speak moderately on these matters and to regard them on practical lines. The pig would not be kept at all if he were not a consumer of produce which cannot other wise be put to a profitable use, and he is kept for profit, no great expense can be incurred by pig-keepers to whom a balance on the right side of the leger is an all-important matter. We have, therefore, to consider not what are the ideal conditions for the animal, but what should and can be done under conditions as they exist; and the main text of these notes is that much of mismanagement at present noticeable, while causing the animal discomfort if not suffering, is unprofitable to the owner.

Not a dirty animal.—In the first place the pig is not a dirty animal. It is true that the pig-sty offends the nose, but this is because the open court, which is often a perfect abomination, is not cleaned out frequently and properly. It is, indeed, often so made that it cannot be kept clean and the animal sinks deep into the muck that is allowed to gather round the feeding trough. If we want proof of the cleanliness of the pig, any experienced keeper will tell us that, in proper conditions, the pig will never soil his bedding as so many other animals will do. He will always go as far away from it and from his feeding trough as possible in order to relieve himself, and even little pigs at an early age are not great offenders in this respect.

The pig, given natural conditions, would certainly not be found standing hock deep in foul refuse, or lying on a damp cold floor. On the contrary, he is a lover of warmth and comfort. Let anyone give his pig a good bed of clean straw, and note how he gets into it. covering himself up as far as possible with the litter. Unlike the cow or horse he is not content to lie on his bed merely, but gets into it for warmth's sake, and if several pigs are lying together they will be found huddled close to each other for the same reason. Is it to be wondered at that, kept in the conditions which are so common, they suffer much from troubles caused by dampness, foul air and want of warmth and sunlight?

Rheumatism.—There is no complaint from which pigs suffer more generally than that which is known as "cramp", but which is really a form of rheumatism. The animal is unable to rise, often crawls to the trough to feed, and there can be no dokbt—for he shows it plainly—suffers a good deal. One of the first symptoms of illness in the pig is that he goes "off his feed," and although this is not so pronounced in cases of rheumatism as in other complaints, a slight falling off means loss of flesh, while as he is kept because of his aptitude to fatten, it is obvious that the main purpose of the keeper is defeated. The pig is not a tractable animal to dose with medicine; besides medicine is costly, so that the profit would vanish if much of it were used. Clearly it is less expensive to provide proper bedding and proper flooring to prevent the trouble than to use costly drugs which may fail to cure. Often they are not effectual, while they may have a bad effect on the flesh, and the same may be said also of the rheumatism itself, as feeders have found when, as the saying goes, they have "killed the pig to save its life."

The chief causes of rheumatism in pigs are exposure to wet and cold, want of exercise and improper feeding. The first two are inseparably connected with the housing. A miserable tumble-down place, with irregular floor that cannot be properly drained, is often considered good enough for this comfort-loving animal, and as many people who keep pigs do not grow corn and do not care to buy much straw, the bedding is often woefully insufficient. Overcrowding is common, facilities for exercise are not too good, and even when they are present the need for exercise is not recognized.

Leaky roofs, which admit the rain, foul and close air which affects the lungs and the eyes are common conditions, and these by the way induce another cause of suffering. Pigs, as we have stated, are careful not to soil their bed, and rather than leave their stuffy sleeping quarters to go out into the cold air they retain their water to such an extent that some of the products are re-absorbed and cause illness, sometimes of a serious nature. If, on the other hand they do go out, chills may follow, with the usual consequences.

Another cause of rheumatism is the use of the cold floors of the sty. All these evils are increased when litters are produced just as winter is coming on and the young animals have the most trying season of the year to go through while they are most tender and susceptible. Numerous cases have come under our notice of whole the winter season, and the moral is litters suffering from cramp during comfort to the animal should avoid that those who cannot afford every winter litters if they seek for profit. Profit and comfortable conditions go together.

Perhaps the most merciful treatment for rheumatic pigs is to kill them off, and if they are at all fit for the butcher this is the most profitable course. If treatment is attempted, it is absolutely necessary that they should be made comfortable. Give them a well-bedded, dry sty, a full dose of Epsom salts, and then doses of bicarbonate of potash in the food. The food is best cooked, and should, whenever possible, include a good supply of milk. The swollen limbs ought to be swathed in flannel and rubbed with a liniment such as—spirits of turpentine 2 ozs., liniment of belladonna ½ oz., spirit of hartshorn 1½ oz., olive oil 2 oz. A lot of trouble to take with a pig? Yes, it is—it is much cheaper and better to make them comfortable from the start and prevent ailments.

Swine Fever.—Pig-keepers have been suffering much loss lately from the restrictions due to swine fever. It ought not to be forgotten that insanitary conditions which affect the health of the animals make them more likely to take any infectious illness that may be "about," and it cannot be too often repeated that nothing is so unprofitable to the owner than bad housing of stock of any kind.

The Sty.—If a man is going to build accommodation for pigs we strongly advise him to proceed on a definite plan—to have a sty or sties

SUFFERED FROM

Catarrh of the Stomach For Thirty Years.

Catarrh of the Stomach is generally caused from some interference with the action of the liver, and is a malady that affects the whole body.

Some symptoms are burning pain in the stomach, constant vomiting, abnormal thirst, incessant reaching, etc. On the first signs of any of these symptoms Milburn's Laxa-Liver Pills should be taken. They are a specific for all disorders arising from wrong action of the liver.

Mr. Michael Miller, Ellerslie, Alta., writes:—"I take pleasure in writing you concerning the great value I have received by using Milburn's Laxa-Liver Pills, for catarrh of the stomach, with which I have been a sufferer for thirty years. I used four vials and they completely cured me."

Price, 25 cents a vial, 5 vials for $1.00, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

MAXWELL'S "PURITY" FOOD-CUTTER

is entirely different from the ordinary food chopper. The barrel is in two closely fitting sections, clamped together by one set-screw.

Canadian made machine.

Better in quality, capacity and price works better, better finished, less in price.

Five different cutting plates.

"MAXWELL'S PURITY" is the only food cutter made in Canada—and in ease, convenience, perfect cutting and durability—is superior to anything imported. If your dealer does not handle "Maxwell's Purity" write us.

DAVID MAXWELL & SONS, St. Marys, Ont.

BICYCLES

BICYCLE SUNDRIES

At Cut Prices BICYCLE MUNSON

413 Spadina Avenue,

Send for Cut Price Catalogue. TORONTO

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. Phosphonol will make you a new man. Price $3 a box, or two for $5. Mailed to any address. The Scobell Drug Co., St. Catharines, Ont.

It would surprise you to know of the great good that is being done by Chamberlain's Tablets. Darius Downey, of Newburg Junction, N. B., writes, "My wife has been using Chamberlain's Tablets and finds them very effectual and doing her lots of good." If you have any trouble with your stomach or bowels give them a trial. For sale by all dealers.

Send your Raw FURS to John Hallam

Sixty Thousand trappers now send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada.

FREE Our "Up to the minute" Fur quotations and the last Edition of HALLAM'S TRAPPERS GUIDE, a book of 96 pages, mailed FREE.

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A PURE, WHOLESOME NUTRITIOUS MEAL

CALFINE

CALVES LAMBS COLTS PIGS

GUARANTEED ANALYSIS	
PROTEIN	20 per cent
FAT	8 " "
FIBRE	4 " "

Save $15.00 to $20.00 a Ton on your calf meal

SEND FOR BOOKLET AND PRICES

Canadian Cereal & Flour Mills, Ltd.
TORONTO, ONT.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

BARB WIRE BARGAIN

10 tons new Barb Wire only 2c. per lb., 50 kegs new mixed size Wire Nails $2.00 per 100 lb. keg. 100 rolls 5 line Wire Fencing 42 in. high, all No. 9, special 15c. per rod. Other bargains in Fencing, Piping, Belting, etc. Send orders at once before sold out. Catalog free.

Imperial Waste & Metal Co., 3 Queen St., Montreal

opening on to a small court where the animals can take occasional exercise, on a site that can be well drained. But many a man has to make the best use of what he has or can afford only a rough building. Yet there are many things that even he can attend to without heavy expense. First, make ample provision for drainage, see that the floor can be kept dry, that the sleeping place is not too small so that it will be stuffy, and yet is not draughty and cold; and that a good wooden stage on which the bedding is placed is provided. A handy man can quickly run up a suitable stage which should be removable, and, in default of anything better, old railway sleepers, which can often be obtained very cheaply, may be used. The pig-sty should face south whenever possible. How far sunlight and warmth are of value is shown by a report made by one of our leading breeders, who states that when awarding prizes offered by a local authority he found that "in nearly every case where the pigs were thriving and apparently profitable the stiles faced the south." Could any thing show more plainly the connection between comfort and profit? What ever the floor is made of, and concrete and glazed bricks are well spoken of, it should be so arranged that there are no puddles, and there should be a gentle slope towards the front of the sty.

A cruel practice.—The pig, as has been stated, is not a tractable animal to dose. The work can be best carried out, in the case of liquid medicines, after the animal has been secured—not an easy task—by giving it to bite an old shoe or boot with the toe opened out, and pouring the medicine into this. The harder the animal bites the more likely is the medicine to be swallowed. Sticky medicines may also be plastered among the teeth, and drugs may some times be introduced into the food. But we must protest most strongly against the practice, as a most foolish and cruel one, of pouring liquid medicines into the nostrils of the pig. It is a barbarous thing to do, and yet it is sometimes recommended by those who ought to know better.

Food.—The primary cause of many internal complaints is the fermentation set up in the hog tub, into which refuse, often quite unsuitable for food may be thrown, and in which refuse that may originally be suitable changes its character. It is difficult to avoid trouble of this kind, but there is need of some correction of the idea that anything, however offensive, may be safely fed to pigs, for many cases of serious illness have been traced to the hog tub. One warning is specially called for—to beware of the presence of salt and soda in the wash. Both, in anything like large quantities, are poisonous to pigs, and this fact is not to be set aside because some one has given his pigs a little of either and found that no harm resulted. The "wash" in use in many places receives the remains on the dinner plates, on each of which there is probably some salt, the contents of the washing-up pans, and other kitchen liquors in which soda and salt have been used, and the amount that may unwittingly be given to the pigs in this way is sufficient to cause not only illness and suffering, but even death.

Calf Should be Raised in Barn.

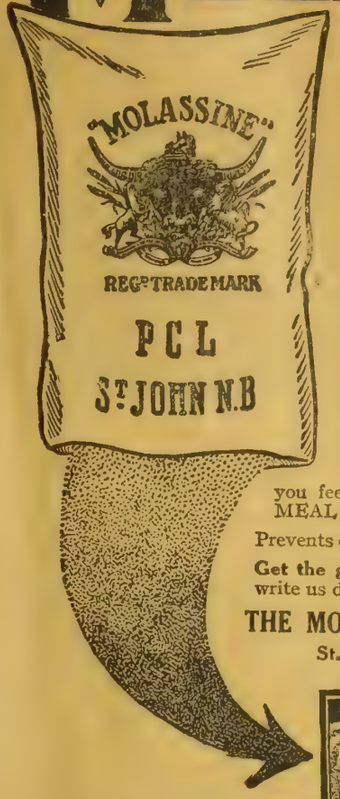
CALF SHOULD BE RAISED in Barn

I have read adverse criticisms to the bringing up of calves the first year on pasture, where they can have grass and skimmilk. Kindly let me know what you would recommend, either calves first year brought up in barn, or allowed to run in pasture by themselves, where they could get both grass and plenty of skimmilk.

When calves are born in the spring, it is better to keep them housed during the summer than to turn them out to grass to fight the flies and to withstand the hot rays of the sun. Calves raised in a clean, shaded barn will do much better. At a very early

(Continued on page 626)

MOLASSINE MEAL



Watch a horse when he is eating his oats—note how he slobbers—bolts a lot—and spills a lot—also a large proportion is undigested.

Take a couple of handfuls of MOLASSINE MEAL and mix with the oats at the next feeding time—reducing the oats by the amount of MOLASSINE MEAL added—then watch him eat—note how he masticates each mouthful and with what evident enjoyment.

Every particle of nutriment is obtained from **all** its feed—that's why it will cost you less for feed and you get better work out of your horses, if you feed them regularly with Genuine MOLASSINE MEAL (Made in England).

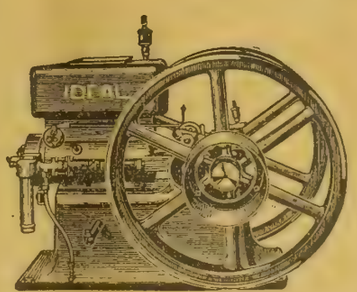
Prevents colic and eradicates worms.

Get the genuine made in England. Ask your dealer, or write us direct for full information.

THE MOLASSINE CO. OF CANADA LIMITED
St. John, N. B., Montreal and Toronto

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



Stationary, Mounted and Traction

We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
Concrete Mixers and Water Boxes

Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.

A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

THE HORSE.

Unnecessary Harness.

From many fragments of the architecture of the early ages, and first allusions to the horse as a domesticated animal, it is obvious that nothing superflous in the way of saddlery and harness was employed, and on Grecian bas-reliefs, and friezes horses are represented as being ridden without bit, bridle, saddle or stirrups, the animals being trained to obey the indications of the hand and leg, while the attachements for draught to the chariots used in war and sport were of the simplest character. As time went on however, superflous and injurious po tions of harness were introduced, the weight of metal furniture increased and more attention was paid to appearance than utility.

IN CARRIAGE AND TRAP.

This has continued down to the present times, and in spite of the protests of those who have made the welfare of the horse a specialty, and the example of a few enlightened owners who have realized the advantage of lightness and simplicity in harness, there still persists the idea that certain portions, such as the bearing and hame rein and the winker bridle, even if unnecessary and useless, give the horse a more finished appearance, and when dispensed with, a naked look. In other terms fashion or custom out-weigh consideration for the comfort, well-being and effective working of the horse.

Horses who bore, or who have become vicious through ill-treatment or bad breaking, may require the use of the bearing rein acting on the bit, to make them hold their heads up to the desired height, for when a horse keep his head too low down there is difficulty and danger, but surely this is no excuse for applying the contrivance to good horses, animals that are well bred, in good condition, and full of courage, when it admittedly operates to their disadvantage in working, and to their discomfit as well as the causing of pain. Admitting that there may be in afew special cases an advantage to be derived from the use, that is, the moderate use, of the bearing rein, there is, and can be no necessity for using a bearing rein so tight as to cramp the muscles of the neck, so tight that the head is drawn down with the nose to the breast, and only the slighest movement ftom right to left or vice versa possible.

A well-bred, well-fed, and well-driven horse does not require a bearing rein to hold up his head, nor is the appearance and action of such animals improved by tight reining. That a bearing rein should be used at all on a horse of this class points to some defect in the condition of the horse, the efficiency of the coachman, or in the common sense or humanity of the owner.

DRAUGHT HORSES.

In the case of the heavy draught horse, the hame-rein is as much abused as is the bearing-rein where the lighter bred horse is concerned, and unless under quite exceptional circumstances there is no more occasion for its use, yet the large majority of carters and waggoners, believe—honestly believe—it to be quite impossible to control, or even keep on his feet a heavy draught horse without a hame-rein and blinkers; and there are still many owners who tacitly agree to the theory, which is altogether wrong. "Nimrod's" admission that horses with free heads have an advantage in their working against hills, is especially applicable to the horse required to shift and draw very heavy loads. With the head unnaturally elevated and confined the animal is not in so good a position to put forth his full strength, whether in drawing a heavy load on the flat or in breasting a hill. This is often recognized by the carter himself, who lets down his horses heads at the foot of the hill they have to negotiate with a stiff load behind them, though he may still insist on retaining the hampering appliance. Hame-reins like bearing-reins can certainly be dispensed with on horses that naturally carry their heads well, and yet practically all alike are compelled to wear them, and to suffer the same disabilities as regards restraint in putting forth full strength, and in many cases actual pain, because the hame-rein forms an integral part of the orthodox carthorse harness.

It is sometimes asserted that the use of the bearing and hame-reins prevents the horse from going down when a stumble has been made, but

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevents the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for alland every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR :--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly rccommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

DEAR SIR :--I have used Dr. J Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

W. A. C. RANDALL, M. D.

Hillsboro, N. S.

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GENTLEMEN :—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

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DEAR SIRS :—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
March 28th, 1911.

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Broken wind is the enemy of the horse. **VIGORA** is the enemy of Broken Wind.

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HENRI TURCOTTE, Jr., St. Pierre, Broughton"

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ABSORBINE

Will reduce Inflamed, Strained, Swollen Tendons, Ligaments, Muscles or Bruises, Cure the Lameness and stop pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone. Horse can be used. $2 a bottle delivered. Describe your case for special instructions and Book 2 E free.

ABSORBINE, JR., the liniment for mankind. Reduces strained, torn ligaments, enlarged glands, veins or muscles—heals ulcers—allays pain. Price $1.00 a bottle at dealers or delivered.

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OUR Stallion Policies, covering against loss by **Death through Accident or Disease,** are more liberal and afford more protection to owners than any issued by Competing Company. They contain no vexatious clauses, having been drafted to cover **the special conditions** met with in this Country. They cover the horse no matter **where he might be** and not merely **in his own stable,** as certain Companies do. This is very important during the Breeding Season as the horse might die while being on the road. Do not **take any chances** by insuring with others, **insure with us;** The insurance premium represents only a small proportion of the service fees earned. Better risk the **loss of the premium** than the **purchase price** of your beast if it dies without insurance.

Better have and not need than need and not have.

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THE BATEMAN-WILKINSON CO. LIMITED 438 Campbell Avenue, Toronto, Ontario.

FARMER ADS BRING RESULTS

the fact is that they, by so tightly confining the head and neck prevent many a stumbler from recovering himself as he would have done had his head been free. Looked at from any point of view, and admitting that there may be need for bearing and hame-reins for some horses carrying their heads badly or going with their nose to the ground, there can certainly be none for horses who naturally carry their heads well—that is, much in the same position in which a judiciously applied rein would place them. As for those who use horses with their heads "beared" up to an elevation suggestive of the giraffe, such abuse should be made a penal offence, and any plea of unintentional cruelty scouted.

With reference to the use of blinkers, the "winker bridle" is, where harness horses are concerned, so general that its necessity is rarely questioned, and yet there are many horse owners, mainly railway companies, large carrying firms, and horse-owning municipalities, who have discarded the use of the blinkers with that of the hame-rein. Their horses are used in large towns, where the traffic is congested, and with all sorts of strange and uncanny loads behind them, and they go just as well and as steadily as horses who wear them. This shows that blinkers are not necessary, and in many cases the "open" bridle might be adopted with advantage on the score of economy in construction, lightness, and freedom of ment. Probably all horses, including heavy horses of phlegmatic temperavision, and especially in the case of the spirited and highly nervous, can be broken to harness in the blinkerless or "open" bridle, and work as well without blinkers as with them. In some cases there may be an element of danger in discontinuing their use suddenly, where horses have become accustomed to their use, and the change should be made with a little care and caution. The difficulty, however, is much less than one is apt to imagine, as after all it is natural to the horse to run without blinkers, and when not at work, in stable yard or field, he does not carry them, so the experience of being without them is not really a new one to him.

Some of the blinkers on the bridles of cart horses are unnecessarily large for any purpose and so markedly increase the weight as to constitute quite an addition to the load the horse has to carry. This is an evil that should always be rectified, even in those cases where it may not be considered safe to dispense with the appendages altogether. Lightness and simplicity, with which it is perfectly possible to combine strength and durability, should be the object aimed at in all harness, and there is a considerable waste of muscular power or energy when an unfortunate animal is made to carry a heavy load of metal furniture for which there is no use, or when portions of harness are worn that are more ornamental than useful, and can easily, and often with advantage, be dispensed with.

THE COLLAR.

The collar should always be as light as is consistent with the nature of the work, and all unnecessary ornamentation and heavy housings should be abolished. It is possible to dispense with the collar and occasionally the breast strap is substituted—in some countries it is employed to the exclusion of collars—and experience goes to show that although it is useful in certain cases, as where the collar has caused sore shoulders, horses generally are more liable to gall in a breast harness than in a light,

(Continued on page 620)

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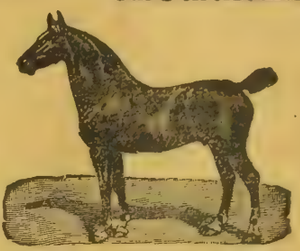

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Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances recommended its use to others.—R. D. KIRK, Antigonish, N.S.

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I have been selling GOMBAULTS CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. Too much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

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Different in construction from other washboards because of the exclusive, patent-protected method of crimping the zinc.

Easier on clothes---hands---patience, for the same reason.

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Gives speedy relief from coughs, colds, cramps, diarrhoea, muscular rheumatism, bruises, etc.

25c and 50c everywhere

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Parsons' Pills Aid Bilious People

POULTRY.

A Bill Entitled An Act to Encourage Poultry Breeding by the Formation of the Nova Scotia Poultry Association.

Be it enacted by the Governor, Council, and Assembly, as follows—

1. The following persons and their succetsors duly appointed are hereby constituted a body corporate under the name of the Nova Scotia Poultry Association.

(1) Delegates or representative members, who shall be chosen as follows:—

(a) one delegate or representative member from each Poultry Club in the Province having a membership of fifty members or less and one additional representative or delegate for each additional fifty members of such Poultry Club duly organized under the Nova Scotia Poultry Association;

(b) ordinary members, who shall be elected in such manner and hold membership on such terms as are provided by the By-laws of the Association.

2. The Secretary for Agriculture, the Principal of the Agricultural College and the Superintendent of the Poultry Department at the Agricultural College shall be, ex officio members of the Association and shall, whenever practicable, attend the various meetings and shall assist in promoting the objects of the Association, but shall not have the right to vote at any such meetings.

3. The special objects of the Association shall be;

(a) to enable poultry breeders and those interested in poultry to confer together for the interchange of information with a view to united action in matters relating to the progress and welfare of poultry and pet stock breeding in the Province.

(b) to encourage the holding of Poulty and Pet Stock shows in various parts of the Province.

4. The affairs of the Association shall be managed by an Executive Committee of such number and with such officers as are fixed by the By-laws of the Association. The Secretary for Agriculture, the Principal of the Agricultural College and the Superintendent of the Poultry Department at the Agricultural College shall be ex officio members of the Executive Committee but shall not vote at any of its meetings.

5. No By-Law of the Association or amendment thereof shall have any effect until the same has been transmitted to and received the sanction of the Governor-in-Council.

6. The Association shall hold meetings at such time and places as are fixed by the Association or the Executive Committee and such other meetings as they find necessary or expedient.

7. The Association may, subject to the approval of the Serretary for Agriculture, organize in any city, town, county, municipal district, or such other locality as may be approved by the Secretary for Agriculture, a branch club to be known as "The Poultry Club" for the purpose of assisting and co-operating with the Association in carrying out its purposes.

8. The Association may, subject to the approval of the Governor-in-Council, make rules and regulations for the organization and for the direction of the work of such Poultry Club.

9. The Association or its Executive Committee shall annually submit to the Secretary for Agriculture, for publication in the Annual Report for the Secretary for Agriculture, a report of its proceedings during the year and a statement of its receipts and expenditures.

10. The Governor-in-Council may annually grant for the use of the Association such amount as is found necessary for the purposes thereof not exceeding in any one year two thousand dollars.

11. (1) Out of this grant the Association may use an amount not exceeding $100.00 to be used to defray part of the expenses of meetings of this Association or of the Executive Committee of the Association.

(2) The balance may be paid upon recommendation of the Executive Committee of the Association to Poultry Clubs organized by the Association for the purpose of assisting such clubs to hold local Poultry shows or to carry on such other work as may be approved by the Provincial Association for purposes of promoting the poultry industry.

(3) The grants which may be allotted to a Poultry Club or Clubs in any one country shall be two-thirds of the prize money paid at a Poultry Show or Shows held by a club or Clubs or expended in carrying on work approved by the Provincial Association within the county. But in no case shall the appropriation in any one county exceed one hundred dollars.

(4) Where only one club exists in a county the total appropriation for the County shall be available for the use of that club. Where more than one club exists in a country the grant shall be divided upon a basis of prize money actually paid out or expenditures actually incurred in carrying on work approved by the Provincial Association.

12. The council of any city, town or municipality, in which a branch club has been organized, may notwithstanding anything contained in "The Municipal Act" or amendments thereto, vote and pay to any such club a sum of money to be used for the purposes of any poultry show promoted by such club.

13. The Governor-in-Council may expend an additional sum not exceeding five hundred dollars annually, in paying the expenses of judges and instructors at poultry shows, meetings and such other occasions as may be held or arranged for under the provisions of this Act, and also to pay the cost of such equipment and apparatus as the Secretary for Agriculture may deem necessary for promoting the work of the Poultry Association.

Prevention is Better Than Cure.

As a rule, poultry are of a hardy nature, and, consequently, are not delicate until man makes them so.

If properly cared for they will remain strong and vigorous, proof of this being shown in the fact that on all the large farms in care of veterans, sickness is seldom found among the stock.

The nature of the fowls must be studied, and every comfort given. Comfortable houses must be provided. A house should be so constructed that it will be practically an open shed during the summer, and a warm and yet well ventilated house in winter—free from drafts, and safe from the cold winds and stormy weather.

The nearer poultry is kept in a natural state, the more hardy will they be. It was this fact that led to the invention of the scratching shed plan.

There is danger in houses built so tight that scarcely a breath of air can enter. Again, such places are often overcrowded, and the fowls sweat while on the roost at night, a condition that quickly brings on colds. It is safe to say that nearly two-thirds of the cases of roup are due to overcrowding in close, badly ventilated houses.

The effect of the different articles of food, as well as the manner of feeding, must be studied. To feed a diet, during the summer, of corn or other heat-producing foods, is apt to bring on a diseased condition about as quickly as poor housing. Entirely too much corn, and not enough variety—a proper blending of nitrogenous and carbonaceous material—is fed. An exclusive diet of any one grain is harmful, producing diarrhoea, and symptoms closely resembling "cholera". The bowels are the best indication of condition. When the droppings are of a brownish color, capped with white, they denote good health, and it is then certain that the food is agreeable.

The present system of dry feeding is becoming more popular every year. This does away entirely with wet or moist mashes, which are the causes of so many cases of overfat and bowel troubles.

Fowls may not be overfed. They should have only what they will eat up clean. The dry-feeding method, however, allows food to be constantly before the stock in hoppers. Champions of this method claim that fowls will not overfeed when dry material is constantly before them, for they eat of it only by degrees, taking with it draughts of water to wash down the food. This, we believe, should only be allowed with dry mash, and not with whole or cracked grains. In the latter case the amount should be limited to an average of a handful for each fowl in the pen—and scattered among litter so as to induce exercising.

Cleanliness is an important factor in maintaining health. It should be made a rule to daily gather up the droppings, and cover the dropping boards under the roosts with sifted coal ashes or dirt. Plenty of kerosene should be used on the roosts and in the nest boxes, and every spring and fall the interior of the houses should be whitewashed, and several times a year the premises fumigated by burning sulphur. The drinking fountains, too, must be kept clean, and the water never allowed to become stagnant.

Cleanliness will not only keep out disease germs, but will give a fatal blow to the prosperity of the lice. Lice weaken poultry, and in this state the lattes become easy prey to disease.

All droopy, ailing fowls should at once be isolated. For this purpore it is well to have cages built in a separate building. In many cases a few days' quiet will be more effective than medicine. A liver pill given when the fowl is placed alone, will hasten a cure. Should the condition remain unchanged, the dose can be repeated. Green food, such as lawn clippings, lettuce, or other tender greens, will greatly help along the cause.

Slight colds can be effectively treated by giving one-grain quinine pill each night for three nights in succession.

Rare beef, chopped fine, will do wonders in toning up a debilitated fowl. It does not pay to doctor a fowl that is hopelessly ill, or suffering from a contagious disease. The latter are never permanently cured, and will trapsmit their weakness to the offspring.

Prevention means a minding of all the details, it means regularity, it means system, it means comfort; in short, it means foresight.

Young geese are ready for market when the tips of their wings reach the tail, which is when they are about ten weeks of age.

It is claimed that it is much easier to dress a gosling in warm than in cold weather, as the feathers do not set so tight, and in picking them the flesh is not so apt to be torn.

When the fowls are made bloody by fighting, the sores or cuts should be washed with whiskey, and afterwards anointed with a little vaseline. It is also well to beat up a raw egg and add ten to twelve drops of whiskey for each bird. There is danger of canker setting in from neglected cuts made by fighting.

Fowls occasionally suffer from sour crop; that is, when pirked up they vomit a quantity of fluid, and the crop feels soft. For this we know of no better remedy than two teaspoonfuls of sugar and baking soda, in a teacupful of warm water. Give two teaspoonfuls of this once a day, and at the same time supply plenty of grit.

Air blisters often show themselves in young chicks. The skin puffs out and seems like a bladder of wind. It comes on the abdomen, sides, and under the wings and neck. Prick the blisters with a needle to let out the air. Add carbonate of iron, alternated with granulated charcoal, daily in the food. The diet should be oatmeal principally, with plenty of sharp grit within reach.

"The small pigeon-sized eggs are generally the last of a litter," That at one time was a well-established theory, but the introduction of the trap nest has exploded it. On the farm of the writer where trap nests are used, these small eggs were, in a number of tests, immediately followed by normal sized eggs, which went to prove that the pigeon-sized eggs come from some other cause.

The average weight of a hen's eggs run from 15 to 24 ounces per dozen. A weight of 22½ ounces may be taken as fair average for good sized eggs, although a weight of four ounces is not unknown for single specimens.

When scalding poultry for market, it is best to first dry-pick the legs, so that they will not necessarily be placed in the water and change color. Neither the heads nor the feet should touch water. The water ought to be as near boiling point as possible, without boiling.

The way to "plump" a dressed fowl is to dip it for ten seconds in water nearly or qaite boiling hot and then

immediately in cold water. Hang in a cool place until the animal heat is entirely out. Plumping gives the fowl a much more attractive appearance.

A duck is not fully matured until it is about two and a half years old.

The Pekin duck is of Asiatic origin, and was imported to this country from China, thirty or more years ago. Hudgens says a traveller who saw them about the streets of Pekin, mistook them for small white geese at first, but upon finding that they were ducks, was so greatly impressed with their snow-white plumage and noble carriage that he secured some of their eggs. They were brought to Hong kong and hatched, and in due time the birds were shipped in a vessel bound for New York. A number of the ducks died during the long sea voyage, but from the rest has sprung this popular breed that is now met with in nearly every state of the Union.

When the fattening season arrives, according to an experienced goose raiser, keep the fowls shut away from bathing water, and feed barley meal, cornmeal and beef scraps and some chopped celery. Keep them in a subdued light for three or four weeks, when they can be let out for a couple of days to enjoy the use of a pond. Then return to clean quarters, and feed on barley meal, and milk, and chopped celery, for two or three days, letting them go 24 hours before killing.

The causes for sickness among fowls can be traced to lice, filth, no grit, overfat, sour food, leaky roofs, lack of excerise, crowded quarters, cracks in the wall, exposure to hot suns, cold houses in winter, hot houses in summer, irregularity in feeding, damp houses and runs, not enough bulky food, impure drinking water, poorly ventilated houses, exposure to bad weather, and too much heating food in summer.

A "Standard-bred" fowl and a "Purebred" fowl are not necessarily the same. A bird may not be up to the Standard qualificatinns and yet be a purebred. But a Standard-bred is bound to be a purebred. Utility poultry are fowls bred for increased egg and meat production, and while they are pure in blood may be off in markings from a poultry show point of view. No fowl can be a successful utility bird unless it is purebred.—Michael K. Boyer, Hammonton, N. J.

Proper Feed at Moulting Time.

As moulting is a natural function, nature should look after it and see that a fowl is not hurt during this time, but nature acts here as it does elsewhere—tries to put every fowl not properly rationed and kept in a weakened condition in its grave. If you have some early pullets at hand these may moult late this fall, in which case you must keep a lookout for these pullets; feed them strengthening food and not allow them to run wet and draggled, and sniffling with cold, for if you do you may have but a sorry lot of pullets left over for early laying next spring.

Another thing, the fowls should not go into the moult worried with the blood-sucking mites or the big, creeping, worrying, oil-sucking lice; a fowl needs all they take from it to sustain strength through the drain on the system of growing new feathers, and this is far greater than you may think.

Good, vigorous hens should begin to moult in midsummer. This is an excellent time to begin, as it insures them heat and plenty of green food, and if farmers' fowl plenty of insect food we hope during this time. The hens that moult early should by all rights be the winter-laying hens, and will be if treated all right.

During the moulting season you must not expect many eggs. Some hens will lay nearly through this time. Such hens must be well fed on meats and oily food, as often these hens are the ones you find dead under the roosts and from sheer debility because of this drain and a lack of strengthening food. Hens that moult late as a rule do little laying the winter through, if any. Some fanciers declare that hens will moult much earlier in the season if all of the male birds are removed early in the summer.—Ida M. Shepler.

Poultry Notes.

To supply some form of animal food is still a problem to the extensive keeper of many fowls. It is not only the most costly of foods, but the most necessary, and the most unsatisfactory at the present time. Fresh ground bone from the slaughter houses and butcher shops furnish animal matter in acceptable form, but it must be fed quickly, and even then in hot weather is likely to cause trouble. Its supply being limited, poultry raisers at a distance cannot get it.

The commercial beef scraps, so generally used, are the refuse from slaughter houses, and are generally cured by the acid treatment. Some brands lately analyzed show from 10 to 12 per cent acid. This is as much to blame as ptomaine poisoning for the evil results that frequently arise from the use of commercial beef scrap. The high quality beef scraps are today the cheapest forms in which to purchase protein. Fish scrap would also be a cheap source of protein for poultry of its danger of tainting could be eliminated. Granulated dried milk, running as high as 25 and 30 per cent protein, is being used by some poultry raisers with the best of results. Some form of protein is neccessary if you would get best results with poultry.—Tribune Farmer.

It does not pay to send fowls to market in poor condition; they neither sell readily nor at best price, and often the dealers must lose by them. Fowls that are poor should be fattened before going on the market; they should be put in rather close pens and fed not less than four times a day, and nothing is better to feed than ground corn or cornmeal, the latter preferred, mixed with water or milk. They must be given all they want of this each feed; they must be penned in a quiet place, with nothing to excite them, and, with the mash, must have access to plenty of water and grit. Two weeks is long enough to fatten; a longer time than from ten to fourteen days in close confinement tends to make them restless, after which they lose flesh instead of gain. The chickens that go in the fattening pens must be in good health and free from lice. You cannot fatten fowls that are droopy or lousy. Charcoal in the water tones up the system of fattening birds; a little epsom salts in the water occasionally keeps the bowels in order and enables them to consume more food.—Poultry Culture.

Discard Poultry.

If there are good reasons for reducing poultry stock, the following is recommended: Reduce by discarding all inferior, unthrifty and aged specimens. Dispose of surplus male birds. These eat food and give no return; they also occupy space which should be occupied by profit-making pullets. Keep one breed and specialize; breed none but good ones for the purpose in view—not more than two, one for egg production, the other for table-bird breeding.

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David Copperfield.

By Charles Dickens.

(Continued from last issue.)

"You are such a comfortable man, you see," said Minnie. "You take things so easy."

"No use taking 'em otherwise, my dear," said Mr. Omer.

"No indeed," returned his daughter. "We are all pretty gay here, thank Heaven! Ain't we father?"

"I hope so, my dear," said Mr. Omer. "As I have got my breath now, I think I'll measure this young scholar. Would you walk into the shop, Master Copperfield?"

I preceded Mr. Omer, in compliance with his request; and after showing me a roll of cloth, which he said was extra super; and too good mourning for anything short of parents, he took my various dimensions, and put them down in a book. While he was recording them he called my attention to his stock in trade, and to certain fashions which he said had "just come up," and to certain other fashions which he said had "just gone out."

"And by that sort of thing we very often lose a little mint of money," said Mr. Omer. "But fashions are like human beings. They come in, nobody knows when, why, or how; and they go out, nobody knows when, why, or how. Everything is like life, in my opinion, if you look at it in that point of view."

I was too sorrowful to discuss the question, which would probably have been beyond me under any circumstances; and Mr. Omer took me back into the parlor, breathing with some difficulty on the way.

He then called down a little break-neck range of steps behind a door: "Bring up that tea and bread and butter!" which, alter a time, during which I sat looking about me and thinking, and listening to the stitching in the room and the tune that was being hammered across the yard, appeared on a tray, and turned out to be for me.

"I have been acquainted with you," said Mr. Omer, after watching me for some minutes, during which I had not made much impression on the breakfast, for the black things destroyed my appetite, "I have been acquainted with you a long time, my young friend."

"Have you, sir?"

"All your life," said Mr. Omer. I may say before it. I knew your father before you. He was five foot nine and a half, and he lays in five and twenty foot of ground."

"Rat—tat-tat, Rat—tat-tat, Rat—tat-tat," across the yard.

"He lays in five and twenty foot of ground, if he lays in a fraction," said Mr. Omer, pleasantly. "It was either his request, or her direction, I forgot which."

"Do you know how my little brother is, sir?" I enquired.

Mr. Omer skook his head.

"Rat—tat-tat, Rat—tat-tat, Rat—tat-tat."

"He is in his mother's arms," said he.

"Oh, poor little fellow! Is he dead?"

"Don't mind it more than you can help," said Mr. Omer. "Yes. The baby's dead."

My wounds broke out afresh at this intelligence. I left the scarcely tasted breakfast, and went and rested my head on another table in a corner of the little room, whith Minnie hastily cleared, lest I should spot the mourning that was lying there with my tears. She was a pretty good-natured girl, and put my hair away from my eyes with a soft kind touch; but she was very cheerful at having nearly finished her work, and being in good time, and was so different from me!

Presently the tune left off, and a good-looking young fellow came across the yard into the room. He had a hammer in his hand, and his mouth was full of little nails, which he was obliged to take out before he could speak.

"Well, Joram!" said Mr. Omer. "How do you get on?"

"All right," said Joram. "Done sir."

Minnie coloured a little, and the other girls smiled at one another.

"What, you were at by candle-light last night, when I was at the club, then, were you?" said Mr. Omer, shutting up one eye.

"Yes," said Joram. "As you said we could make a little trip of it, and go over together, if it was done, Minnie and me—and you."

"Oh! I thought you were going to leave me out altogether," said Mr. Omer, laughing till he coughed.

"—As you was so good as to say that," resumed the young man, "why I turned to with a will, you see. Will you give me your opinion of it?"

"I will," said Mr. Omer, rising. "My dear," and he stopped and turned to me; "would you like to see your—"

"No, father," Minnie interposed.

"I thought it might be agreeable, my dear," said Mr. Omer. "But perhaps you're right."

I can't say how I knew it was my mother's dear, dear coffin that they went to look at. I had never heard one making; I had never seen one that I know of; but it came into my mind what the noise was, while it was going on; and when the young man entered, I am sure that I knew what he was doing.

The work being now finished, the two girls, whose names I had not heard, brushed the shreds and threads from their dresses, and went into the shop to put that to rights, and wait for customers. Minnie stayed behind to fold up what they had made, and pack it in two baskets. This she did upon her knees, humming a lively little tune the while. Joram, who I had no doubt was her lover, came in and stole a kiss from her while she was busy (he didn't appear to mind me, at all), and said her father was gone for the chaise, and he must make haste and get himself ready. Then he went out again; and then she put her thimble and scissors in her pocket, and stuck a needle threaded with black thread neatly in the bosom of her gown, and put on her outer clothing smartly, at a little glass behind the door, in which I saw the reflection of her pleased face.

All this I observed, sitting at the table in the corner with my head leaning on my hands, and my thoughts running on very different things. The chaise soon came round to the front of the shop, and the baskets being put in first, I was put in next, and those three followed. I remember it as a kind of half-chaise cart, half piano-forte van, painted of a sombre colour, and drawn by a black horse with a long tail. There was plenty of room for us all.

I do not think I have ever experienced so strange afeeling in my life (I am wiser now, perhaps) as that of being with them, remembering how they had been employed, and seeing them enjoy the ride. I was not angry with them; I was more afraid of them, as if I were cast away among creatures with whom I had no community of nature. They were very cheerful. The old man sat in front to drive and the two young people sat behind him, and whenever he spoke to them leaned forward, the one on one side of his chubby face and the other on the other, and made a great deal of him. They would have talked to me too, but I held back, and moped in my corner; scared by their love-making and hilarity, though it was far from boisterous, and almost wondering that no judgment came upon them for their hardness of heart.

So, when they stopped to bait the horse, and ate and drank and enjoyed themselves, I could touch nothing that they touched, but kept my fast unbroken. So, when we reached home I dropped out of the chaise behind, as quickly as possible, that I might not be in their company before these solemn windows, looking blindly on me like closed eyes once bright. And oh, how little need I had had to think that would move me to tears when I came back—seeing the window of my mother's room, and next it that which, in the better time, was mine!

I was in Peggotty's arms before I got to the door, and she took me into the house. Her grief burst out when she first saw me; but she controlled it soon, and spoke in whispers and walked softly, as if the dead could be disturbed. She had not been in bed, I found, for a long time. She sat up at night still and watched. As long as her poor dear pretty was above the ground, she said, she would never desert her.

Mr. Murdstone took no heed of me when I went into the parlor, where he was, but sat by the fireside, weeping silently, and pondering in his elbow chair. Miss Murdstone, who was busy at her writing desk,, which was covered with letters and papers, gave me her cdld finger-nails, and asked me, in an iron whisper, if I had been measured for my mourning.

I said: "Yes."

"And your skirts," said Miss Murdstone; "have you brought 'em home?"

"Yes, ma'am. I have brought home all my clothes."

This was all the consolation that her firmness administered to me. I do not doubt that she had a choice pleasure in exhibiting what she called her self-command and her firmness, and her strength of mind, and her common sense, and the whole diabolical catalogue of her unamiable qualities, on such an occasion. She was particularly proud of her turn for business; and she showed it now by reducing everything to pen and ink, and being moved by nothing. All the rest of that day, and from morning to night afterwards, she sat at that desk; scratching composedly with a hard pen, speaking in the same imperturable whisper to everybody; never relaxing a muscle of her face, or softening a tone of her voice, or appearing with an atom of her dress astray.

Her brother took a book sometimes but never read it that I saw. He would open it and look at it as if he were reading, but would remain fkr a whole hour without turning a leaf, and then put it down and walk to and fro in the room. I used to sit with folded hands watching him, and counting his footsteps, hour after hour. He very seldom spoke to her, and never to me. He seemed to be the only restless thing, except the clocks, in the whole motionless house.

In thses days before the funeral, I saw but little of Peggotty, excepting that, in passing up and down stairs, I always found her close to the room where my mother and the baby lay, and except that she came to me every night, and sat by my bed's head while I went to sleep. A day or two before the burial—I think it was a day or two before, but I am conscious of confusion in my mind about that heavy time, with nothing to mark its progress—she took me into the room. I only recollect that underneath some white covering on the bed, with a beautiful cleanliness and

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freshness all around it, there seemed to me to lie embodied the solemn stillness that was in the house; and that when she would have turned the cover gently back, I cried: "Oh no! oh no!" and held her hand.

If the funeral had been yesterday, I could not recollect it better. The very air of the best parlor, when I went in at the door, the bright condition of the fire, the shining of the wine in the decanters, the patterns of the glasses and plates, the faint sweet smell of cake, the odor of Miss Murdstone's dress, and our black clothes. Mr. Chillip is in the room and comes to see me.

"And how is Master David?" he says, kindly.

I cannot te l him very well. I give him my hand, which he holds in his.

"Dear me!" says Mr. Chillip, meekly smiling, with something shining in his eye. "Our little friends grow up around us. They grow out of our knowledge, ma'am?"

This is to Miss Murdstone, who makes no reply.

"There is a great improvement, ma'am?" said Mr. Chillip.

Miss Murdstone merely answers with a frown and a formal bend; Mr. Chillip, discomfited, goes into a corner, keeping me with him, and opens his mouth no more.

I remark this, because I remark everything that happens, not because I care about myself, or have done since I came home. And now the bell begins to sound, and Mr. Omer and another come to make us ready. As Peggotty was wont to tell me long long ago, the followers of my father to the same grave were made ready in the same room.

There are Mr. Murdstone, our neighbor Mr. Grayper, Mr. Chillip, and I. When we go out to the door, the bearers and their load are in the garden; and they move before us down the path, and past the elms, and through the gate, and into the churchyard, where I have so often heard the birds sing on a summer morning. We stand around the grave. The day seems different to me from every other day, and the light not of the same colour—of a sadder color. Now there is a solemn hush, which we have brought from home with what is resting on the mould; and while we stand bare-headed, I hear the voice of the clergyman, sounding remote in the open air, and yet distinct and plain, saying: "I am the Resurrection and the Life, saith the Lord!" Then I hear sobs; and, standing apart among the lookerson, I see that good and faithful servant, whom of all the people whom of all the people on earth I love the best, and unto my childish heart is certain that the Lord will one day say: "Well done."

There are many faces that I know, among the little crowd; faces that I knew in church, when mine was always wondering there; faces that first saw my mother, when she came to the village in her youthful bloom. I do not mind them—I mind nothing but my grief—and yet I see and know them all; and even in the background, far away, see Minnie looking on, and her eye glancing on her sweetheart, who is near her.

It is over, and the earth is filled in, and we turn to come away. Before us stands our house, so pretty and unchanged, so linked in my mind with the young idea of what is gone, that all my sorrow has been nothing to the sorrow it calls forth. But they take me on; and Mr. Chillip talks to me; and when we get home, put some water to my lips; and when I ask his leave to go up to my room, dismisses me with the gentleness of a woman.

All this, I say, is yesterday's event. Events of later date have floated from me to the shore where all for-

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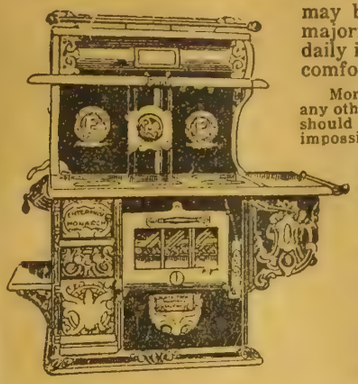

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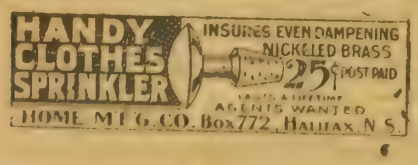


fotten things will reappear, but this stands like a high rock in the ocean.

I knew that Peggotty would come to me in my room. The Sabbath stillness of the time (the day was so like Sunday! I have forgotten that) was suited to us both. She sat down by my side upon my little bed; and holding my hand, and sometimes putting it to her lips, and sometimes smoothing it with hers, as she might have comforted my little brother, told me, in her way, all that she had to tell concerning what had happened.

"She was never well," said Peggotty, "for a long time. She was uncertain in her mind, and not happy. When her baby was born, I thought at first she would get better, but she was more delicate, and sunk a little every day. She used to like to sit alone before her baby came, and then she cried; but afterwards she used to sing to it—so soft, that I once thought, when I heard her, it was like a voice up in the air, that was rising away.

"I think she got to be more timid, and more frightened-like, of late; and that a hard word was like a blow to her. But she was always the same to me. She never changed to her foolish Peggotty, didn't my sweet girl."

Continued in next issue.)

House Cleaning.

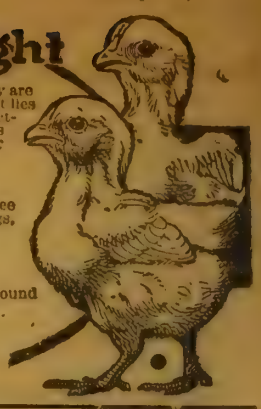
House-cleaning, like Thanksgiving day, is one of the good instituions which belong to this side of the sea. It is understood in Great Britain (that paradise of the housewife) where the maid always wears her cap and never refuses to blacken the boots, that house-cleaning goes on quietly and inobtrusively all the year round, without any one being the wiser. One room is "done" at a time and where there are many rooms, one room cleaned every fortnight or month means that the whole house is thoroughly gone over in a year.

People do say, however, that even in the paradise of the housewife, it is much more difficult to get maids than it used to be. Any of our readers who have crossed the sea in recent years will probably have heard that remark more than once. And even with perfectly organized household machinery, one is not ashamed to confess to a certain satisafction and interest, if not a fearful joy in the catalysm known as "Spring cleaning" when all the household goods of the Farmer's wife are ranged in a row in the out-of-doors and the farmer seeks the seclusion of the barn, if indeed, he does not carry a lunch with him, having arranged to work on the "back hundred" on that auspicious occasion. How his wife's back does ache that night, to be sure, and her sleep is the sleep of the weary, for there are few days even in the life of a farmer's wife, when a bigger day's work is done than at the time of Spring Cleaning.

It is not only inside the house but the accumulations of the winter in the front yard, the rubbish accidently or purposely deposited there, and everything else unsightly or untidy disappears under the besom of spring cleaning.

It is essential to "plan" the campaign of spring cleaning, and to try to do it all in one day, as some too energetic women do. No matter if the house is small, it is a mistake to do two days' work in one, and then have to go to bed for four days. Usually it is better to begin at the top of the house, or at the kitchen, or perhaps at the spare room, and then this particular place may be a haven of rest while the remainder of the house is being cleaned. The dining room and the parlor are the best places to leave to the end, one of the other rooms being used as a dining room for that one day.

Feed Growing Chicks Right



They must be furnished with the right kind of material if they are to make satisfactory growth of muscle, bone and feather. Profit lies in quick growth and early maturity. Rush those cockerels to marketable size and turn them into cash before prices fall. Get the pullets completely developed and ready to fill the nests with fall and winter eggs.

Pratts Baby Chick Food

contains just the necessary ingredients to give them during the first three weeks the best possible start, at a cost of 1c per chick. In boxes and bags, 25c, 50c, $1 up. After the third week mix

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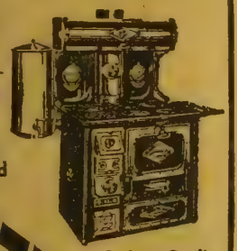

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The Wringer Board extends from the side, out of the way of the cover. This allows practically the whole top of the tub to open up—makes it easy to put in and take out clothes.

No other washer has as large an opening. No other washer can be worked with crank handle at side as well as top lever.

Do you use Maxwell's "Favorite"—the churn that makes quality butter?

Write us for catalogues if your dealer does not handle them. 89

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Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

Do not begin more work than you can finish in one day. Secure help from somewhere. Simplify the usual household routine when house cleaning is "on." It is always a pity to have a room in confusion over night, and no sensible person will think of cooking an elaborate dinner and house cleaning too, any more than she will, on the other hand, rush to the other extreme and almost altogether omit the regular meals.

Remove from the room all the movable furniture, rugs, pictures, hangings, curtains, beds, books, etc., etc., and have all of these thoroughly cleaned outside the room. It is not a bad plan to engage someone to wash all the pictures, for example, in the house, and have these neatly arranged in piles, the pictures from each room in a separate pile, all ready to hang in their own places again as soon as the room is clean. If there are some good boys and girls on the farm, housecleaning will be eased by everyone's helping to get such jobs done in the evening, and this shortens the labor and trouble of house cleaning very much.

The wife and mother should as far as possible direct others and plan the work and not exhaust herself by doing anything that she can get some one else to do for her. This is most important. We know that sometimes the farmer's wife is worn out in mind and body by the cruel pressure of work and in a rich and prosperous farming community like ours, this should not be.

The proper time for house cleaning seems to be when it is warm enough to wash the windows and when the "self-feedes" can safely be put out of commission till next winter. This disposes of a great deal of dust and dirt, and the farmer's wife takes heart to look upon her lace curtains and put away heavy winter things.

It is very important not to "raise a dust." Floors should be cleansed, not by dry sweeping, but by first scattering tea leaves or wet newspaper torn into large fragments, or other wet material and so sweeping up the dirt without distributing it all through the house. The Dustless Cleaner may be all very well, but $50.00 is a lot of money and no "Dustless" will give the clean fresh smell of soap and hot water pervading the whole house and making you quite certain that the work is done. "How clean it smells," says everybody.

Bed clothes and bedding should all be exposed to the sun and air. The back verandah is valuable for this, but the lawn is a good place too.

If there has been illness in the house, now is the time to finally banish every germ. Sunlight and fresh air are far and away the best disinfectants and the next best are boiling water and soap. Nothing is as safe, or as satisfactory, as sunlight, soap, and boiling water.

Nature summons us to the spring cleaning by leading the way herself. The rushing river carries down mud and debris. The banners of the spring make us plan for clean or new carpets and curtains. Last year's leaves are thriftily used for new soil material, and so it goes.

Don't let spring cleaning kill you. Save time to see and hear the birds and flowers. Never stay in all day, especially in spring.—Winnifred Cotter in Farmers' Magazine.

When Worry Enters the Home.

With women I suppose that household problems are the greatest single cause of worry. The proper rearing of the boy, the succeesful training of the girl, the usual petty cares of the home, to which all women are subject, together with the modern servant problem—all serve to create anxiety and worry, together with the useless and unnecessary toil connected with the family life. Housewives are constantly worried over the proper performance of little things, that, as an actual fact, would in no way affect the family happiness if they were left undone.

Many a mother, when she wakes up in the morning, begins the day in a state of anxious and nervous agitation; she feels herself already crushed under the weight of all the burdens she will have to bear. The little household cares and domestic trials which every mother has to bear are not to her simple annoyances; they are actual catastrophes, and she suffers every one of these calamities a score of times before they come. By noon her life is swarming with apprehensions, difficulties and troubles; wŏrry reins supreme on the throne of her mind, and distraction has come to possess the soul. At the close of the day this unhappy mother has borne a hundred sorrows which were wholly imaginary, produced entirely by abnormal emotion.

HOW WORRY CAN PRODUCE POOR HEALTH.

Now worry grows by what it feeds on. When we nurse and nourish this spirit of dissatisfaction it acts and reacts upon ourselves until the very soul is filled with discontent and the mind is permeated with complaining. However small and trifling the matter over which we began to worry the insignificant cause of our mental dissatisfaction will be found entirely sufficient to feed and nourish the spirit of uneasiness to the point where it gains possession of our minds, threatens to wreck our careers and constantly harasses the soul to the point where life is unbearable.

Some of these people seem to have actually brought themselves to the place where they enjoy poor health. They would not be happy if they could not complain of headache, backache, stomache, or something of the kind; their complaints have become chronic; they enjoy enlisting the sympathy of their fellows, having delight in describing their sufferings and explaining their miseries; they are constantly consulting the almanac and the patent-medicine advertisements to find some new cause for physical complaint, and they usually find what they are looking for.

There is little doubt that nine-tenths of all the ordinary functional diseases of the body originate in the mind, and it is worry that produces the soil from which these infant diseases spring. The seeds of mental disease and physical affliction may fall upon us thick and fast, but if they fail to find the soil of worry and depression in which to develop and grow we are not likely to be seriously affected by their presence. It requires not only a germ to produce disease, but also favorable soil in which it may grow. Worry produces just that condition of mind and body most favorable to the growth and development of all the vicious diseases which prey upon the mind and destroy the body.

The direct result of worry we know now is diseases, and there is where the crime of the matter comes in. The fact that certain nervous diseases are direcly caused by worry admits of no doubt whatever. Take the general condition known as "neurasthenia", commonly called "nervous prostration." Patients suffering from this condition are usually spoken of as all "run down." The truth is that they are all "wound up", and, as a result of high tension coupled with mental anxiety, they have broken down.—Ladies' Home Journal.

All Skin Diseases ARE OCCASIONED BY BAD BLOOD.

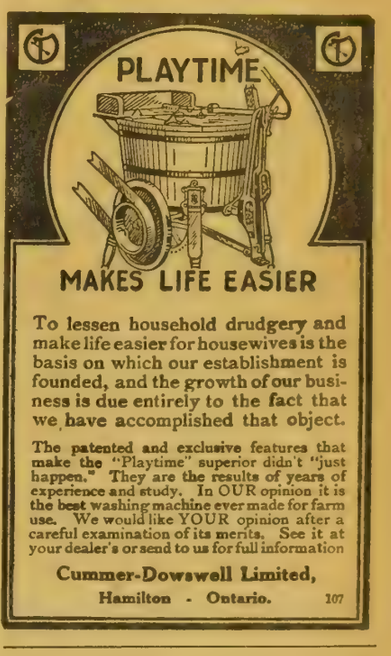
No one can expect to be free from some form or other of skin trouble unless the blood is kept in good shape.

The blood can easily be purified and the skin disease cured by the use of Burdock Blood Bitters, that old and widely known blood medicine.

It has been on the market for over 35 years and its reputation is unrivalled.

Mrs. Lillie Mitchell, Guelph, Ont., writes:—"I was troubled with eczema. My body was covered with awful itching skin eruptions. Although I tried many different remedies I could get nothing to give me relief. Finally I got a bottle of Burdock Blood Bitters, which completely cured me."

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.



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The patented and exclusive features that make the "Playtime" superior didn't "just happen." They are the results of years of experience and study. In OUR opinion it is the best washing machine ever made for farm use. We would like YOUR opinion after a careful examination of its merits. See it at your dealer's or send to us for full information

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—has proven itself by many years of testing and by thousands of farmers to be the one perfect carrier. It is simply and strongly constructed of malleable iron, firmly braced where strength is most needed. Its mechanism is perfect. Has large swivel, positive lock and wide flaring mouth.

Sold at a price within reach of everyone.

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—when used with this carrier cuts down time and labour in handling hay. You can't beat this Louden Harpoon Fork. Material and construction insure strength as well as ease of operation. It locks both open and shut. Has concave points and is designed to carry a large load. Here is a combination outfit that is well worth while. Ask the Louden dealer in your town to show you.

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before you buy a gasoline engine anywhere. It is built right, stays right and the price is right. Costs the least to operate. A binding guaranty with every *Sta-Rite.*

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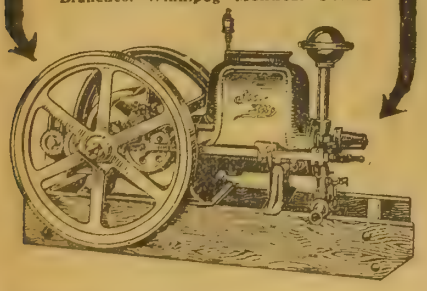


HOW TO CONQUER RHEUMATISM AT YOUR OWN HOME

If you or any of your friends suffer from rheumatism, kidney disorders or excess of uric acid, causing lameness, backache, muscular pains; stiff, painful, swollen joints, pain in the limbs and feet; dimness of sight, itching skin or frequent neuralgic pains, I invite you to send for a generous **Free Trial Treatment** of my well-known, reliable **Chronicure**, with references and full particulars by mail. (This is no C. O. D. scheme.) No matter how many may have failed in your case, let me prove to you, free of cost, that rheumatism can be conquered. **Chronicure** succeeds where all else fails. **Chronicure cleanses the blood and removes the cause.** Also for a weakened, run-down condition of the system, you will find **Chronicure a most satisfactory general tonic that makes you feel that life is worth living.** Please tell your friends of this liberal offer, and **send today** for large free package, to **MRS. M. SUMMERS, Box B. 309—Windsor, Ont.**

FLORICULTURE.

Hampton, writes:—I left a bed of Hollyhocks in the ground last fall as my grandmother used to do. This spring a few are sprouting about the dead stalks, but the others show no signs of life. Would you think they are dead and how can I tell? Is it too early to plant Nasturtiums? Will they grow in a shady place? Will grass grow under heavy trees. The lawn grass I get seem to be ineffective.

Dig about the Hollyhock roots carefully and see if there is any life in the crowns. Yous can easily tell.

Would not advise planting Nasturtiums until after the 15th of May. They are not usually successful in a shady place, as they like sunshine.

Grass seed can certainly be grown under most trees when there is a little sun during the day if the soil is not sour. The common lawn mixture would not thrive. You must have a mixture with Nemaralis and if the soil is suspected to be at all acid, give a light dressing of air slaked lime. Any heavy soil in a shady situation will be found more or less acid.

Dig around the tulips and hard perenials to loosen the winter caked soil. A dressing of good bone meal will help your buds now if well rotted manure or compost is not available.

Roses should be planted as soon as possible after the first of May. The seasons are so short at best for them and the earlier they go into the ground the better. A dozen times a week the florist is asked re the best varieties of Rose to plant. Of course, this is to some extent governed by circumstances but in the writer's experience the Paul Neyron as a pink; Jack or Ulrich Brunner, as a red, with Dickson, as white, seem to give the best results. At all events these sorts have all been thoroughly tested in New Brunswick and have been found reliable.

Plant this spring Delphiniums, Phlox, Columbine and other old-fashioned hardy plants that you thought of last summer. A well drained, sunny bed with good soil will give good results for years. Annuals may be planted between them with good effect if you like a few cuttings such as Asters, Stocks, Mignonette, etc.

If your soil permits, plant your Sweet Peas as early as possible, the earlier the better. Don't make the soil too rich or you will get nothing but vines and little bloom. Poor soil with a little strawy manure to start them and a light top dressing of ashes when they are about six inches high will be found to give the best results.

Unnecessary Harness.

(Continued from page 603)

well-padded, and properly fitted collar. The fitting should receive most careful attention, and the collar should belong to the horse, no matter in what respect the other parts of the harness or cart gears are made interchangeable. It is obvious that all shoulders are not in the same shape, and this also applies to backs where saddles and pads are concerned, so that it is long odds against the collar of one horse fitting another with that accuracy which is essential to the reduction of friction—the chief cause of collar galls—to a minimum. As regards injury to the skin a collar that is too loose, as we often see when that belonging to a large horse is worn by smaller animal, is even worse than one that is too tight, since friction is a more fertile cause of galls than pressure is of sores. Further, when horses do not vary appreciably in the shape of their necks and shoulders, there are differences, for a collar, even a new collar, when it fits has to be made by wear to take the impression of the shoulders falling into depressions and elevations, and these are never quite the same in any two horses.

Besides having its own collar suited as regards its weight to the type of animal and the nature of its work, care should be taken from time to time to have it refitted. The stuffing of a collar, which consists of rye straw, in course of time becomes very hard, and the lining gets worn, when the collar should be "re-plugged" and re-lined.

CART SADDLES.

Cart saddles and pads, in common with collars and other portions of the harness, are often unnecessarily heavy and uselessly ornamented and also, like collars, are often badly fitted. The first rule in the fitting of a saddle, and it applies equally to the cart saddle or harness pad, is that it should bear on the back and ribs, and not on the spine or withers, which will not stand pressure. There is, of course, less difficulty in the fitting of the cart saddle than in the case of the riding saddle, where the weight of the man in the case of a saddle not wide or high enough in the arch tends to bring it down and pinch the wither, but it must be remembered that, particularly in the case of the two-wheeled vehicle—for example, the heavily loaded tip-cart—going down hill, considerable weight is thrown on the back, and by pressing forward a cart saddle that is too narrow, the withers may be pinched, and that dreadfully painful condition koown as fistulous wither established. —Patley Bridge in The Farmyard Series.

Lame back is usually caused by rheumatism of the muscles of the back, for which you will find nothing better than Chamberlain's Liniment. For sale by all dealers.

LOCAL TREATMENT FOR WOMEN'S DISORDERS

The health we enjoy depends very largely upon how the blood circulates in our bodies; in other words, if we have perfect circulation we will have perfect health.

There is a constant wearing out of the tissues in every part of the body. The blood flowing through the veins carries off this waste or dead matter, while the blood coming from the heart through the arteries brings the fresh new living tissue, the essence of the food we have digested, to replace what has been carried off. This constant wearing out and expelling of the dead matter and the replacing of it with new matter, atom by atom, goes on day and night, until in about 7 years a complete change has been effected. Thus every man and woman has an entirely different body in every particle of it from what he or she had 7 years before.

It sometimes happens, however, from a variety of causes, that the blood becomes congested in certain portions of the body. This means that the blood vessels in these parts become weakened, and the circulation in that section of the body becomes sluggish and stagnant. The consequence is that the dead matter in that part of the body is only partially carried away, and that but little of the new, vital matter is introduced there to build up and strengthen the tissues and nerves.

This condition invariably exists in all cases of female disorders. The dead matter retained in the circulation, which should have been expelled, causes irritation and inflammation of the delicate memberane, and oppresses the nerve centres. This condition is the cause of the grievous physical and mental suffering which accompanies female troubles.

To obtain relief it is evident that the first thing to be done is to get rid of the dead matter which is being held in the circulation. If this dead matter is allowed to remain there a species of blood poisoning will result and nature will endeavor to get rid of it by forming ulcers, tumors, etc.

The above explanation will also show why ORANGE LILY is so successful in curing this condition. It is a local treatment, and is applied direct to the affected organs. Its curative elements are absorbed into the congested tissue, and from the very start the dead matter begins to be discharged. A feeling of immense relief, both mental and physical, accompanies it, and the improvement is constant and positive. This feature of the expelling of the dead matter is always present to a greater or less extent, and in some cases it is so marked as to be amazing. The case described in the following letter is not exceptional:

Dr. Coonley—I am thankful to Mrs. F. E. Currah, your Canadian representative, for my health restored by your wonderful remedy. I have suffered for 17 years, but not so bad until 3 years ago. Then I had a doctor, who told me I had a tumor, and could live no more than a year. If I went through an operation I would not live through it. A year later I sent for him again, and he gave me up to die. My husband then sent for another doctor, who performed an operation, and it did me much good. I doctored with him 3 or 4 months, but became so bad again that I thought I could live no longer, and I began to long to die. One day my husband came home and threw a slip of paper to me with Mrs. Currah's address and told me a lady had advised him to write to her for a treatment that would cure me. I said it was too late, that I would die anyway. I could not lift a teacup without hurting me. Then the first doctor told me I was worse than ever. However, my husband sent for ORANGE LILY, and the third treatment brought away one tumor. Others followed, until 7 tumors had been expelled, 3 large ones and 4 small ones. I know if it had not been for ORANGE LILY I would have died, for I could not live much longer. I would have thought it cheap at one hundred dollars for a month's treatment, instead of one dollar. It is worth its weight in gold.—MRS. GEO. LEWIS, Huntsville, Ont.

The above letter is published with Mrs. Lewis' permission. All letters received are treated as being sacredly confidential, but occasionally some patient feels so grateful for being cured that she is willing to make the matter known for the benefit and encouragement of her suffering sisters.

ORANGE LILY is a positive, scientific remedy for all disorders of the female functions. As explained above these troubles are of local origin, and require local treatment. It is just as sensible to take medicine internally for female troubles as it would be to take medicine internally for a bruise, a boil or an ulcerated tooth. In all these cases some dead matter is being retained, and the cure is effected by employing local methods for expelling the dead matter. ORANGE LILY has antiseptic, soothing and healing properties, and also tones up and invigorates blood vessels and nerves. I am so anxious that every suffering woman may satisfy herself, without cost to her, that ORANGE LILY will cure her, that I hereby make the following

FREE TRIAL OFFER

I will send, without charge, to every reader of this notice who suffers in any way from any of the troubles peculiar to women, if she will send me her address, enough of the ORANGE LILY treatment to last her ten days. In many cases this trial treatment is all that is necessary to effect a complete cure, and in every instance it will give very noticeable relief. If you are a sufferer, you owe it to yourself, to your family and to your friends to take advantage of this offer and get cured in the privacy of your home, without doctors' bills or expense of any kind. Address MRS. FRANCES E. CURRAH, Windsor, Ont.

For Sale By Leading Druggists Everywhere

Land Drainage Means Sure Profits.

Land drainage is not mere speculation. It is a problem which can be handled with mathematical exactness and justified from an economic stand point. Too many farmers are prone to look at the matter in a general way, rather than to arrive at conclusioos by careful and accurate calculations.

There are two classes of farm lands which are entirely unproductive, and lands under cultivation producing in some instances an occasional crop. In the first instance the cost of clearing and breaking the land must be added to the cost of drainage, while in the second case only the cost of drainage need be considered.

The success or failure of land drainage depends largely upon a correct location of the drains. Location is of first importance and in this the farmer must be guided to a great extent by a knowledge of local conditions gained through successive seasons of farming. If he has been an observant man, he will have noticed certain places in his fields where there has been partial or total failures of crops due to excessive moisture. He will also have acquainted himself with the direction taken by surface water after rains. Furthermore, he will have noted the points of overflow from ponds, sloughs and swales. Knowledge of this kind is of great importance in subsequent drainage operations, and will frequently eliminate the necessity of running accurate levels over the area. In certain cases where the ground is nearly level, it may be necessary to use an instrument in order to determine the correct location of the drains. On the other hand, if the slopes are well defined, instruments may be dispensed with and the drains laid by merely noting the flow of water in the trench.

The distance apart of the lines of drains will depend mainly upon the character of the soil. It is apparent that a compact, retentive soil will require a closer spacing than an open, porous one. Lowering the depth of the drain will permit a greater spacing of lines. This rule holds good mainly in an open soil. It is frequently a matter of conjecture to know what distance apart the lines should be placed. This requires a through character of the soil, best acquired by a personal study of the area for one or more seasons. The practice has been to place the lines of drains anywhere from 30 to 300 feet apart.

Homeseekers Excursions to Western Canada.

Every Wednesday until the 9th of October the Intercolonial Railway will sell second class, round trip tickets to Winnipeg, Brandon, Regina, Edmonton, Saskatoon and Calgary. These are good to return two months from date of issue and are a special inducement for those wishing a cheap trip to the West. The nearest I. C. R. ticket agent will furnish all particulars. In that ticket read via Intercolonial Railway, the only all Canadian route from the Maritime Provinces.

The financial statement of the Prince Edward Island Central Seed Fair has been published. It shows that the receipts were $735.73, including $385.00 from the Government, two hundred dollars from private citizens, fifty dollars from the City, and forty-eight dollars from Institutes. The expenditure was $727.31, which included $469.65 for prizes, $257.66 for the payment of bills. The Association has therefore a balance on hand of $8.42. —Pioneer.

Look Into This Gate

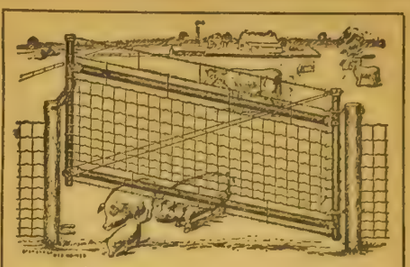
BEFORE you buy any farm gates look into the "Clay" Steel Gate. It has features possessed by no other gate. It is the ideal gate—the very gate that all Farmers want and have wanted always. Consider these good points of "Clay" Gates—:(1) They always hang true—they can't and won't sag, bend, break, burn, blow down, or rot; (2) They can be raised (as shown) to let small stock through or to lift over snow in winter; (3) are so light that a child can work them with ease ; (4) positively keep back breachy cattle.

Clay Steel Farm Gates

will last life-time. They are fully guaranteed. The leading stockmen of Eastern Canada, and the model farms at Guelph, Ottawa, and Macdonald College use Clay Gates, knowing their worth.

Clay Gates are made of tubular steel of large diameter—far stronger than gas pipe or tee or angle iron ; and of heavy wire mesh fabric. They are made in a great variety of sizes and styles—a gate for every purpose.

I GUARANTEE every Clay Gate to be free from defects in material or workmanship. I will replace free any parts, or the entire gate, giving out for such reasons.
H. RALPH STEELE, Manager.



In a recent competition on the subject of "the Ideal Farm Gate" open to the Students of the Ontario Agricultural College, Guelph, every competing student with but one exception declared "Clay" Gates to be the most perfect farm gate made

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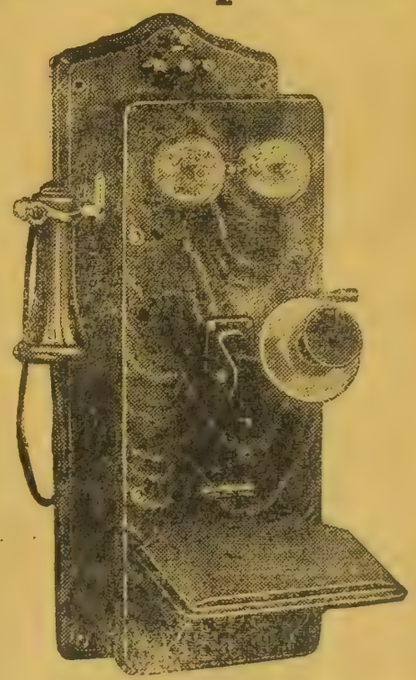

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MARKETS.

Charlottetown

GRAIN.—Oats, White 38c. to 39c.; Black 40c. to 42c.

FEEDSTUFFS.—Bran, $1.15 to $1.25 per 100 lbs.; Shorts, $1.25 to $1.40 per 100 lbs.; Middlings, $1.30 to $1.40 per 100 lbs.; Oil-Cake, $1.90 to $2.00 per bag; Gluten Meal, $1.55 per bag; Corn Meal, $1.60 per bag.

GRASS SEEDS.—Timothy, 6c. to 8c.; Com. Red Clover, 26c.; Mam. Red Clover, 26c. to 28c.; Alsike, 30c.

LIVE STOCK.—Butcher's Cattle, 6c. to 7c.; Stockers, $18.00 to 35.08; Milch Cows, $25.00 to $50.00; Sheep, 4c. to 5c.; Lambs, $3.50 to $5.00.

DRESSED MEATS.—Beef (carcass) 9c. to 12c.; Beef, (retail) 8c. to 16c.; Mutton, 8c. to 14c.; Veal, (carcass) 6c. to 8c.; Pork, 11½ c. for select.

HORSES.—Drafters, $170.00 to $250.00; Roadsters, $170.00 to $250.00; Carriage, $170.00 to $250.00.

DAIRY PRODUCTS.—Creamery Butter, Prints 28c. to 29c., Solids 27c. to 28c.; Dairy Butter, 25c. to 28c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 17½c. to 18c.

FRUIT.—Apples, $4.00 to $5.00 per bbl.

MISCELLANEOUS.—Hay, $11.50 to $13.00; Straw, $6.50 to $7.50; Wool, 25c.; Beef Hides, 11c.; Calf Skins, 14c.; Sheep Skins, 70c. to 90c.; Lamb Skins, 30c. to 40c.

VEGETABLES.—Carrots, 50c. to 70c. bush.; Potatoes, 22c. to 25c.; Turnips, 14c. to 16c.; Beets, 50c.

Farmers are busy planting and market only poorly supplied. Season is cold and backward but dry, and planting is fairly well advanced. Prices for most lines of farm produce are good, but potatoes are low and difficult to sell even at the small prices. Oats are quiet and demand not very brisk. Meats of all kinds are high and Butter is still scarce but lower prices in this line are expected. The cheese season has not opened here as yet but the outlook is for lower prices. Eggs are fairly plentiful and prices hold firm but a slight drop is expected.

Halifax

GRAIN—Oats, 46c to 51c bushel, (bagged); Peas, $2.30 to 2.40 bus.; Barley, $1.70 to 1.75 per 100 lbs.

FEEDSTUFFS.—Bran, $22.00 to 23.00 per ton; Shorts, 23.00 to 24.00 ton; Middlings, 24.00 to 25.00 ton; Oil Cake, $2.25 to 2.30 per 100 lbs.; Linseed Meal, $2.20 to 2.25; Gluten Feed $1.35 to 1.40 per 100 lbs.; Corn Meal, 1.45 to 1.47 per 100 lbs.

GRASS SEEDS.—Timothy, 5½c to 6c lb.; Common Red Clover, 22c to 24c lb.; Mammoth Red Clover, 22c to 24c lb.; Alsike, 21c to 23c lb.

LIVE STOCK——Milch Cows, $30.00 to 50.00; Sheep, 8c to 10c lb.; Lambs, 13c to 15c lb.; Hogs, 9c to 10c lb.

DRESSGD MEATS.—Beef (Carcasses), 8c to 10c lb; Beef (retail) 12c to 24c lb.; Veal, 12c to 15c lb.; Pork, 15c to 18c.

HORSES.—Drafters, $200.00 to 300.00; Roadsters, $200.00 to 250.00; Carriage, 200.00 to 350.00.

DAIRY PRODUCTS.—Creamery Butter, 30c to 32c lb. prints; Creamery Butter, 28c to 30c lb. tubs.; Dairy Butter, 25c to 27c lb.; Cheese, 14½c to 15½c.

POULTRY AND POULTRY PRODUCTS.—Eggs, 18c to 20c dozen; Fowl, 18c to 25c lb.; Chickens, 20c to 23c lb.; Ducks, 20c to 23c lb.; Geese, 18c to 20c.

MISCELLANEOUS.— Hay, $14.00 to 16.00 ton; Straw, $10.50 to 12.00 ton; Beef Hides, 11c to 12c lb.; Calf Skins 15c to 17c lb; Sheep Skins, 80c to $1.00; Lamb Skins, 15c to 25c.

VEGETABLES.— $1.90 to 2.10 bbl.; Potatoes, $1.50 to 1.60 bbl.; Turnips, $1,60 to 1.70 bbl.; Beets, $2.00 to 2.25 bbl.; Parsnips, 2.00 to 2.25; Cabbage, 75c to 1.00 dozen.

Montreal Potato Market

The market is easy and quiet under liberal offerings. Sales of Green Mountains were made this week at 60c to 62½c track Montreal. Quebec varieties are worth 40c to 50c track per bag of 90 pounds.

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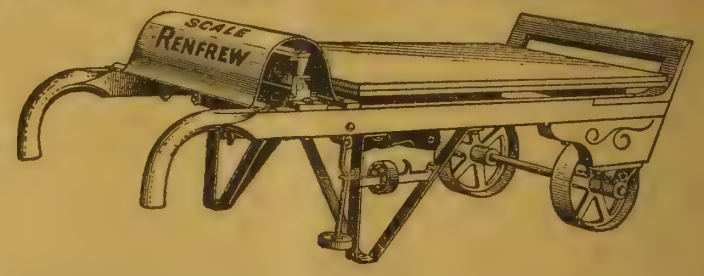

Daily loss—that's what inaccurate scales mean to the farmer. Loss on everything he sells by weight.

Stop it Now. Let the Renfrew do your weighing, and get every cent of profit on your produce, ***that you should get.***

"Renfrew" accuracy is guaranteed by the Canadian Government—which means protection against loss through underweighing.

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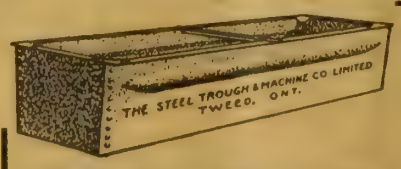

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STEEL WATER TROUGHS

Are strong, rigid, clean and sanitary. Will last a lifetime. Never rust, never leak, and are frost-proof. Infinitely superior to wooden troughs, which rot, become slimy, and are disease breeders "TWEED" Steel Troughs are provided with an outlet for drainage.
Send for illustrated catalogue of "TWEED" Steel Equipments for farmers and stockmen.

STEEL TROUGH MACHINE CO., Limited
9 James Street, Tweed, Ont.

Care of the Suckling Colt

There will be a difference of from twenty-five to fifty dollars in the selling prices of horses determined by the management they have received when they were colts. The colt that three or four years ago was allowed to follow its dam to town or church, or to drag its weary limbs back and forth after the mare from one end of the field to the other, from morning till noon and from noon until night, has not developed as it should and sells at anywhere from twenty-five to fifty dollars less than it would have brought had it been properly cared for.

We do not know what the price of horses will be when the sucklings of this year are put upon the market; but whether that be high or low, it will pay to give them Christian treatment. They are young, their bones are soft; and while they like to play and have a good time, they are easily tired out, and hence should not be allowed to follow the mare further than the stable door or the barnyard. She will probably fret and worry about her baby for the first day or two, but the farmer can afford to unhitch her at about ten o'clock, give her a drink of water, let her cool off, supply the wants of her baby and then go back to work.

If the colt is kept in a roomy stall, or, better still, in a paddock, or in a small pasture well fenced, preferably with some other colt or idle horse to keep it company, it will soon be content to stay at home; in fact, will not know that it can go outside of the enclosure in which it is confined, whatever that may be.

After it is three or four weeks old it will begin to get hungry; but a little fresh grass, if there is a pasture convenient, or a little bran, oats, clover or timothy hay, will stay its stomach until feeding time comes. In fact, the well bred colt will always pay a good price for anything that is fit for it to eat. Hence no farmer should stint his suckling colts.

Remember, that in the first year, particularly in the first six months, you are laying the foundation, building the frame work, so to speak, on the lines of architecture you laid out when mating the dam. No matter how well bred the colt, it must be developed. The plan of the architect must be carried out; and this can be done only by proper feeding' shelter and care.

Teach the colt that you are its master—omnipotent so far as it is concerned—whose will cannot be resisted, and yet though powerful are kind, disposed to be friendly, even generous. All this takes a little time and trouble; but it is time that is well spent and trouble that pays.

Valuable Live Stock for P. E. I.

One of the most valuable shipments of live stock ever brought to this province, arrived by the S. S. Empress, April 17th. It consisted of three Clydesdale fillies, one rising two years, and two rising one year old, also a handsome driving mare, four years old. One Shorthorn bull calf and three yearling heifers of the same breed. The whole were selected and purchased in Ontario this winter by Hon. John R. Richards. The Clydesdales are a handsome lot, full of quality and breed of character. The yearlings were sired by the noted breeding horse Gallant Carrauchan, the horse bred in the same lines and closely related to the well known horse, Knight of Argowan, imported from Scotland by Mr. Richards many years ago. These fillies should prove most valuable for breeding purposes. The driving mare is of handsome conformation with style and high action. Her sire is the well known Hackney, Oak Hall, and mare. The bull calf is from the Pure bred standard famous herd of W. A. Dryden, Brooklin, Ont., and is of the Duchess of Lancaster family, a family that has bred splendidly in this country, as it has in Scotland. This is probably the highest priced youngster ever brought to the Island and should do much to improve the Short-horn breed. The heifers are a choice lot and fashionably bred, one being by the noted bull Superb Sultan, at present in the herd of R. Miller, Stouffville, Ont. One is red in color and the others red-roan. These cattle were purchased by Hon. Senator Yeo, and will be a valuable acquisition to his already splendid herd of Short-horns.

Mr. H. H. Acorn, Souris, P. E. I., has purchased from Mr. Dodd Dwyer, Pictou, N. S., the Standard-bred carriage stallion "King Dodds." King Dodds is a magnificent animal, a beautiful bright chestnut in color, standing 15.3 hands high, and weighing 1,135 lbs., and will be seven years of age on June 12th next. In breeding "King Dodds" is the peer of any, being sired by "Kalol" 2.19¼, by "Kremlin" 2.07¾, by "Lou Russell," brother to Maud S., 2.08¼, and his dam was "Marie King," by "May King," 2.21¼, sire of "Bingen," 2.06¼ "Uhlan," 1.59, and many others. As a show horse, "King Dodds" had won fourteen red ribbons at five years of age, and had never been shown anywhere that he had not won first prize, until this year, at Amherst, when, owing to the fact that he was not properly fitted, he had to be content with second place.

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For Potatoes For Grain For Fruit

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Our fertilizers will not cake and will run in the planter.

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¶ There is no woman who likes to wear a style that is so common that everybody else has it. Send to **GOODWINS** and get something different: We will save you money, guarantee you satisfaction and pay Express or Mail charges—both ways if necessary. . . . . .

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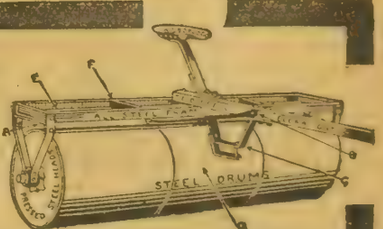
With DRAW BRACKET under the Pole, making the Draught down low.

With the FRAME all of steel and the improved steel plate bottom.



You may be told that other Rollers are like the Bissell—but there is only one original Bissell Roller and to save our customers disappointment, we put our name on every Roller we build. Look for the name "Bissell" and write our Dept. M for catalogue.

Several styles and a variety of widths to choose from, 6 ft. up to 12 ft. Grass Seeder Attachment also furnished if required. 73

T. E. BISSELL CO., LTD., ELORA, ONT.

Operations on the Farm.

Of necessity the farmer has to depend on himself very largely in the treatment of his ailing stock. In the first place he is very often far away from a veterinary surgeon, and telephones are not as yet a part of the equipment of the average farm in this country. If he sends for him the veterinary may be miles away in the opposite direction, and possibly hours may elapse before his arrival on the scene of action. Then the value of many of the individual animals of the farm is small, and would soon be swallowed up in doctor's fees, while the profits of farming are not large, anh thus the desire to avoid expense is natural enough. Indeed, the stockman is often an expert in the treatment of minor ailments, and it may be safely said that a really experienced man who loves his stock and knows their peculiarities is the means of saving them from a good deal of suffering. But—and this the crux of the whole matter—this is only true if he knows his own limitations, and refrains from doing things which he is not qualified to do. Unfortunately, there are many people whose ignorance is only equalled by their self-confidence, and who really take upon themselves operations from which a really good stockman would shrink. There is no means of ascertaining how often cruelty of this description is inflicted upon animals, because in many cases, while the pain may be great, the apparent results are not so noticeable as to attract attention, and it is to the advantage of all concerned to say as little about it as possible. But records of cases that have come to light show that farm animals are not infrequently the victims of inexpert, sometimes of barbarous, treatment, and it is well that it should be made clear that those who are guilty, even if their object was not to be cruel, are liable to punishment. Let us deal with a few examples.

DOCKING.

Whether docking is desirable or not is a matter on which there is a good deal of difference of opinion. It is claimed by some well-known breeders to be necessary in the case of fast carriage horses, but this is disputed by equally competent horse-keepers, who scout the notion that there is any danger to be feared from the retention of the whole of the tail. Yet the opposition to a reform in this matter is so strong that when the Royal Agricultural Society passed a resolution some thirteen years ago tending to the discouragement of the exhibition at its shows of docked horses it was practically forced to rescind it without loss of time. The truth is that docking is "fashionable" and that is the explanation of the continuance of the practice. So was ear-cropping of horses at one time, but it has died out, and we may hope that the same fate will soon befall the practice of clipping the tail.

We hold strongly that, save in exceptional cases, docking is an act of cruelty, and this is not merely on account of the operation itself. It is painful, of course, but when carefully performed the result of the wound is not serious, and it heals quickly enough. The cruelty consists in the result of the operation upon the animal's comfort. It is held to be of advantage to dock foals when young, on the ground that the operation is less painful then, and doubtless it is less painful; but when these are turned out in the summer their sufferings are great. The tail is a natural flywhisk, but when it is cut short the animal is deprived of an essential weapon of defence, and is practically powerless against its tiny enemies. This may seem a small matter—it is not so to the horses, and in fact they show there sufferings in loss of condition; they cannot feed in comfart, they cannot rest, and of course they cannot make the desired progress.

But unfortunately the operation is often not performed carefully. We have heard of such barbarous methods as putting the tail across a block of wood and chopping off a portion! This, we are happy to believe, is an exceptional case, but unskilful hands, dirty instruments, and lack of proper treatment of the wound afterwards often result in sloughing of the joints, and of a good deal of torture to the animal. If docking is to be performed at all—and we repeat that in the vast majority of cases there is no need for it—it ought to be done by some one who knows something of surgery, can make the cut in the proper place and quickly, and knows also how to treat the wound afterwards so that it may heal readily. The result of the sloughing is that the tail has to be cut again, and when eventually healed may be so short that the animal is quite disfigured; while the clumsy wounding may result in poisoning the whole system and perhaps in the death of the animal.

TAILING.

The tailing of lambs is on a different footing, for, singular as the custom may appear to outsiders, there are good good grounds for holding that it is of benefit to the sheep, because when the tail is left the wool on the hind quarters is apt to become dirty and to invite the attentions of the "fly," which often causes torture and even death, so that the animal may in the long run suffer a good

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What does this bare fact mean to you? This:---

Brantford Roofing is *known* to be *practically indestructible*--it's *enduring* qualities recognized by shrewd business men who *must have the best roofing* money will buy: Since it costs no more than ordinary roofing, it is the *safe* roof for you to invest your hard-earned cash in for the purpose of protecting your crops and stock.

Write today for our big FREE book: It contains samples of the best roofing---also facts worth money to you.

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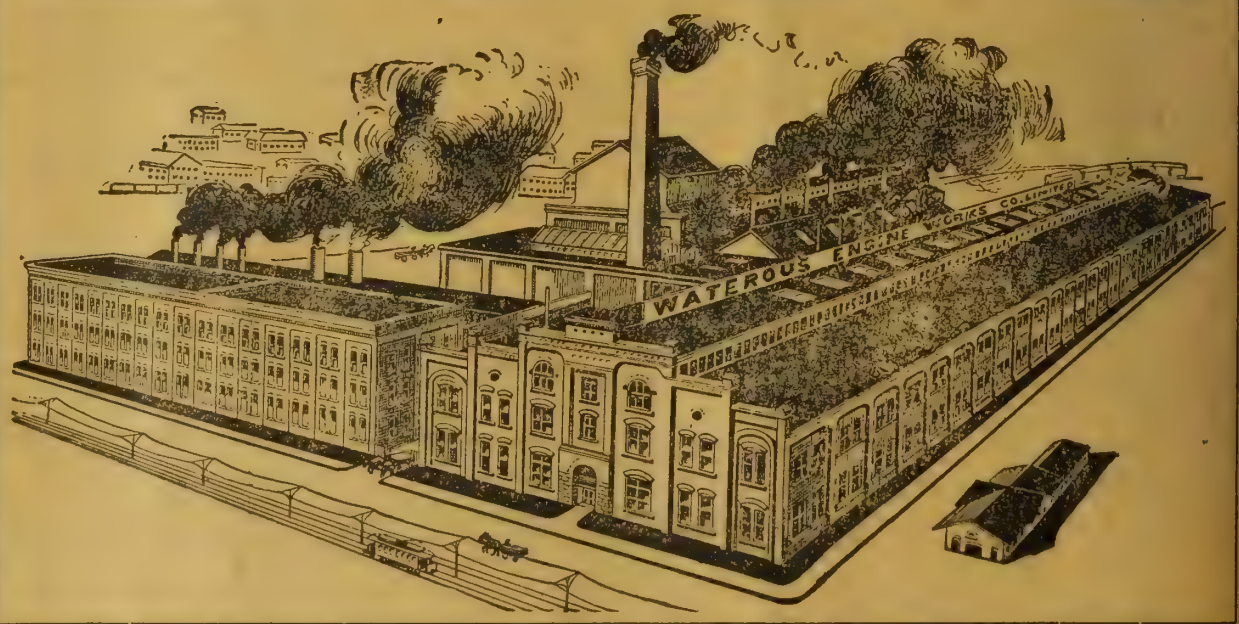

deal more from the presence of the tail than from the sharp cut which removes it. It is a fact that the lamb operated on may generally be seen resuming its feeding as if nothing had happened. But here again the need for clean instruments is imperative, and shepherds would do well to use carbolic disinfectants for their knives, &c., and carbolised oil for the hands in preference to some of the preparations that are so popular owing to the respect paid to a privately owned recipe.

POLL EVIL, FISTULAS AND QUITTOR.

Much of the unnecessary suffering that animals undergo is due to the fact that those in charge of them neglect to get expert advice in time. Take the case of poll evil as an example. This is often due to the low stable entrances which are to be met with. The horse may be able to walk in alright, but some time or other he jerks his head up suddenly and strikes it against the lintel. A lump is caused, and if this is neglected it may develop into a case of poll evil. Or the same result may follow on repeated pressure by a head collar. Now it is of no use whatever poulticing or "dressing" a case of developed poll evil. From the posieion of the injury there is no escape for the "matter" that forms, and if the treatment is not vigorous and prompt it will burrow its way downwards, forming canals or "tubes" until the poor animal is in a pitiable condition. What is wanted in a case of this kind is not the doubtless well meant poultice and ointment but a clean cut with the knife which will lay bare the canals and make an opening for the escape of the pus or matter.

It is work for the surgeon, and it is folly to delay sending for him until the trouble has progressed so greatly as to be come almost impossible to cure it. So difficult indeed are some of the cases that it is safe to say that the average veterinary surgeon would much prefer to be without them. The same thing may be said of fistulous wither and the disease of the coronet called quittor. We have known people dabble about with these things with "dressings" that might just have been applied to the manger for all the good they did to the horse, and in the meantime the trouble has been getting worse and worse and, apart altogether from the prolonged suffering, there is less chance of a cure and the treatment is bound to be prolonged and therefore costly.—The Farmyard Series.

Why Leafy Potato Plants.

The most nutritive part of the potato, the part that gives to the potato its excellent flavor, is the part that contains the greatest number of starch cells. If anyone will cut a potato through the middle he will notice that the potato substance is not homogeneous. Around the outside of the potato, just beneath the skin, is a layer, separated from the inner layers by a vascular sunifibrous partition that is visible on close examination. This outer layer is called the corticel, and contains most of the starch of the potato. The best potatoes have this corticel layer thick instead of thin—that is, have more starch than the others.

The principal chemical element of starch is carbon. The potato plant gets all of its carbon from the air through the leaves, none of it from the soil. The leaves have the power to dissociate the carbon from the car, bon dioxide in the air, and store much of this carbon in the tuber. The larger the leaf capacity and vigor, the more carbon it will be possible for the plant to utilize from the air. If the leaf growth is scanty, or if it is injured and lessened by either insects or disease, the less carbon will the plant be able to take from the air and store in the tuber. This is the reason why a liberal leaf growth in the plant is necessary in order to produce the highest quality in the tuber. It is also the reason why ever grower should protect his plantfrom the ravages of insects.

IHC Wagons Are As Good As They Look

TO really know the value of a wagon you must know of what material it is made, how it is built and about how many years of satisfactory wagon service you may expect. When you know all there is to know about I H C wagons it is safe to say that your next wagon will bear the I H C trademark—the stamp of quality and honest value.

Every piece of wood used in I H C wagons is carefully selected and air-dried. Only in air-dried lumber does wood retain its full strength and elasticity. All steel or iron is selected with the same care to secure the greatest possible strength. Thorough knowledge of the strain each part must stand is necessary because a wagon, like a chain, is no stronger than its weakest part. Every part of I H C wagons

Petrolia Chatham

has the same relative strength. The men who build I H C wagons know why one part is built stronger than another, know the exact strain it will have to bear. This same thorough knowledge has enabled them to build a wagon of light draft, which puts the least strain on the horses, without impairing the strength or durability of the wagon.

The finishing touch, the thing that adds to the life and appearance of an I H C wagon, is pure paint. Cheap paint may improve the appearance of a wagon for a short time, but after that is a positive detriment. Only pure paint is used on I H C wagons. It fills the pores of the wood, prevents shrinking, swelling, warping and twisting, and acts as a wood preservative.

There are many other reasons why I H C wagons are such good wagons, why owners say they are the best and most satisfactory. Have the I H C local agent show you an I H C wagon, or, if you prefer, write the nearest branch house for catalogues.

International Harvester Company of Canada, Ltd

EASTERN BRANCH HOUSES
At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa; Ont.; St. John, N. B.; Quebec, P. Q.
Built at Chatham and Petrolia, Ont.

This label has no "second grade"

THERE'S only one quality of Canada Cement. It is the highest quality that can possibly be made with modern equipment, scientific methods and rigid inspection by expert chemists.

The Canada Cement you buy for a garden walk is the same cement that is sold by the trainload for great dams, elevators and bridges. The engineers in charge of these great works have ample facilities for testing the quality of cement.

Canada Cement

comes up to their most rigid requirements.

The farmer has not these facilities for testing the quality of cement. He must buy a product upon which he can depend for a grade that is *always of highest quality*, and that therefore does not *need* to be tested.

You can place absolute reliance upon the quality of Canada Cement.

It's always the same and always the best. The large output—which enables us to *keep the price down*, enables us also to maintain the factory equipment and organization that *keeps the quality up*.

A Canada Cement label appears on every bag and barrel of genuine Canada Cement. See that it's on the bags and barrels of cement that you buy.

WRITE for our free book "What the Farmer Can Do With Concrete." It has told a hundred thousand Canadian farmers of the money-saving and profit-making possibilities of concrete.

Address Farmers' Information Department—

Canada Cement Company Limited, - Montreal

There is a Canada Cement dealer in your neighbourhood.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—One registered Holstein bull, 2 years old. JOHN A. HUGHES, Petitcodiac, N.B.

FOR SALE—Pure bred Shorthorn bulls, all ages. GUY DIXON, Point de Bute, N. B.

100 POST CARDS, assorted, postpaid, 35c. Good quality. Dealers wanted. FARMER EMPORIUM, Beebe, Que.

FOR SALE—Four Ayrshire bulls, five to eleven months old from good producing stock. JOHN F. FROST, Hampton, N. B.

FOR SALE.—Two pure bred Holstein Bull Calves. Right milking stock. Apply to A. W. MORROW, North Lake, P. E. I.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

MY BARRED PLYMOUTH ROCKS are bred to lay. Extra large. Narrow Barred. True Rock Shape. Eggs for hatching, $2.00 for 15. C. CAREY, Yarmouth, N. S.

FOR SALE.—One pure bred Shorthorn bull, eighteen months old, color red, good size. Apply to C. H. RIPLEY, Rossendale, Cum. Co., N S.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R. J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

VALLEY FARM HOLSTEINS FOR SALE.—1 Bull, dropped in October, 1912; 1 Bull Calf, dropped in March, 1913.—W. G. CAMPBELL, Salisbury, N. B.

WANTED—To purchase a dog to run tread power for cream separator, must weigh 85 pounds or more and under two years old. PERLEY S. STEEVES, Weldon, Albert County.

FOR SALE—One acre—Two story house, wood shed, barn, &c. attached. Water in house. Near churches, school, store, boating, bathing and fishing. Also 60 acre wood lot, 3-4 mile from village. GEORGE WELLING, Baie Verte, N. B.

LIVE AGENTS WANTED for high grade Household Specialties. Large profits easily made. Particulars free. Sample 35c.—THE ELDOR NOVELTY CO., Box 146, Westmount, Que.

WANTED—The name and address of the party who mailed Postal Note No. H. 998512 at Moncton, N. B., on March 15th, so we may give proper credit for same.—THE MARITIME FARMER, Sussex, N. B.

ENGINES for all purposes such as pumping water, spraying, wood sawing, motor boats, etc. Cut out the drudgery and let the engines do the work.—GUARANTEE MOTOR CO., 371 Bay N, Hamilton, Ont.

EGGS FOR HATCHING. One Dollar per setting. Single Comb Brown Leghorns, White Wyandottes and Houdans. See our win at Amherst in Christmas issue. WOLFVILLE POULTRY YARDS, Wolfville, Nova Scotia.

GUERNSEY BULLS FOR SALE—We have on hand 1 bull 2 years old in May, 2 bulls 14 months also 1 ten months. All good quality stock and from good dams and sires. We must sell to make room for young stock and will sell right. Come and see them or write us. WILLIAM COX & SON, Canard, Kings Co., N. S.

Reduced Prices of Eggs

For the months of June, July and August only we will sell White Wyandotte, Columbian Wyandotte and S. C. White Leghorn eggs at $1.25 per 15; $3 for 50; $5 for 100. For Light Brahma eggs $2 for 15; $3 for 30. Address,

Michael K. Boyer, Box 27,
Atlantic Co., New Jersey.

Breeding Season 1913

The fashionably bred, prize-winning Clydesdale stallion, "Dunure Crag" will stand at stud and meet mares by appointment.

"Dunure Crag" is bred on the right lines, and will prove a very popular breeder, he is sired by the renowned "Baron of Buchlyvie."

For further particulars and terms apply to

J. MEIKLEJOHN, Cossar Farm,
Lower Gagetown, N. B.

Farmer Ads. will Bring Results.

P. E. Island Crop and Live Stock Conditions.

HAY—Clover has saved fairly well throughout the Island, except in some of the hillier parts and in Western Prince, where it has been badly killed. There is no scarcity of hay in any part of the Province, but there is very little for sale, the market price depending entirely upon the quality. In King's County correspondents report the prospects for pasture to be poor, resulting from the dry weather of two years ago. The outlook is for a better than average hay crop.

WHEAT—The usual amount of ground is being prepared for wheat. White Russian seems to be the favorite variety in all parts of the Province, with White Fyfe a close second. About West Devon and Coleman quite a lot of Colorado Bearded is grown. White Chaff is regarded with favor about Bedeque and Freetown. Neither Blue Stem nor Marques seem to be increasing in popularity. Imported wheat is not as generally used as formerly.

OATS—About 164,000 acres are annually seeded to oats. In some sections banner is grown almost exclusively, and in others Old Island Black. It is worthy of notice that the districts in which all kinds of oats are being raised report the lowest price for seed oats, averaging 40c, while those districts in which Old Island Black is reported to be the chief variety give an average price of 50c a bushel for seed, and the Banner oats districts an average price of 60c. Old Island Black predominates in Western Prince and in Eastern King's. Banner in Eastern Prince and in certain districts scattered through Queen's and King's Counties. It is also noticeable that in a few districts which use imported seed oats, the prices quoted are not among the best. Correspondents report a large amount for sale still in the hands of the farmers.

BARLEY—Very little barley is grown in this Province, except as a mixture with oats and peas. Six-rowed barley is becoming more common than formerly, quite a lot of No 21 O. A. C. will be sown this year in Prince Caunty.

POTATOES—There are a good many potatoes yet for sale in all parts of the Province. The demand is very small and the prices reported vary from 15c to 25c per bushel, being better in King's and Southern Queen's than elsewhere. MacIntyres are the popular variety in Prinre County, Dakota Reds in King's and Southern Queen's, while in the remainders of Queen's several varieties claim equal attention. Green Mountains are not growing in popularity.

TURNIPS—Turnips kept particularly well through the winter. The number of silos is not increasing.

LIVE STOCK CONDITIONS.

Live Stock—All clasees of live stock have come through the winter in good condition.

In some sections winter dairying is on the increse, but in others it is declining. The same is true of the quality of milch cows. One correspondent says: "There can be no improvement in the quality of the cattle till they are better fed and cared for." Pigs are very scarce and are bringing about eight dollars a pair for feeding at four weeks of age.

The following are the market prices May 10th, 1913:—

Oats (white)	38 to 40
Oats (black)	40 to 42
Pork	11½
Straw (per ton)	$5.50 to $6.50
Potatoes (per bushel)	20 to 22
Hay (per ton)	$12 to $15
Beef (quarter)	7 to 10
Butter	30 to 32
Eggs (per dozen)	17 to 18
Turnips (per bushel)	15

Calf Should Be Raised in Barn

(Continued from page 611)

age the calves consume very little, if any, grass. The ideal way is to have the calves born in September and October. The first few months of a calf's life it requires considerable personal attention, and during the winter months especially there is more time to devote to the stock than in the busy summer months. When spring comes, the calf is six or seven months old and can be turned to pasture to advantage; it is past the period when it needs very much close attention. If the grass is good, and plenty of water supplied, the calf will largely look after itself.

Get a Start Cheap!

Six Sicilian Buttercups eggs, four Turkeys eggs, (Bronze), five of my best Single Comb Rhode Red eggs, $2.00 for the fifteen.

Four handsome pairs of Sicilian Buttercups $5.00 A pair

Sicilian Buttercups generally agreed among those who breed them to be the best layers known $3.00 for 15 eggs.

Bronze Turkeys eggs $3.00 for eleven.

Single Comb Rhode Island Reds good birds in every way, and splendid to hatch and rear turkeys $2.00 for 15 eggs.

I have plenty of all these eggs I can supply any number. Order straight from this adv. and save time.

Terms, Cash with order.

SARAH E. MOSES SMITH,
Woodward's Cove, N. B.

A pen of Indian Runner Ducks three females, one male $5.00

OCULUM

For Roup, Canker, Cholera and White Diarrhoea.
Greatest Poultry Tonic on Earth
Sent prepaid for $1.00 per bottle.

GEO. H. SEAMAN, Moncton, N. B.,
Sales Agent for Occulum

Molascuit Meal

The best and most economical of the Molasses Feedstuffs.

Made in the British Colony of Demerara--the pure product of the Sugar Cane.

A very small quantity per day will keep your Horses, Cattle, and all Live stock in good condition. It will pay you to feed it to them.

If your dealer does not stock it, kindly write for prices and full particulars.

Agents in Maritime Provinces

BAULD BROS., Ltd., Halifax, N. S. — A. C. SMITH, St. John, N. B.
CARVELL BROS., Charlottetown, P.E.I. — WEST INDIA CO. Ltd. Montreal

Holstein Bulls For Sale

We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
Loch Lomond West — Nova Scotia

HEREFORD STOCK FARM

Let us know how much money you want to invest in Hereford bulls, heifers, or cows with calf by her side or bred to "Prime Lad".

Buff Orpingtons and White Wyandottes, good laying and Utility strains, eggs $1.50 per 13.

R. R. BLACK, Amherst, N. S.

CORNING TURNIP SEED FOR SALE

About 1000 lbs. of the famous Gr. Top "Corning" Turnip Seed, crop 1912, grown from selected roots. Price 50c., postpaid 55c.

S. P. GOUDEY, Yarmouth, N. S.

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

C. C. H. EATON,
Canard, N. S.

Raspberry Plants!

Wishing to remove all Raspberry stock from ground they now occupy, we are making the following low prices for April: King (early), $1.25 per 100. The celebrated "Herbert," $2.00 per 100. Hiram, $1.00 per 100. Cuthbert, $1.25 per 100. Eaton (new), $1.50 per 100. Any variety mailed, postpaid, 50c per doz.

Orchard Hill Farm,
Brown's Flats, N. B

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm, Shubenacadie, N.B.

Elmshade Jerseys

Bulls from six to twenty mos. Sired by College Fox whose dam made a record of 678 lbs. butter in one year.

Horse 7 yrs. old, weight 1200 lbs., good driver and good worker, would make a good express horse.

J. R. SEMPLE, Brule, N. S.

Cattle and Sheep Labels

Size	Price doz.	Fifty tags
Cattle	75c	$2.00
Light cattle	60c	1.50
Sheep or Hog	40c	1.00

No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample mailed free.

F. G. JAMES, Bowmanville, Ont.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire attle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

Stewart Bros., Alliston, P. E. I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown. N. S.
Wm. A, Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.

Shropshires

C' A. Archibald, Truro, N. S.

POULTRY.

Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

Springbrook Ayrshires!

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

SPRINGVALE FARM AYRSHIRES

Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd.
Young Stock For Sale.

FRED S. BLACK, Amherst, N. S.

"HILLSIDE STOCK FARM"

We have for sale at right prices four Ayrshire bulls from twelve to fifteen mos. old. They are sired by the champion bull of 1911; a son of the renowned Scotch champion "Spicy Sam."

Prescott Blanchard, Truro, N. S.

Lawndale Stock Farm Shorthorns

We offer at present a few young heifers and bulls, as well as three cows, all bred in the purple.

Information cheerfully supplied to enquirers, Address,
I. M. LOVITT, M. D., P. O. Box 352, Yarmouth, N. S

Sea View Stock Farm

offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

Sgd. J. D. IRVING,
Buctouche, N. B.

ROSE BANK FARM

Jerseys & Yorkshires For Sale

Bull calves by Foxhalls St. John O'Dreamwold, and young pigs, both sexes, ready to ship in April.

JOSSELYN & YOUNG, Silver Falls, St. John, N.B.

FOR SALE!

A few choice White Leghorn Cockerels from prize stock. Eggs for hatching all breeds. Send for catalogue.

Maritime Poultry Supply Co.
MONCTON, N. B.

NORTHERN GROWN TREES

Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery —no agents. Send list of your wants for prices, etc.

E. L COLPITTS
Petitcodiac, New Brunswick

FOR SALE

We have a number of choice cockerels and pullets of Barred Plymouth Rock, White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Eggs for hatching $1.00 per setling. Apply to

Walter McMonagle & Sons, Sussex Corner, N. B.

Pure Bred Ayrshire Bull Calf

Dropped Jan. 12th, 1913. Bred from a daughter of Barcheskie Kings Own. Come and see him and his dam. Stables near the station.

ALLANDALE FARM, - Hampton, N. B.

Commercial Strawberry Plants

FOR SALE

Senator Dunlap—Perfect blossom, very vigorous, good size, good quality, very productive. $3.50 per 1000 f. o. b.
Sample—Imperfect blossom, very large, very productive, fair quality. $4 00 per 100 f. o. b.
Cash must accompany order.

L. D. ROBINSON,
Berwick, N. S.

EGGS FOR HATCHING

From prize mating Rose and Single Comb R. I. Reds and Buff Orpingtons and S. C. Brown Leghorns. Eggs $2.00 per 15. Send for mating list.

W. H. HENRY, Shubenacadie, N. S.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.
DR. BELL, V. S.
Kingston, Ont.

Fullline of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

SHORTHORN CATTLE

To avoid inbreeding am obliged to offer my splendid, dark red, imported stock bull for sale. Bred by The Right Hon. Earl of Moray, Doune, Scotland, is of the low down kind and represents the best quality and families of this breed in Scotland. His color alone is worth his price to anyone wanting a head for a herd.

J. E. Hetherington,
Codys, N. B.

BARRED ROCKS

(Exclusively.)

Never beaten out in 15 years of competition. Now holders of Silver Cup for Best Birds at Amherst Fair, 1912. Offering eggs from six pens—every bird an exhibition specimen. Prices cheertully given on application. A few colonies of Bees for sale.

CRAIG BROS., Amherst, N. S.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

DROP A CARD

KINGSDALE MATING LIST
Our mating list is now ready for 1913.

KINGSDALE POULTRY SUPPLY CATALOG
Fully illustrated 60 pages all up to date.

EVERYTHING FOR THE POULTRY KEEPER

KINGSDALE POULTRY & SUPPLY CO., SUSSEX, NEW BRUNSWICK

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

AYRSHIRE BULLS FOR SALE

I am offering a two-year-old bull for sale. He is out of the famous cow White Heather of St. Annes. I have also two other choice bulls that are fit for service. Correspondence solicited.

J. FRANK ROACH, - - Sussex, N. B.

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

YOUNG HOLSTEIN BULLS!

We have lots of them, all ages, from one to six months. Show Calves from our best cows. Now is the time to get your choice. Females all ages, bred for the fall shows and dairy tests. Some excellent high grades fresh or springing. Also Three Draft Fillies rising two, three and four, and a quantity of Seed Potatoes.

LEA & CLARK, VICTORIA, P. E. I.

Rockview Farm, Welsford, N.B.

(Wm. S. Harding, Jr., Proprietor)

High Class Holstein Cattle. Young stock bred from heavy producing and showing ancestry for sale.

Cobequid Farm Holsteins

Present offering. One fine bull fit for service and several bull calves three or four months old, sired by Helbon Dehols Prince, and from cows that are producers. Among them one whose two nearest dams average over 26 lbs. butter in 7 days. For particulars and prices write

Samuel Dickie & Son, Central Onslow, Col. Co. N.S.

BELLEVIEW STOCK FARM

Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

C. A. ARCHIBALD, - Truro, N. S.

HOMESTEAD FARM

Holstein-Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

LOGAN BROS.
R. R. I.
Amherst, N. S.
Long distance 'Phone

JOHN RICHARDS,

Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand. Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

The "BURLINGTON" English Model. This shows the most popular style of suit worn by well-dressed men in England.

PRICE $12.50

Duty Free and Carriage Paid.

Sign The Coupon

and we'll send you 72 pattern pieces of the finest English Suitings you ever saw

With the patterns will come our 1913 Style Book and a letter telling you all about our successful system of made-to-measure tailoring for Canadians.

We guarantee to prove to you that we can save you from 33 p. c. to 50 p. c. on the purchase of any suit. All you need to do is to sign the coupon and get the patterns and "be shown."

So confident are we that you will be satisfied with the value of our suitings, that we suggest you make this test: When you receive patterns, pick out the one you like best, take it to your local tailor, Say to him:—"What will you charge to make me a first class tailored suit of that quality of material?" Then compare his price with the one we ask, and act on your own judgment. That's fair, isn't it? Mail the coupon now, before you forget it.

CATESBYS Limited

Dept. 14.

119 West Wellington St., Toronto
Coronation Bldg., Montreal.
160 Princess Street, Winnipeg.
Or to CATESBYS LTD., Tottenham Court Road, London, England

Catesbys save you the four middlemen's profits that your local tailor has to pay before he even gets the cloth.

Your suit is shipped five days after your order is received in London. We guarantee perfect satisfaction in every particular and detail of the transaction. The price inclndes the payment of all duty and carriage charges by us.

MESSRS CATESBYS LIMITED,
119 West Wellington Street, Toronto

Gentlemen—Please send me your 1913 Style Book and 72 pattern pieces of cloth. I am thinking of buying a suit.

Full Name.....

Full Address.....

.....

Dept. Maritime Farmer.

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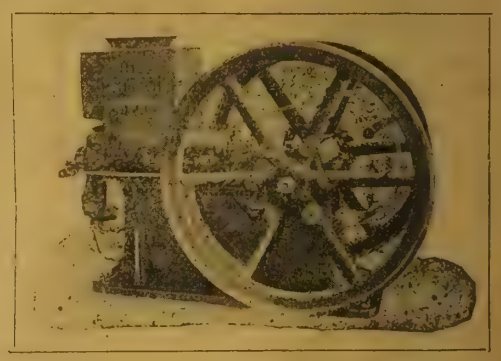
Plan Now to Own This Summer Our "Monarch" Engine --The Very Best Value Money Can Buy.



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The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

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Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 18. SUSSEX, N. B., JUNE 10, 1913 No. 17

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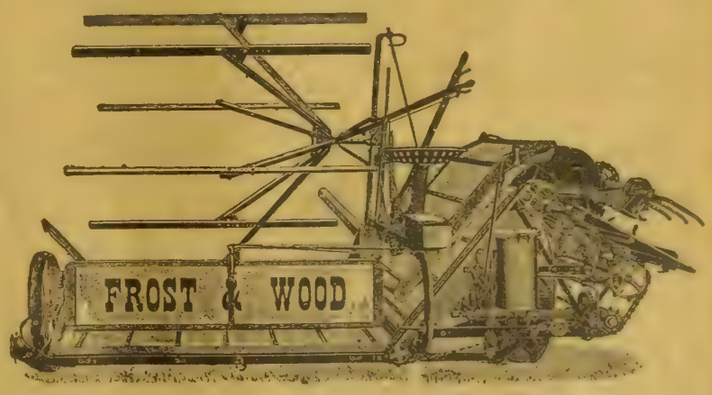

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A *pure* Manitoba wheat flour—FIVE ROSES.
And the healthy sun-ripened spring wheat berries are *naturally* of a *golden* glow.
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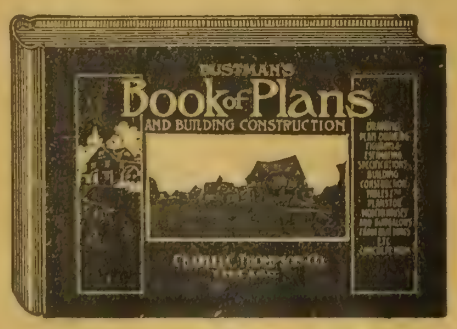

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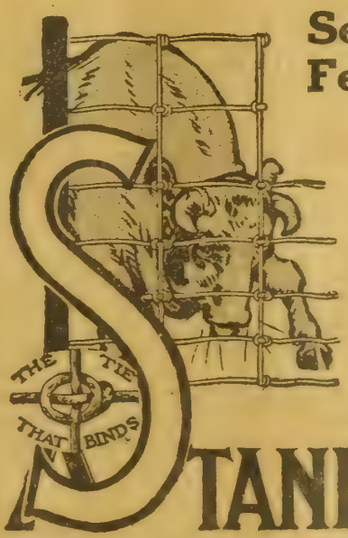

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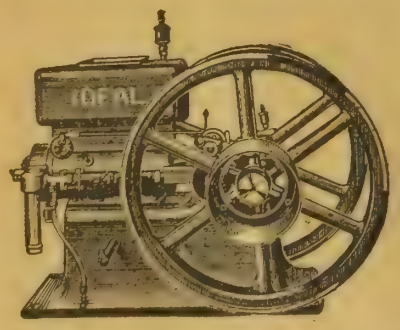

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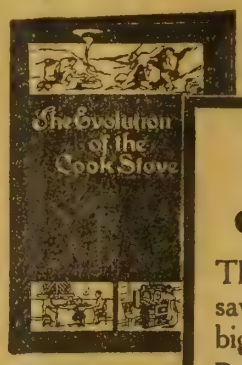

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Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 18. SUSSEX, NEW BRUNSWICK, JUNE 10, 1913. Number 17.

Proved Value of Spraying Potatoes

Six Applications of Bordeaux Increase Crop 125 Per Cent--Economical Methods of Making Spray Mixtures.

By Daniel Dean of Tioga County New York.

THE fact is patent to all our readers that blight and insect pests tend to very materially reduce the potato growers' profits. The leaves are what may be called the stomach of the plant and when the stomach gets impaired the whole system is thrown out of alignment.

Stripped of their leaves by bugs and blight the potato plant cannot thrive and thus only attains a minimum growth.

The following thoughts from the columns of the New England Homestead is well worthy of the thoughtful consideration of every potato grower in the Maritime Provinces.

"Last year spraying was even more profitable than usual in this vicinity. Frequent and heavy rains in July, August and September made conditions favorable for severe attacks of late blight, which rotted over 50 per cent. of the local crop. A neighbor spraying six times with bordeaux increased the yield from 152 bushels an acre on the unsprayed check rows to a yield of 334 bushels an acre where sprayed, a gain from spraying of 182 bushels an acre. I sprayed 14 times and know that the extra spraying paid me. The sprayed stock was salable at 7 cents a bushel more than the unsprayed, because of freedom from rot. The trouble of careful sorting at digging time was saved, and storage made much safer. I always begin to spray very early. It is often hard to find the first blighted leaves, because they are usually next to the ground.

IMPORTANCE OF HAVING POWER SPRAYER.

Spraying is so profitable that horse power sprayers should be used on all but small areas. A good sprayer should have a pump powerful enough to develop at least 125 pounds pressure while covering several rows so thoroughly that every leaf will be covered at each application. The pump should be as simply constructed as possible, preferably with single-acting, outside-packed cylinders.

The pump must be made of brass where exposed to bordeaux, as that quickly rusts iron. While more costly it may pay to have the spray boom and other piping also of brass. Rubber piping deteriorates so quickly that I never use it except a single length between pump and spray boom to permit quick movement. A large air chamber makes even pressure and makes the pump wear longer. I am particular to have the whole machine strongly built and of good material, to stand the strain of pumping.

Last year, 1912, I had profit enough from spraying each one of my 18 acres to buy a first-class traction sprayer. Where the tops are large enough nearly to meet in the rows, the sprayer wheels may cause great injury by crushing them. This can be prevented by an arrangement to draw them out of the way of the wheels. I have a home-made top protector made of a 2x4 scantling. It reaches across and under the foot of the machine. Four old hayrake teeth are fastened to it, one just inside and one outside each wheel and just touching the ground. A lever lifts the teeth off the ground for turning at the ends of the rows and for traveling. Experiment will tell just how far ahead of the wheels the rakes should work.

Time is money in the spraying season. It can be saved by a convenient apparatus for making the bordeaux. Much depends on the water supply; if from a well a small gasoline pumping engine saves labor and the cost is small, as the engine can be used for many other purposes about the farm and in the house. An elevated platform with a mixing tank of larger capacity than the tank on the sprayer, a smaller tank or barrel half the capacity of the first and two barrels with wooden hoops makes the arrangement, I have found, very efficient and economical.

METHOD OF MAKING SPRAY MIXTURE.

Here is my method of making: One barrel has, say, 40 gallons of water, measured into it at night, and 80 pounds of blue vitriol in a bag suspended at the top of the water. Thi will dissolve by morning, and when stirred will give a solution of two pounds blue vitriol to the gallon. Fresh stone lime, the lumps only, is slaked in the other barrel. If kept covered with water, it will keep its strength all summer.

For a 100-gallon tank sprayer 50 gallons of water is pumped into the mixing tank, six gallons of the blue vitriol solution added and thoroughly stirred. For the first one or two sprayings some experiment stations advise using only two-thirds as much blue vitriol. Thirty or 40 gallons of water is pumped into the second tank which is elevated above the first, and about 12 pounds of lime stock added and well stirred. The lime solution is then added to the blue vitriol solution and well mixed at the same time. The more diluted the solutions when mixed the better and more adhesive the bordeaux.

After mixing I test with a solution of ferrocyanide of potassium, which may be had at any drug store. Ten cents' worth can be dissolved in an oil can of water and left ready to test with a few drops. If a brown color shows where the test solution strikes the bordeaux, I add more lime, stir up and test again till no color appears. If not enough lime is used, the tops of the plants may be injured. On the other hand, too great an excess of lime makes a mixture which does not stick nearly so well to the foliage as when just enough lime is used to neutralize the blue vitriol.

For late potatoes, I spray with bordeaux every year, beginning when the plants are 6 inches high, again at least every 10 days till danger of blight is past and always just before rain if possible. No one should be satisfied with any sprayer that will not cover every leaf of large vines at each application. Spraying costs just as much for a poor crop as for a good one, so I use good seed of the right variety for my soil, fertilize well and keep free from weeds. The largest gains an acre from spraying come from the best crops.

In my section of Western New York potatoes are subject to the attack of many diseases which, without spraying, often make the crop unprofitable. For instance, last year. In its wild state the potato blossomed before setting tubers. Now, under cultivation both processes overlap, usually at a time of great heat. This is the critical period in the life of the crop. With main crop potatoes in my locality it is when various forms of blight and sun scald are most active.

BORDEAUX REDUCES INSECT ATTACK.

I have found that insects are much less troublesome where bordeaux is used. Paris green is much more efficient when applied with bordeaux than where applied in other ways. It sticks much better and is evenly distributed over the leaves by the bordeaux. Also there is no danger of burning the foliage. I apply from four to eight ounces an acre just as the slugs of the beetle are hatching. Then the slugs are easily killed.

When I use paris green, I always make a stiff paste of it with a little water in a pail, then dilute to three or four gallons and put into the sprayer in proper quantities. I am always careful to mix it just before using, as it settles quickly. Arsenate of lead may replace paris-green where bordeaux is not used. It is more expensive and less efficient, but is safe to use alone.

In western New York the little black flea beetles do great damage during dry seasons by making many small holes in the leaves. Bordeaux greatly reduces the damage done by them. Hot, dry weather, particularly following a wet period, may also cause the leaves wholly or partly to die. This tip-burn or sun scald is often mistaken for blight. It is not helped directly by spraying, but spraying increases the vigor of the plant.

Fusarium disease hurts the tops by destroying the roots. Spraying helps it indirectly. Late blight and rot is the most destructive potato disease we have. It does most damage in northeastern states from Maine to Wisconsin, although in wet seasons it may spread farther south and west. I have found it the easiest one to control when spraying is well done. To do this several conditions must be observed. In the first place the disease passes the winter in the tubers. I select the seed from a crop which has been free from the disease the year before, and better for several years.

When the soil is full of water from rains the disease germs multiply on the seed tuber and then rise in the water to the surface of the soil. As the plants have been beaten to the ground by storms the germs attack the leaves and easily multiply very fast if the weather is damp and cloudy. As the leaves are destroyed new crops of germs are constantly found on the under sides covering that part of the leaves with a gray fuzzy growth. These spores or germs are spread by the wind and beating rains and may sometimes destroy the whole fields in a few days. After the potatoes are formed in the hill, the germs may fall from the leaves to the ground and rot the tubers. This is especially likely to happen if the fall is wet.

HOW FUNGICIDE ACTS.

The action of bordeaux on blight depends on the fact that the germs of blight are easily killed by a solution of copper, even if very weak. Bordeaux is a solution of copper sulphate in water, with just enough lime to keep the copper from burning the foliage. When sprayed on the potato

plants the water evaporates, leaving the solid parts on the plant.

Perfect protection against the late blight demands that all the foliage be covered with bordeaux all the time through the blight season from July to October. As late potatoes are growing rapidly growers cannot keep the tops always covered, but can spray often enough and thoroughly enough to make the amount of damage very small.

Blight reduces the crop in two ways, by killing the tops and by rotting the potatoes. The germs fall from the leaves to the ground and when that is wet penetrate down to the tubers. I always spray potatoes in blight years till the tops are all gone. Often potatoes growers stop spraying late in the season because most of the tops are dead. Last year two neighbors stopped spraying after two and six sprayings respectively. Heavy rains followed for several weeks. The one lost half his field, the other probably 5 per cent. In a very wet fall I believe it may pay to spray the ground when only a few plants are yet living; this may be made very effective."

The Importance of Keeping Accounts on the Farm.

Farming as a business will never be placed on a satisfactory basis until the farmer keeps a system of accounts to show whether he is gaining or losing by his method of management. We believe we are right in saying that a very large proportion of farmers keep no system of accounts at all; as a result they do not know whether they are gaining or losing in the year's operations. It may be that they are making a good profit in one line, and losing in another, but they are unable to know the sources of the gains and losses without some system of keeping accounts. Some farmers will tell us that they have no need for keeping accounts so long as they are making money, but this attitude is unbusinesslike. It is probable that if their management were put to the test it would be found that they are carrying on some operations at a loss, or that they could make more money by changing the emphasis on certain crops in the rotation. The cow-testing Association has shown many a farmer to his great surprise that he was keeping cows that did not pay for their feed. In a similar manner keeping accounts would open the eyes of many a surprised farmer to the fact that he was growing crops that did not pay for the work put upon them.

The keeping of farm accounts does not require much time or much education. The simpler the accounts are the better, at first, but as experience is gained and more information is desired the system will gradually become more complex from year to year.

The first thing to do is to make an "inventory" of all the property, the cash, the debts, and all outstanding accounts, so as to arrive at the exact condition of the business at a certain fixed time of the year. The complete list of all the animals, machinery, etc., should be made in a book, kept for the purpose, and the actual value of each put down. (See Chart 1.) This stock-taking would require a few days perhaps but it is usually done at the beginning of the year when other work is not pressing.

Next, it is necessary to keep a detailed account of all receipts and expenditures. As many of the items will be of a cash nature a "Cash Account" should be opened (See Chart 2). If these are notes these should be recorded in a "Notes Account (See Chart 3). At the end of the year when the inventory is taken these accounts are balanced,

1913
Jan. 1. INVENTORY BOOK

Horses	
Bill	.....
Fanny	....
Tom	.....
Jerry	.....
Cattle	
Jim	.....
Spot	.....
Kate	.....
Sue	.....
Etc.	
Sheep	
Swine	
Poultry	
Machinery	
Binder	.....
Mower	.....
Rake	.....
Tedder	.....
Wagons	.....
Sleighs	.....
Cutter	.....
Buggy	.....
Etc.	
Tools	
Household Equipment	
Furniture	.....
Piano	.....
Pictures	.....
Sewing Machine	....
Stove	.....
Etc.	
Clothing	
Etc.	

CHART 1.—HOW AN INVENTORY BOOK MAY BE KEPT.

and the "Financial Statement" made out, to show the gain for the year. It may be put down like this:

Jan. 1. 1912 Total Inventory	$8250.00
Jan. 1 1913 "	9050.00
Net profit for 1912	$800.00

But the foregoing does not show the sources of the profits, hence some thing more is necessary. Separate accounts should be kept of every field on the farm; these may be called "Field or Crop Accounts." The field or crop is charged with all the labor manure, seed, etc., put upon it, and credited with the proceeds. A good plan, and one suggested by Mr. Fixter while Superintendent of the Macdonald College Farm, is to rule an account book after the accompanying chart 4, reserving two or three pages for each field; and at the end of the year to make a statement thus:

(1) BARLEY CROP—FIELD OF 23 ACRES.

Cost of Production—	
Rent of land at $4.00 per acre	$92.00
Manure, 1-3 of portion used in rotation at $6 per acre	138.00
Plowing, 16 1-2 days at $3.00	49.50
Harrowing and discing, 4 days at $3.00	12.00
Seed, 40 bushels at 75c	30.00
Sowing, 2 4-10 days at $3.00 per day	7.20
Rolling, 1 5-10 days at $3.00 per day	4.50
Reaping, 6 days at $3.00 per day	18.00
Twine, 80 1-2 lbs. at 11c	8.85
Shocking, etc., 14 days at $1.50 per day	21.00
Horse raking, 4 days at $2.25 per day	9.00
Drawing, 7 6-10 days at $3.00 per day	$2.10
Loading, unloading, 13 days at $1.50	19.50
Use of farm machinery, 30c per acre	6.90
Gathering stone, 2 days at $2.25	4.50
	$444.05
Yield of Barley per acre—46 bus. 13 lbs.	
Yield of Straw per acre—1 ton 1650 lbs.	
Allowing $3.00 per ton for the straw —$126, the grain cost nearly 30c. per bushel.	

(2) OAT CROP— FIELD OF 40 ACRES.

Cost of Production—	
Rent of land at $4.00 per acre	$160.00
Manure, 1-3 of rotation, at $6.00 per acre	240.00
Plowing, 31 2-10 days at $3.00 per day	93.60
Harrowing and discing, 24 1-2 days, at $3.00	73.50
Seed, 80 bushels at 75c	60.00
Sowing, 3 9-10 days at $3.00 per day	11.70
Reaping and mowing, 11 1-2 days at $3.00 per day	34.50
Shocking, etc., 22 days at $1.50	33.00
Drawing, 10 6-10 days at $3.00	31.80
Loading, unloading, 16 8-10 days at $1.50	25.20
Horse raking, 4 days at $2.25	9.00
Twine, 140 lbs at 11c.	15.40
	$787.70
Yield per acre—56 bushels 17 lbs.	
Yield per acre straw—1 ton 1809 lbs.	
Allowing $3.00 per ton for straw, 76 tons—$228.00, the grain cost 24 3-4c. per bushel.	

But some will say that these details demand too much labor on the part of the average farmer. In reality very little time is required if the items are jotted down every evening in an account book. Occasionally it may require the services of a teacher or a book-keeper to sum up all the details in a financial statement where the owner carries on several enterprises and is anxious to locate the sources of the profits.

One of the most valuable features in keeping farm accounts is the revelation they give of the amount of money spent on farm machinery, buggies, sleighs, etc., every year. Here is where the profits of the farm are often wasted, and here is where good management is clearly exhibited by the cutting down of unnecessary expenditures.

Moreover, the keeping of farm accounts enables the farmer to determine the most profitable crop out of a group of competing crops in a rotation. A most important feature of good management is to plant crops which bring the largest money returns and that require the most advantageous use of labor. For example, since horses and help must be maintained, it is not economical to plant crops requiring the labor or horses and men for only a portion of the season. The largest returns will, as a rule, be secured from those enterprises that require labor at different seasons of the year.

Successful farming demands the keeping of accounts just as much as any other successful business but, as we have already stated, very few farmers make any kind of an effort in this direction. It is becoming recognized more and more that the information gained by the farmer in keeping accounts is most valuable, and in some sections of the United States, a book-keeper or accountant is employed by a group of farmers in a district. Moreover, some of the colleges of agriculture in co-operation with the U. S. Department of Agriculture at Washington are helping farmers to keep their books. And so the movement is growing. It is hoped that it will spread to the farmers of the Maritime Provinces.

NOTES ACCOUNT

1912			Receivable		Payable	
Jan.	15	Sold steer to John Jones —note at 3 mos.	50	00		
Feb.	20	Bought wagon from Murphy Bros., note at 6 mos.			100	00
		Etc.				

CHART 3.—A SIMPLE BILL OR NOTES BOOK FOR KEEPING TRACK OF ALL NOTES.

CASH ACCOUNT

1912			Income		Outgo	
Jan.	2	10 bags Potatoes	12	00		
"	10	Set of Harness			20	00
Feb.	3	1 Suit Clothes			15	00
"	3	Milk Cheque	75	60		
		Etc.				

CHART 2.—A SIMPLE CASH BOOK FOR KEEPING ONE INFORMED AS TO THE AMOUNT OF CASH ON HAND.

Improvement of the Dairy Herd.

(The following paper on "Herd Improvement" was read by Mr. Walter M. Lea, of Victoria, before the recent meeting of the P. E. I. Provincial Dairymen's Association.

Mr. Lea is one of the most successful and enterprising dairyman on the Island. His herd supplied the greatest amount of fat and butter per cow in that province for the year ending June 1st, 1911. In this contest he had to count every cow that was milked even for a month, consequently he had to average on 16 cows, whilst he only milked 11 for the year the others being heifers of a few months, or cows that were sold.

The cow testing records, show the following:

For greatest amount of fat per cow furnished a creamery during the year ending June 1st, 1911.

1st. Walter M. Lea, number of cows 16, lbs. fat delivered 4293, estimated lbs. butter 5010, avreage per cow 313⅛ lbs.

The above is only for the amount of fat sold per cow and gives no credit for the amount of fat fed 12 calves, used at home, and lost during the five weeks absence of a large number of cows, following the different shows.

During the year ending December 31st 1911, when the year in the cow testing association ended, Mr. Lea's herd averaged 9113 lbs. milk per cow for the 11 cows which completed the full year.)

HERD IMPROVEMENT.

Within the last few years the cow testing associations have been doing good work for the dairy in Canada, by endeavoring to awaken farmers to the necessity of learning the producing abilities of the different members of their herds. This is certainly the first step in herd improvement and is of inestimable value to the industry but we must not stop here for when we cull out an unprofitable cow, we must see that a better one takes her place.

Breeding from pure bred dairy sires whose ancestors are heavy producing stuck, and properly raising and growing the calves, is good advice easily given, but when we consider the conditions under which the majority of calves are now raised we fear improvement will be very slow.

We learn so much about the unprofitable cow, the boarder, or robber cow, that is seems has been for ages secretly, and sometimes in disguise robbing the industrious dairyman, that I fear many cows will be condemned before a fair trail is given them, to decide whether it is their or their owner's fault that their production has not been satisfactory.

And while I commend the yearly testing of dairy herds and the keeping of milk and fat records I think them of little value for comparison excepting to their owners, for the reason that, taking any one year, some cows in a herd are almost sure to have a more favorable season than others, slight accidents especially at calving, the season of the year they happen to freshen, condition of flesh at starting, and many minor hindrances will make a remarkable difference in the returns per cow shown on the sheet, that is known only to the owner of the herd, and I often wonder at the deductions drawn, by dairy instructors from the record sheets between the different members of the herd with the supposition, that each cow was on equal footing.

Now, I have been keeping herd records for the last seven years, and will continue to do so as long as I breed cattle for dairy purposes as the knowledge thereby gained, is such that I simply cannot afford to quit.

Besides the benefit of knowing just how much milk and fat each cow has produced, we can by weighing at once detect the effect of changes of feed, changes of temperature, lack of any care, and how each cow is satisfied with her milker, etc., so that we are enabled to help correct many otherwise secret hindrances, before any serious loss occurs.

Milk records also increase the value of a cow and her offspring, if we offer them for sale, and I consider those who drop cow testing after one season, with the idea that now they know their cows, are making a great mistake, for this I have invariably found that we never yet in one single instance came across a cow that had been "properly raised and grown from calfhood" that did not exceed the 6,000 pound limit, and in every instance, where a thin cow was put in good condition before again freshening that her "per cent fat" as well as milk flow was greatly improved.

So if we would have better cows we must pay more attention to the raising of the young heifers.

So much has been said and written on this subject, that it seems wearisome to take it up in this article, but when we see the conditions of the calves of this Province in general we must conclude, that either our farmers don't believe it pays to grow them properly, or simply to appear to have yet learned how. Every farmer knows, or should know that the younger the animal the cheaper the growth, that a milking two-year-old heifer will pay many times the extra cost of her feed (if properly fed) over her three-year-old freshening sister and will be a better cow for all time.

Why then do we have so many heifers with first calf at three years old? Is it because we don't believe it pays to grow them faster, or are we still following the old system of feeding only the producing cows?

Now, while I consider dairying the most profitable line of live stock husbandry for our fathers to engage in, we must admit, that to lay the foundation for a good dairy herd, we must invest considerable capital, such as feed, in the young stock, and it is not by any means a line of the least resistance in farming and requires considerable intelligence and skill to make it a success.

And to the man who has been accustomed to marketing considerable of his farm products in their raw condition, to turn at once to properly feeding his dairy cows, and at the same time "grow the young things better," it will strike him as taking an alarming lot of feed.

Here is where the most of the trouble comes in, to see a lot of good saleable hay, grain and roots go into calves and yearlings, (that could be cashed at once) with only the hope that some day he will be able to realize profits on his investment, requires more faith and patience than most farmers possess, added to this (even where the faith is strong and intentions good,) when milk is furnished cheese factories from spring calved cows, it is impossible to properly grow a calf without an almost prohibitive amount of whole milk.

With the patrons of a cream gathering creamery it is altogether different, and where winter dairying is carried on, and an easy matter to any one of experience, and valuable grade herds can be raised at a moderate cost.

It is quite evident that a few dairymen have yet realized, that not only is a well raised herd of grade cows much more valuable for their owner's business, but a splendid market is open to him who would raise surplus condition," bring all the way from $50 to $100, in and around our Maritime towns, we sold some eighteen head of fresh grade cows last season and could not nearly supply the demand, having enquiries from as far as Medicine Hat, Alberta, and as a sample of what can be accomplished in herd improvement by breeding, feeding, etc., I will instance one case that I know the particulars of.

Just ten years ago a farmer in our vicinity started breeding his common cows to our pure bred bull, and has persistently followed this up from year to year, always using the best pure sire, and keeping all the heifer calves, growing the young stuff properly as well as the producing cows, improving the quality as well as increasing the number, until at the end of ten years he has a high grade herd that closely resembles the pure breds in appearance and production, and are a pleasure as well as a profit to their owner.

This past season I paid him $475 for seven head of grade heifers and cows for the Nova Scotia milkmen, and it's needless to add that as this man regularly weighs and tests his milk, that while I got good cows ("he has no other kind now") I didn't get the pick of the herd. These were only his "yearly surplus," and I wish to emphasize, that it is easily possible to breed up a high class herd at a moderate cost. Don't envy the owner of some record-making cow and think her kind beyond your reach a son of her's or her like will, sire on your common cows, heifers that if properly fed and developed, may crowd her close, only be certain that when you do select a sire for your herd, that he is from a real good dairy cow. Remember that all records for yearly or weekly work are made by clever men who by their knowledge of the business can make a very creditable record from a pretty ordinary cow.

But when you do get the opportunity to purchase or secure the service of a high class sire, you must expect to pay a fair price for him. I don't think there is any line of improvement in live stock husbandry equal to the value to be obtained by the use of a "good dairy sire." When we consider that in a pure bred bull we have handed down to us the result of the skill and labour of intelligent men for hundreds of years, and at the price usually obtained for a sire of merit I consider this a remarkably cheap method of obtaining high class cows.

The wonder is why with the Government assistance given institutes, that every cow in the province is not bred to one, and as an example of what improvement is possible with even the first cross let me instance one case. A twenty-eight dollar ($28) scrub cow (as she was bought for) was bred to our pure bred sire, and at an Auction Sale we bought in the yearling heifer from this mating. She freshened at 26 months and proved a most profitable cow, giving in one season 11,000 lbs. milk and 532 lbs. estimated butter, we afterwards sold her for $100. She cost her breeder $1.00 and myself probably $15 or $20 more than a scrub grown one would have cost. She was sold for $100 or about $75 more than had she been sired by a scrub bull, and was fed "scrub" feed.

Now I have endeavored to point out the direct financial gain to be had through intelligently and persistently following up cow feeding, testing and breeding.

Another point I would draw your attention to is that as we breed from strongly constitutioned animals as most of the good ones of necessity are, and keep them in strong growing condition we suffer much less from sickness and loss of stock. The old saying that farmers must be losers is not altogether true. How many calves do you imagine after consuming considerable new milk fail to reach one year old? I think a sufficient sum is yearly lost to keep a pure bred sire within the reach of all.

Nor is this all. A well kept high grade herd is a valuable asset to the farmer in their attractive appearance. There is no man, woman or child but takes pride in stock, that draw the attention of every passer by. They are a pleasure to handle and the sort of property that can be disposed of at a good figure, at any season of the year. But in passing through the country when cattle are on pasture, it is hard to find a herd, that show by their conformation and markings, that they are all of the one breed or grade.

Now for the patron of a cream gathering Creamery, there is no good excuse for not always raising good calves every year.

We have not only never lost one since starting the cream gathering system, but have always grown them to their limit. We lately slaughtered one grade at a year and three months that dressed 448 pounds baby beef. This was only an average calf, some grow much larger.

With patrons of a cheese factory however, who have all the cows freshen in the spring, it must be a very difficult matter, as there is to my knowledge no "good substitute" for skim milk, and as the cheese factories open about the time the great majority of cows calve in the spring there is always a temptation to cut the calves very soon off milk, for the milk in them is capital invested in the business, while milk at the cheese factory can be cashed at once. This is the reason why our dairy cows are not improving faster, and why dairying is often thought not to pay; the young heifers are neither well enough bred, fed nor cared for.

However, this condition of affairs can be easily improved with little cost, and were I a patron of a cheese factory, I would have at least a few cows freshen in February. This would give the calves four months of milk before the cheese factory opened, then if I could not induce the company to put in a plant to manufacture the butter, (and the other patrons to do the same) churn it at home, as we must and can only improve dairy conditions through the young stock, and cannot afford to neglect the raising of the calves.

If properly fed, cows calving at this season will milk fully better than those indifferently cared for through the summer until the end of

(Continued on page 655)

1912 RANGE 1—FIELD 2—1912.

Date	Drawing Manure	Spreading Manure	Plowing	Disk-Harrowing	Harrowing	Sowing	Rolling	Cultivating	Gathering Stones	Draining	Stumping	Weeding	Hoeing	Spraying	Reaping	Shocking	Drawing	Threshing	Etc.
Jan 2	T	n																	
Apr 8	10	10																	
" 10			10																
" 14			4																
" 15				5	5					5									
May 1						5													
Aug 3							5								8	8	5		
Sep 2																		$5	
Total Cost																			

CHART 4—SHOWING HOW THE ITEMS OF FIELD OR CROP ACCOUNTS ARE KEPT.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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JUNE 10, 1913.

DATES OF ISSUE.

June 10-24
July 8-22

ORGANIZING A FARM

To some men a farm is merely a rude, rough, abiding spot for them and their family a few years, till they can move to another of like character, or till they die. There is no other ideal in their mind and there is no other outcome of their hands. To others, a farm is a center around which group large possibilities. It is a place for the building of a home from which radiates light and warmth for all the better elements of worthy character. It is a place for the exercise of a noble affection for wife, children, animals, orchard, fields and all. Children born in such a home carry with them all their lives the fondest of recollections and the impulse of a finer manhood.

If we look over such a farm, and there are thousands of them, we will find in every instance that here lives a man who has the power to organize forces for their best expression. Such a man lives a rich life, even though it may not bring him public acclaim and recognition. His children, his buildings, his animals, even, his crops, "rise up to call him blessed" and he is blessed. There is no sense of the favor of Heaven and the respect of men that can compare with it.

The man who can thus organize a complete farm home, one that becomes an inspiration to himself and all men who behold it, is always mated to a woman of like character and purpose. Here is seen, as no where else on earth, the fruitage of a complete union.

The careers of other men, the lawyer, the doctor, the merchant, or the banker shows no such results of united effort, no such contribution of woman to man, and of both to a beautiful expression in life. There is no picture so powerful in its appeal to the human heart as the picture of a complete farm and farm home. There is no spot on earth where so much can be done that will bring lasting satisfaction to the souls of men, for so little expense, as on the farm.

Every word we have said is true, absolutely true. Why then do we see so few of such homes? Why do we find so many men who look with sordid eyes upon this noblest of opportunities for human living? Why is it that so many farmers look upon the farm home as a prison pen, a place of toil, suffering and privation, a place to get away from, both for their children and themselves, as soon as opportunity will permit, a place where the least money possible shall be expended in the way of good architecture, flowers, trees and those adornments they would gladly lavish on some home in a village or city?

Everywhere we find in the minds of such men a lack of ambition and pride for their farm and home, a looking forward to the hope of disposing of it and ending their days elsewhere. It does not seem to occur to them that here is a fit place for the finest thought, ambition and purpose. Here is a place where they can demonstrate to the world that they have the ability to organize to the highest perfection in art, in beauty of surroundings, in financial profit, as proportioned to capital. Rich men from the cities vainly seek to do this by a wasteful expenditure of money on costly buildings, but it is as empty of perfect expression as the furebelows of a milliner in place of a true woman. The crying necessity of Maritime agriculture today is not more land. It is not for a chance to emigrate somewhere else, but it is for men who will put more thought more conscience, more patriotism, more pride, more taste, in short, more brains into this pursuit called farming.

MACHINERY VERSUS HAND LABOR

In the minds of many intelligent people there is an unreasoning prejudice against the use of "labor saving machines." The history of obstructive policies adopted by mill operatives and other skilled laborers during the past two hundred years in their blind efforts to stop the introduction of certain types of machines would make a good story, but too long for these columns. The cotton spinning laborers fought the introduction of the loom and the jenny with strike and the torch. Shoe making machines were as bitterly opposed by thousands who were led to believe that the shoe makers would all soon be out of work. It did not work out so in any of these cases. So many of the southern farm people who have dreaded the invention of cotton-picking and cotton-chopping machines will find that in due course, when these things have come about, the machines will prove blessings to mankind and especially to the class it would, at first sight, appear to compete with.

Labor saving machinery is as useful as the burden bearing horse which takes the place in our civilization of the human pack carriers of the less civilized countries. Like the railroad, the telegraph, and telephone they are calculated to save human labor, drudgery, human time and soul-killing efforts by permitting the education and upbuilding of the mental and moral natures through devoting a large part of our time to the use of uplifting agencies.

The sowing of grains which formerly required 10 hours and 35 minutes by hand, can now be accomplished in 32.7 minutes by machinery; harvesting and threshing, which required 46 hours and 40 minutes by hand can now be done in one hour by machinery. The mowing machine performs in one hour and six minutes what a man with a scythe formerly could accomplish in 7 hours and 20 minutes. Potato planters will now plant as many potatoes in one hour and 25 minutes as formerly required 15 hours to accomplish by hand.

Who is benefited by farm machinery? First, the user, second, the consumer, and finally all of those associating and trading with these first beneficaries. How shall the time thus "saved" to the human family by labor-saving devices in all the walks of life be employed? By increasing production? Yes, and by wisely devoting a part of that time to educating and training the producer to a right use of the increased blessing by which he is now surrounded. How shall we increase the influences for mental instruction and moral development? By devoting time and energy daily to these matters while not neglecting the material or business routine of our lives. Farm machinery may thus prove the means of leading us to higher planes of thought and daily living.

THE DUST MULCH

If one turns over a board or scraps away some straw lying upon the ground, the ground is seen to be moist while the surrounding exposed ground may be dry. If one scatters straw upon dry grodnd, it will be found in a few days that the dry ground has become moist. The upper few inches of surface will be seen to have accumulated moisture. This moisture would have been given up to the air and thus lost to the soil had not the straw been applied. A layer of dry soil acts in the same way when applied to land. It is plain that this layer of dry soil can be applied to the land from the land itself, by the use of suitable machinery. The dirt mulch can be applied with but little cost and because of this, it saves the moisture so well, it becomes of incalculable value to farming. After a heavy rain, one observes the soil in the garden or in the root field to be packed and hard; by running over the ground with a cultivator, the packed soil is broken and a mulch is established. The formation of the mulch prevents in great measure the loss of moisture. The loss of moisture is prevented by the stoppage of the capillary movement of water. It would be much the same if one were to cut off a lamp wick and fasten the two cut ends by wires. Oil would not pass from one part of the cut wick to another. Forming a mulch on land does not entirely prevent the loss of moisture but the moisture saved may amount to 50 per cent or even more.

There are several conditions that affect the dirt mulch. The deeper soil mulch is the more effective but the deep soil mulch is more expensive to make and the deeper the mulch the more fertile soil there is lost for the plants. A soil mulch becomes poorer with age and so it may have to be renewed occasionally. This is especially true if the rain should come. Dirt mulches can be better made when the soil is moist.

THE CANADA THISTLE

A prominent weed pest which farmers should exert an effort to exterminate as soon as it makes its appearance in the fields is the Canada thistle. This weed is unlike any other that grows and is easily found by its extremely prickly surface. It spreads at the base and is a cumberer of the ground as soon as it makes its appearance. A full grown plant will often cover a ground space of eighteen to thirty inches in diameter, which it completely controls, there being no animal, except the mule, that attempts to feed on it foliage, and this is only when the thistle is young and tender. The thistle usually acquires its growth, throws out its seed top, blossoms and prepares for spreading its seeds in the latter part of July and first of August. In the month of August the harvest is completed and the ripened seeds are sent broadcast over the country in a little tuft of cotton-like fibre.

The only successful warfare that can be waged against the Canada thistle is the hoe in the hands of the interested land owner or the attentive hired hand. The thistle may be cut with a sharp hoe before it has acquired much growth and thus destroyed, or it may be cut later with a briar or weed cythe, close to the ground, any time before the seed top is formed and thus completely destroy the chances of growth.

This variety of thistle is not a hard thing to destroy or keep in check, when a little attention is given at the proper time. It inclines to grow in pastures and meadows, in tame grass lands, in waste places about the farm. It is not a plant that proves troublesome in cultivated fields. The sharp hoe in the hands of the attentive boy or hired hand during odd hours in the month of June will keep the Canada thistle from proving a serious annoyance.

EDITORIAL

Almost every dairy farmer who commences to weigh and sample his cows' milk individually says at the end of a few months "I find some in my herd were kept at a loss." Some men find only one or two cows, others state that they have found too many in the herd play a losing game.

What does this mean? Just this: that despite all the exuerience gained from years of practical dairying, the farmer finds that in order to become thoroughly 'practical' he must requisition the aid of dairy records. Neither the cow's appearance, nor the owners knowledge of some short-period yield of milk (extraordinary as that yield may have been for a day, or one week, or a month) will testify with certainty to each individual cow's ability eo pay her way for the whole year. Cow testing provides a simple and eminently practical way of discovering, not only if each cow pays, but which cow pays the most profit on the twelve months' transaction of feed consumed, and milk and fat produced. Those large profit cows are revealed only by practical cow testing.

Cows are apt to cheat the unsuspecting dairyman unless he keeps tabs on the performance of each one; many dairymen have found this out to their utter astonishment and regret. Don't take chances with your herd, be certain that each cow pays; it pays you to find out. Individual cow records help the practical farmer to build up a profitable herd.

Raising Green Ducklings.

In his book entitled "Poultry Truths," Stephen B. Twinging, proprietor of the Afton Farm at Yardley, Pennsylvania, says, according to an exchange:

A man can go into the duck business on a much larger scale than he can any other branch of the poultry business, i. e., he can depend more on hired help. There is not near the amount of fine labor in duck raising as in chicken, guinea or turkey growing. Freedom from disease also makes it possible to have larger duck farms than chicken farms. Successful large duck plants are the rule, while successful large chicken farms are the exception.

In starting a duck farm it is important to have sandy or well-drained soil. Water in the right place is good, but remember the day of the puddle duck is past. To get the price today your ducks must be raised under sanitary conditions and ducklings so raised show the benefit of such treatment. Too great care cannot be used in the selection of breeders. Get stock with long, low hanging keel, with large heads and thick necks. Heavy legs of a rich, reddish orange shade. Watch the eyes. They should be of good, wide, deep leaden-blue in color and have a firmness. Weakness in the vitality will show up as quickly in a duck's eyes as anywhere. Watch out for weak, watery eyes. Ducks hatched the first two weeks of May are considered to make the best breeders. On Afton Farm they are grown the same as the market ducks up until eight weeks of age. They are then selected and put into lots covered with good sod and having a stream of clear water running through them. They are now fed twice daily a moist mash of equal parts bran, cornmeal and middlings, with eight per cent. of beef scraps added. Here they are allowed to play in the water, roam over and eat the grass and enjoy light feeds till about the middle of November, at which time they are again sorted and put into the laying quarters. (Any birds not up to expectations are dressed for market. Better have less breeders than breed from any inferior birds.)

In feeding for eggs thay are given one part bran, one part low grade flour, one part whole corn, two parts whole wheat, two pares cornmeal, four parts cut clover hay, 12 per cent. beef scrap, sand, grit and oyster shells, all they will eat; mix with water till crumbly. The mixture is by bulk measurement.

This is the main food for getting eggs. However, no set formula will get the very best results. Vary according to conditions. Use more middlings if bowels are very loose, less if too tight. Vary the corn according to the weather, as corn is heatening. Amount of cornmeal should be regulated so as not to keep breeders too fat or too thin. Meat scraps affect the fertility; if you are getting a lot of rotten eggs you are using too much scrap and make the birds averous. The clover hay affects size of eggs, also, to an extent, the yield.

Early may hatched breeders should drop their first eggs by Thanksgiving, and be right down to business by Christmas. They should now lay heavy until June 1, when they will start to drop off in egg yield, and be practically through by the first of August. A good strain of Imperial Pekin ducks, with proper care, will yield about 150 eggs in eight months, then they will lay off for four and get busy again. During these four months they should be on a grass range, with plenty of clear water and light food. It is best for them, and the cost of maintainance during the inactive season is normal.

Ducks lay between four and eight in the morning. The eggs should be promptly gathered at eight, lest some get broken as they lay on the floor.

Lightly wash the eggs but do not rub them unless very dirty. Put them on trays and set as soon as you get a machine full. Duck eggs on Afton Farm are set daily and better results are secured than when set every four days.

It is the common opinion that ducks are hard to hatch and easy to raise. Mr. Twining runs his machines at 102 degrees the first two weeks, 102½ third week and 103 the last week of the hatch, when it reaches 104 or 105. Eggs are turned once a day till first test (seventh day), then twice daily till they pip. He then places all the pips up and closes the machine until the hatch is over. A three-sixty hen egg machine will accommodate two-eighty-eight duck eggs, and if you average 150 good ducklings per hatch throughout the season you are doing well.

After the egg shells are removed the ducklings are left in the machine until thoroughly dry. They are then taken to the duck nursery, where there are pens 12x4 with brooders 4x2. Overhead hot water heat is used. Pens are heavily bedded with straw. Temperature of brooders is ninety and it is endeavored to maintain absolutely even heat. There is water and coarse sand put before the ducklings right away and is left there till night, when they are fastened close to the brooder. They get their first food the next morning, which is Pratt's Patent No. 5, which, though an expensive food, they find well worth using. They are fed on this food five times a day for four days then gradually weaned onto a mash of (by bulk): six parts bran, two parts cornmeal, two parts middlings, one part low grade flour, five parts cut greens, 10 per cent. beef scrap, sand, grit and oyster shell, all they will eat up clean. They are fed this until eight weeks of age, when they are gradually changed to the fattening food, consisting of four parts cornmeal, two parts low grade flour, one part bran, 12 per cent. beef scrap; add a little cut greens to make it tasty, also sand, shell and grit for the digestion.

Many feed good food but fail to provide proper grinders to digest it. The cut greens are either lawn clippings, cut green clover, corn fodder, dwarf Essex rape or wheat.

At ten weeks they are in the best condition to kill. If they have been carefully fed and attended to they will average ten pounds to the pair or over. Now if they are properly prepared for market they will command a price that makes production profitable.

The breeding ducks have a stream of clear water to bathe in. It is not essential, but it gives better fertility. When the drakes are forced to tread on land they ofttimes slip and rotten eggs or dead germs result. Ducklings raised for market have water only to drink, and every precaution is taken to keep them out of it. A muddy or dirty duck will not thrive. Keep the pens as clean as possible. Feed the best and purest of foods, and be extremely careful not to have any sour food lying around, and keep their water absolutely pure and fresh.

Many succeed is raising a good duck only to spoil it by carelessness in preparing it for market. At Afton Farm they dry pick. Dry picked ducks bring a cent per pound more than scalded ducks. This is five cents per duck. The cost of picking dry is two cents per head over scalding. Thus there is a gain of three cents per head or six hundred dollars per year. Is it worth while?

The ducks to be killed are put six each in rows of pens 18 inches square. The picker comes to the pen, grabs a duck, sticks it in the throat and knocks it over the head with a club. The bird is thoroughly dead and the feathers loose. An expert picker will kill the bird instantly. This will leave the muscles that hold the feathers lax. When a bird dies slowly the muscles tighten and hold the feathers vise-like. As the picker walks to his seat he pulls out the tail feathers and throws them into a box provided. He sits down to his work, brushing most of the feathers off. He wets his hand in a basin of water and by experience knows just how and where to touch the duck to push the feathers off without damaging the flesh. Of course there are some he has to pull out and the pins and down he shaves off with a keen edged shoe-makers knife. The wing feathers are left on beyond the first joint and the neck is only picked about an inch from the body. The pickers pick fifty ducklings a day and do it right. They get six cents per duck. The feathers are carefully saved and about half pay for the picking.

After the picker has finished his duck he puts it into a tank of running artesian well water. Here they are left until an hour after the pickers have finished for the day, when they are counted out, head and feet washed and put into a tank of ice water. Here they remain until the next afternoon, at which time they are thoroughly chilled through and can be shipped on long journeys with little ice and arrive in good condition. Many make the mistake of cooling too rapidly. If you plunge a duck just killed into ice water it makes the surface suddenly very cold and the bird seems cold throughout. It is then rushed off to market, but arrives soft and flabby and sometimes slippery. You blame the commission man for not getting your full price when you shipped him the goods so they arrived in an inferior condition. Let's straighten ourselves out before we start on the commission man. We have found them as honest a lot of men as poultrymen are.

Have sandy or well drained land, comfortable houses, good vigorous breeders; feed plain, wholesome food; give them plenty of clear water to drink; keep their quarters clean and sanitary, attending to your duties at the right time, and you will find the duck business an excellent investment for your money.

The Feeding of Roots.

There are few foods for animals regarding which we find such a conflict of opinion as we do in the case of roots. Chemical anylysis shows about 90 per cent. of water in our leading root crops, and this fact is variously interpreted by those interested in feeding animals. Some claim that the water in roots is of no more value than the water in animal drinks, and that feeding roots is an expensive method of watering animals while others claim that the water in roots is different from ordinary water, and has an actual feeding value. As a rule, truth lies midway between extremes, and the present paper is an attempt to present a rational view of the question. Experiment stations have done considerable work with roots, and their findings are of importance in arriving at conclusions regarding the feeding value of roots.

In the first place, it may be noted that the Maine, Pennsylvania, Ohio, and Ontario Experiment Stations compared the yield of dry matter per acre from roots and corn. Maine obtained 3,415 lbs. of dry matter an acre from Swede turnips, and 5, 580 lbs. from fodder corn. Pennsylvania obtained 4,554 lbs. of dry matter an acre from mangels, and 6,763 lbs. an acre from corn; Ohio, 3,000 lbs. dry matter an acre from mangels, and 6,-080 lbs. from corn; and Ontario, 5,-034 lbs. dry matter from mangels, and 8,135 lbs. from corn. So far as yield of dry matter per acre is concerned it will be noted that corn shows a marked advantage over turnips and mangels. By dry matter is meant what is left after all the moisture of the product has been driven off by heat.

The Ohio Pennsylvania and Vermont Stations compared the dry matter of corn, silage and roots for milk production. The following table taken from "Feeds and Feeding," shows results from these trials:

MILK FROM 100 LBS. OF DRY MATTER IN CORN SILAGE AND ROOT RATIONS

Station	Root ration	Silage ration
Ohio, 1889	59 lbs.	62 lbs.
Ohio, 1890	59 "	60 "
Ohio, 1891	62 "	66 "
Ohio, 1892	69 "	76 "
Pennsylvania	87 "	82 "
Vermont	113 "	119 "

From the above table it will be seen that in every case but one, the dry matter in the rations containing silage proved more effective in the production of milk than in the dry matter in the rations containing roots. It is difficult to explain why such should be the case, unless the dry matter in the silage rations were underestimated. At the Central Experimental Farm turnips proved more expensive and not much more effective than corn silage for milk.

The Cornell Station found that one pound of dry matter in mangels is slightly superior to one pound of dry matter in corn silage. Also that one pound of dry matter in mangels is equal to one pound of dry matter in grain, and that mangels may replace half the grain ordinarily fed in a ration composed of grain, mixed hay and silage.

At the Copenhagen Station, very extensive trials go to show that one pound of concentrates in the form of grain, bran and oil cake is equal to 10 pounds of mangels. Also, that for cows, 1 lb. dry matter in roots is equal in feeding value to one pound of Indian corn, mixed grains, or three-quarters of a pound of cotton-seed meal. It was also shown that the water content of the milk was not increased by the liberal feeding of roots.

The results of tests quoted above are not exactly uniform, yet they all point to one thing, namely, that for dairy cows, the dry matter of roots is not materially different in feeding value from the dry matter in other foods.

At the Ontario Agricultural College roots have been fed in comparison with corn silage for fattening steers, and in all cases the roots did not make so good a showing, pound for pound, as silage. In one series of tests, silage showed 25 per cent. higher value a ton than roots, and in other tests the difference in favor of silage was greater.

A review of British methods of steer feeding shows a very heavy use of roots, as high as 150 lbs. per steer a day in some cases, accompanied by a comparatively light meal ration. The relatively low cost of labor in Britain and the high price of concentrated foods renders it advisable for the British farmers to use roots as a substitute for a large portion of the meal ration. In this country, such a practice would not be the most economical, more especially because we can raise corn for silage better than they can in Britain, and corn silage has been shown to be a cheaper food for fattening steers.

(Continued on page 655)

HORTICULTURE.

Executive of Hillcrest Orchards, Limited 1913-14.

The annual meeting of Hillcrest Orchards Ltd., was held at Middleton on Thursday, May 8th at which the following directors were appointed for the coming year:

Ralph S. Eaton, Kentville, N. S., President and Managing Director.

S. B. Chute, Berwick, N. S., Vice-President.

Mr. Chute is manager of the United Fruit Companies of Nova Scotia, and one of the largest individual growers in the province.

R. J. Messenger, Lawrencetown, N. S., Secretary-Treasurer.

Mr. Messenger is a graduate of Dalhousie University, was President of the Nova Scotia Fruit Growers' Association, 1911, Chairman of delegation to Second Dominion Fruit Conference at Ottawa, 1912, Lecturer at Short Courses Agricultural College, Truro, Farmers' Institute Speaker, and a large fruit grower.

E. E. Archibald, Wolfville, N. S.

Mr. Archibald is a Silver Medalist Royal Horticultutal Show, London, for boxed apples, and one of the most scientific fruit growers in the valley. He was President N. S. Fruit Growers' Association 1910.

Herbert Stairs, Wolfville, N. S.

Mr, Stairs is one of the largest fruit growers and one of the best known and most conscientious business men in the valley.

Mr. J. Rufus Starr, Starr's Point, N. S.

Mr. Starr was manager of Nova Scotia Horticultural Experiment Station, Kentville, 1911, has been a judge of fruit and stock at several county exhibitions, and has large orchard interests in Kings County, and is Ex-President of the N. S. Farmers' Association.

Captain F. A. Brown, Middleton, N. S.

Mr. Brown is President of South Far ington Fruit Company of Annapolis County, and has some forty acres of orchards of his own besides being interested in several other local enterprises.

In spite of it being the worst season for fruit in the valley since 1896 Hillcrest was able to clear up 4 per cent. profits on its year's business. When we consider that the apple trees average only 17 to 18 years of age and the profits of the last two years above all current expenses were 7½ per cent and 4 per cent as above, the shareholders may judge of the probable dividends in the near future.

Cutworms.

Cutworms are the most generally destructive garden caterpillars. There are many different species, but they look much alike and are similar in habit. They are most destructive in spring and early summer. Cutworms are naturally grass-feeding insects. The parent moths are the familiar "millers" that fly about lights at night. In early autumn these millers lay eggs among grass stems, and the eggs soon hatch into grayish or brownish worms, that eat the leaves of grasses and clovers. They feed for a few weeks before cold weather comes. By this time, they are, perhaps, half grown. Now they find such shelter as they can at the soil surface and remain through the winter.

In spring they come hungarily back to life and attack the grasses and clovers greedily. They continue to eat for several weeks. Then they are full-grown, smooth-bodied worms, an inch or more long, and are ready to change to the pupa state.

So the cutworms burrow into the soil a short distance, generally an inch or less. Here each wriggles around to form an oval cell. Then it casts off its larval skin and changes to a brown pupa. About two weeks later the pupa wriggles into the soil surface, the brown skin splits open, and the moth comes forth. This moth is like the "miller" that laid the eggs in grass land so many months before.

This is the life history when the cutworm remains in the grass land throughout its life as a larva. But very often the grass is plowed under in fall or spring and there are no grasses or clovers for the hungry larvae in spring. They must eat or starve, and so they wander around over the bare soil until they come to some garden plants, young peas or corn or cabbages. They attack the stems of these and cut them off with their sharp jaws, swallowing the green tissues greedily. After the plants have fallen they may eat part of them, although they seldom eat them completely.

In case the grass ground where the cutworms have been feeding is next to a garden or field, the insects often wander over the latter in search of food. Small gardens surrounded by grasslands are especially liable to cutworm injury. In setting out tomatoes, cabbages or other vegetables in such gardens it is generally worth while to tie a bit of pasteboard 2 or 3 inches high about each stem. This serves as a collar that prevents cutworm injury

COMBATING IN A LARGE WAY.

In fields liable to injury by cutworms the poisoned bait treatment is effective. The bait is made by mixing ¼ pound sugar or a small quantity of cheap molasses with about a pound of bran. Stir these up in a gallon of water to make a rather thick mash. Now stir in an ounce or two of arsenate of lead or paris green, mixing the poison thoroughly with the bran.

This bait should be scattered in little piles, about a heaping tablespoonful, over the harrowed field. If placed on immediately after planting to corn it will be likely to do much good by killing the worms before the corn is attacked.

Another effective bait to use in the field is made by spraying freshly cut clover with poison or dipping bunches of the leafy stems in a mixture of arsenate of lead and water. Such leaves scattered over the field after harrowing will be eaten by the cutworms. I find this very effective.

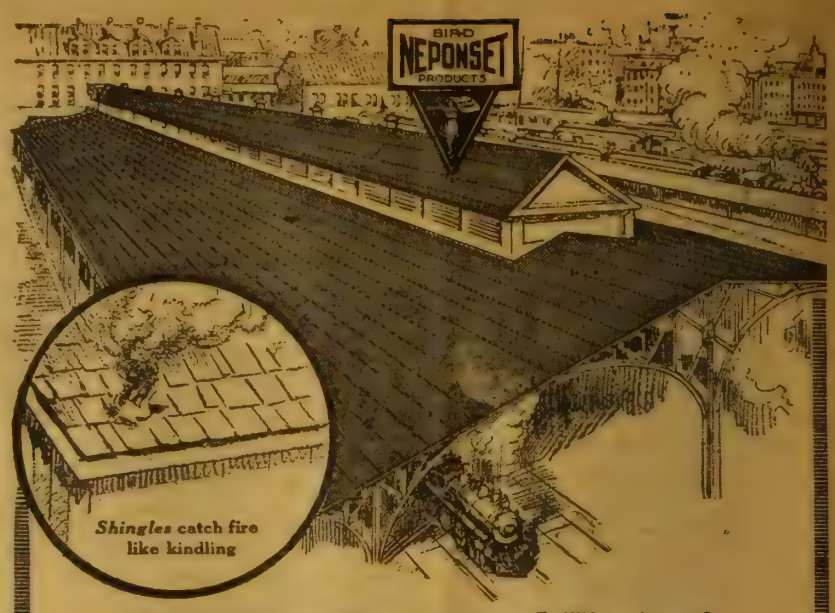
Care must, of course, be taken that chickens do not eat the mash bait, or sheep, calves or other animals the clover bait. After a few days either may be cultivated or harrowed into the soi,.

Conserving Soil Moisture.

Unless cultivation be given promptly after each shower of any consequence crops are apt to suffer faster than you suspect. It is often remarked and with a great deal of truth too, that "showers" cause soils to dry out rapidly. This is true under certain conditions, but it is not the whole truth.

As a matter of fact when there is a good mulch on the surface soil and just enough rain to wet this but not enough to cause the "moisture to meet," unless cultivation be soon given and the mulch reestablished, capillarity will be greatly accelerated and an enormous amount of moisture be lost. The damp surface soil starts the upward movement of the soil moisture and since the surface mulch has been made firm and established connection with the lower layers of moist soil, moisture is rapidly evaporated on the surface of the soil and lost so far as the crops are concerned.

To obviate this cultivate promptly, reestablish a mulch and thus sever the connecting tubes or capillary movement of moisture to the surface. This will cause the moisture to rise to the lower level of the mulch, but the mulch serpes as a "blanket" to



This Roofing Used Twice!

Most roofs have but "one life." This roof pictured above had "two lives." When the Old Wells Street Station of the Chicago and Northwestern R. R. in Chicago was torn down, its roof of NEPONSET **Paroid,** after fighting smoke, burning cinders and storm for eight years, was rolled up and used to roof other stations.

It's still giving perfect service. NEPONSET **Paroid Roofing** is constantly doing this—giving better, longer and safer service than you would think it possible for any roofing to give.

"Covered with NEPONSET **Paroid**" means that you have protected your stock, implements, grain, etc., with the safest, sanest and surest product which the development of prepared roofing affords. It's a quality product. Anyone can lay it.

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Waterproof Building Products

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If NEPONSET Waterproof Building Papers are built into walls and floors, the building will be warmer, will cost less to heat and will last years longer. Recommended by architects, engineers and building owners everywhere.

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NEPONSET Wall Board is a scientific product which takes the place of lath and plaster; comes in sheets 32 inches wide. Remember, it is the only wall board with waterproofed surfaces that requires no further decoration. Anyone can put it up.

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Creonoid sprayed on cows keeps away flies. Use it before milking and cows will yield better.

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Save money by using this black paint wherever the color is no objection. Elastic, heat-proof, durable. Use it for "rubber" roofings and all exposed iron and wood.

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FOR EVERYBODY

Made In Smart Styles, Suitable For Every Outdoor Occasion

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Minard's Liniment Co., Limited.

Gents,—I have used your Minard's Liniment in my family and also in my stables for years and consider it the best medicine obtainable.

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ALFRED ROCHAX,

Proprietor Roxton Pond Hotel and Livery Stables.

A sprained ankle may as a rule be cured in from three to four days by applying Chamberlain's Liniment and observing the directions with each bottle. For sale by all dealers.

keep the moisture from coming to the outer surface where it would evaporate and be lost to crops.

Soils that are tenacious require especial promptness and care in cultivation for they are easily "packed" and "crusted" and hence unless cultivated at the right time after rains lose much moisture and may be in a condition that future cultivation will be greatly handicapped. A light sandy soil retains the mulch longer and, as a rule, is not so rigid in its requirements for cultivation after showers. A sandy soil does not "pack" and for this reason does not lose moisture so rapidly.

As a rule the finer the soil particles the faster moisture will move under the law of capillarity, but the slower will be the rate of percolation, or downward movement under the law of gravitation. This means that soil that have fine particles of clay, clay-loam, "buckshot," etc., will require more cultivation than sandy or loam soils, but will when cultivated properly retain the moisture longer.

The point to remember is that we must study our own soils and learn to manage them economically.

Watch for Noxious Weeds.

The greatest care should be taken to keep weeds from producing seeds on the farm, in the orchard or in the garden. Not all weeds are pernicious pests but many of them are. All of them cost money to destroy and every weed plant that bears seeds is increasing your expense for cultivation.

During the busy season the turn rows are apt to be neglected and before one is fully aware of it weeds have made a start. It is then only a few weeks more until there are millions of seeds to propagate the species and thus your labor and expenses are increased.

Years ago when the old rail-fence was used, the corners of the fence were a hot-bed breeding place for noxious weeds. These not only caused an unsightly appearance, but they usurped moisture and plant food that crops needed and what is more serious produced seeds to propagate the species and thus contaminate the fields. There are yet in some locations a few rail fences and the greatest care should be used in keeping the corners clean.

On many farms there are sloughs, breaks, slashes or other places that for various reasons can not be cultivated. The farmer should see to it that these places do not breed weeds to cause him trouble and expense. Usually such places can be utilized so that they will not breed weeds, but on the contrary produce something that the farmer or his stock can consume.

Marking Imported Fruit.

Hon. Martin Burell, Dominion Minister of Agriculture, has given notice of an amendment to the Inspection of Sales Act of 1906 to provide that the Governor-in-Council may prescribe the kinds of imported fruit, the packages containing which must be branded or marked, the marks to be used thereon and the manner and places in and at which such fruit is to be inspected and such packages branded and marked.

All packages of fruit not branded or marked in accordance with such regulations are to be forfeited. Persons violating any regulation will be liable to a fine of not more than fifty dollars and costs.

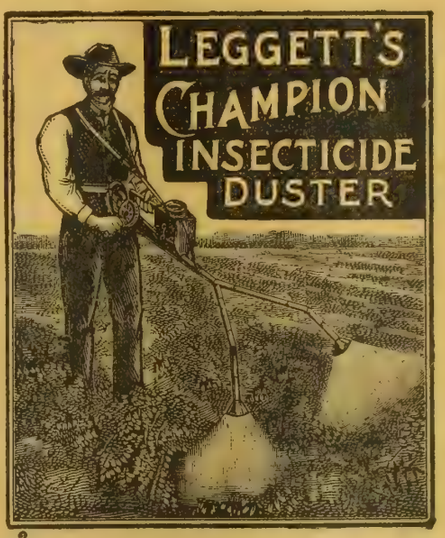
Comparison Proves It

You will be better pleased with Red Rose Tea---you'll praise it more and more if you ever try a package of another tea.

N.B.—Coffee users will find Red Rose Coffee as generously good as Red Rose Tea.

374

I Don't Sell an Imitation



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All joints and Y's reinforced giving absolute strength where strength is needed

THE EASIEST AND SUREST WAY TO KILL BUGS

The Champion works faster—dusts two rows at one time—as fast as a man walks. Weighs only six pounds. Simple to operate—any farm hand, even a boy, can operate it. It gives better results at less expense than any other similar machine. No water to carry. Least danger, because the poison is kept at a safe distance from the operator. THIS IS NO IMITATION, being the Genuine Leggett's Champion Insecticide Duster, manufactured only by the originators. Leggett Bros., New York.

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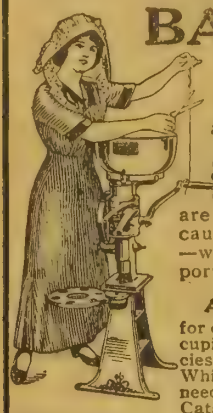

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Gasoline Engines are called Sta-Rite because they do stay right—which is a very important point.

Agents Wanted
for our machines, in unoccupied territory. Agencies are going rapidly. Which machine do you need or want? Write for Catalog 131

If this young woman should cut the string, the EMPIRE would start under the weight of its crank.

The Empire Cream Separator Co.
(Limited)
Toronto Winnipeg

DAIRYING.

Why Send Cream Instead of Milk?

Progressive farmers re beginning to appreciate the advantages of separating milk on the farm in preference to sending the whole-milk to a creamery. Each year more separators are introduced on farms and a greater number of farmers do the separating at home and deliver the cream to its destination.

When a creamery is patronized and the whole-milk is delivered, there is a needless haul of large quantities of milk both ways. For example, if the daily output is 300 pounds and whole-milk is delivered, this quantity must be hauled to the creamery. Here it is separated and about 40 pounds of cream is removed. The skim-milk, about 240 pounds, must be hauled back home again. Thus in order to deliver only 40 pounds of cream, the the farmer must haul both ways the total amount of milk.

When it is separated on the farm, the skim-milk has a greater feeding value for the calves. Then it can be fed to them while it is yet warm with the original animal heat. The milk is always sweet, being only a few hours old. When one has to depend upon that brought from a creamery, there is always more or less trouble with sour milk, especially in hot weather. It is not available for feeding until the return trip from the creamery is made. This delays the morning feed and as half of the milk is held over until night this is often sour.

When whole-milk is delivered to a creamery, one may not get a correct test of the milk. After cream has set once on the milk it is difficult for the buttermaker to get a representative sample. Unless it is most thoroughly mixed at the creamery, the sample for testing is apt to be either too low or too high in butter-fat. When cream is delivered there is less danger of making this error.

Another reason in favor of delivering cream is the time saved both going to and from the creamery and in not having to wait one's turn at the creamery for the milk to be weighed. Every one, who has had experience in drawing milk, knows what it is to wait in line behind a dozen or more milk wagons for an hour or more and then often have to wait again in line for the separgted milk to take home. When cream is delivered one can drive up to a side door with a small can of cream and it is received without any waiting on the part of the farmer. On account of the several hundred pounds lighter load which can be taken in a buggy, quicker time can be made in going back and forth. This saving, when one's time and the horses are needed for pressing farm work, is an important consideration.

The practice of sending cream is becoming more popular each year. Farm separators have been perfected, so that the work can be done easily and quickly. The separators are durable, easily taken care of and are valuable machines for each dairy farm.—Lynford J. Haynes in Kimball's Dairy Farmer.

Satisfactory Guernsey Records.

The Guernseys continue to demonstrate by actual test that they are producers.

Recently a number of cows owned by some of the leading Guernsey breeders of Eastern Canada have made the following very satisfactory records and have qualified in the Canadian Record of Performance.

"Berwick Queen Bud" four years old, owned by John N. Chute, Berwick, N. S., produced in 12 months 9119.5 lbs. milk, 421.163 lbs. fat.

In the herd of D. G. MacKay and Son, Heath Bell, N. S., three have qualified:

"Flora's Heiress" mature cow produced 8107 lbs. milk, 418.257 lbs. fat.

"Heiress Daisy" two-year-old produced 6318.5 lbs. milk, 282.586 lbs. fat.

"Lady Pauline 2nd," of Spruce Grove, two-years-old produced 6121 lbs. milk, 359.54 lbs. fat.

Two heifers in the three-year-old class owned by Hugh A. Dickson, Central Onslow, made good records as follows:

"Gipsy of Willow" three-year-old produced 7852.3 lbs. milk, 368.668 fat.

"Beauty's Belle" three-year-old produced 8540.25 lbs. milk, 466.864 lbs. fat.

The six cows whose records appear above consist of one mature cow, one four-year-old cow, two three-year-old and two-year-old heifers; their average production is nearly 8000 lbs milk each, and 386.082 lbs. fat or 450.429 lbs. commercial butter. Their average butter fat test is above 5 per cent.

What more convincing evidence do the Guernseys need to demonstrate their ability to produce?—Howard W. Corning, Secretary Canadian Guernsey Breeders' Association, Chigoggin, N. S.

The Shape of the Udder.

Among the leading attributes sought for in a good dairy cow, both from a show point of view and that of ordinary practical utility, there is none which is deemed of more vital importance than the possession of a well-developed and shapely udder. The key-note of a good milk vessel should in all cases be capaciousness, for this, more than anything else, constitutes a sign of milkiness, and formerly a large size was usually considered to be practically the only criterion that really mattered; but with the high standard of perfection which has now adays come to be looked for as regards the shape of this organ—in consequence of the increased attention which breeders have latterly bestowed upon improving it—there are several other very exacting requirements which it must fulfil if it is to pass muster satisfactorily. Mere expansiveness in itself in no wise means a good udder, and there are various faults of shape, etc., which may utterly mar even the largest bag.

SYMMETRY.

Next to possessing the necessary capacity, the great thing is that the udder should be symmetrical and well-proportioned, hanging down evenly and squarely, showing an equal degree of development in the fore and hind quarters, having a broad, flat sole, and with teats placed well apart. That the sole (i. e., the bottom of the bag) should be as broad and level as possible is probably the most important detail as regards the question of shape. A sole such as described imparts a symmetrical underline to the vessel, but it is by no no means a mere fancy point, for it is most desirable, also, from a utilitarian aspect, inasmuch as it goes materially to enhance the capaciousness of the organ. Two other leading points to look for are that the udder should extend well forward under the belly, and be carried high up behind between the thighs, while the back of the bag, as seen when one is standing in rear of the cow, should look wide and full, and the more it bulges outwards at the back when filled with milk the better. A very full, outward curve behind is a point of special attraction, and this is seen in the greatest perfection most often among well-bred Jersey cows. It is a bad fault if the udder shows a narrow or attenuated formation when viewed from behind, for a vessel of this shape cannot really be capacious however pendulous it may be.

Perhaps the most common fault of shape seen in the udders of dairy cows, and more particularly so in those of Shorthorn breed or which are of Shorthorn descent, is that of the fore-udder—that is, anterior half of the bag—not being sufficiently well developed in proportion to the rest of the organ. The symmetry of the vessel is utterly spoiled in this case, for, instead of its coming down squarely in front, as it should do, which insures a full form and level sole, it slopes away or recedes, imparting a shapeless and unbalanced appearance to the whole, while it naturally also reduces the bag's capacity. Breeders of dairy cattle will do well to concentrate some special attention upon the elimination of this defect from their strains. It is averred by some that a certain degree of improvement may be artificially brought about in the shape of the bag of a young cow, when her fore-udder is not full enough, by plentifully massaging this part, and by pulling the two front teats, as if the cow is being milked, for a short time after every milking. It is quite probable that these manuipulations may have some effect in stimulating the development of the interior portion of the vessel, when done to young cows which have produced their first and second calf, and in which the udder has not yet attained its full development. But it is very doubtful whether the results produced by such a course of treatment will improve the shape of the bag to a perceptible extent, and to be worth the trouble which it entails. In mature cows this treatment would, in any case, be quite ineffectual.

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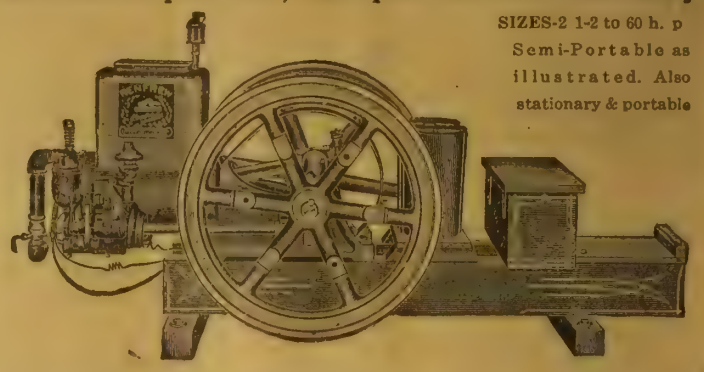

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Say I Saw It in The FARMER

THE TEATS.

To come finally to the teats. Both the way in which these appendages are set on and their shape are points to be taken into consideration. They should be placed wide apart, especially the front pair from the hind one, and they should hang perpendicularly from the soil, being set on quite low. Very often the teats are placed too high, and project from the sides of the bag rather than from its sole. Such a position is faulty, and looks bad. In this case they will also frequently straddle more or less outwards, instead of hanging in a perpendicular position, which is another defect. But the worst fault, as regards the teats, is for them to be unduly close together—a position usually described as "bunched together." This defect is very commonly associated with a poorly shaped and insufficiently developed udder, and more often than not it is the mark of a bad-milking cow. It practically never occurs in well-shaped milk vessels. The more cylindrical in form the teats are the better, and they should be of medium size. In the Jersey and Ayrshire breeds they are, in fact, preferred small, and in the latter breed especially a very small teat is fashionable, though it is not the most practical. Very big fleshy teats are ungainly, and constitute a sign of coarseness. Sometimes the teats are very puffy or swollen-looking and thick at the base, while tapering much towards the end; these are known as windy teats. This is deemed a most unsightly defect, and it quite mars the appearance of an otherwise shapely vessel. As cows get older their teats very often lose their original good shape, and become larger and coarser, and this fact should always be duly allowed for in sizing up the udder.—F.

The Art of Milking.

The art of milking is considered as being on a level with pumping water, or any other simple work, and yet there are many points needed to stamp a man as a good milker. Too many children are allowed to attend to this important work and many of the chronic troubles of cheese and the cheese factory originate here.

A good experienced milker can soon tell if there is something wrong with the udder and milk, and will not allow such milk to be delivered to the factory, but what can you expect of a child? Cleanliness is absolutely necessary to success in the factory. Everybody knows this and yet you can notice cows being milked that have udders covered with dirt, mainly caused by the swamp-like condition of some of the barnyards.

Do the milk utensils always get proper care? Are they properly washed with hot water and kept in proper places? Are they used exclusively for their purpose alone? I think not, or else the collection of things of all variations delivered with the milk would not be so large as it is. It seems to me that it would be a step in the right direction if we would follow the example of the dairy farmers of Switzerland, who arrange milk courses every year, where the proper care of cow and the milking is taught in all its important details. We certainly need something of this kind.

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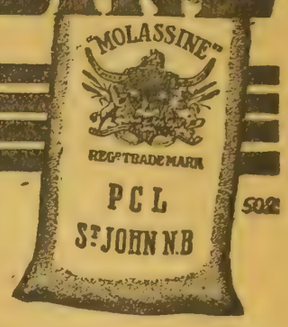

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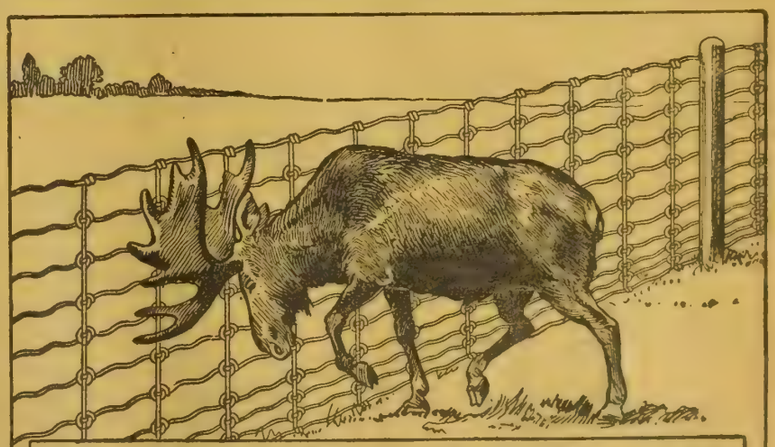

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LIVE STOCK.

Mammary Inflammation in Sows.

The causes of the inflamed condition of the udder in sows, resulting in cessation of milk secretion, and commonly in the death of the offspring, with great pain and loss of condition in the sow, often miscalled "milk fever," are varied, but the most fertile is injudicious feeding and management prior to and immediately after farrowing. Cold and exposure, and lack of attention to cleanliness are said to be causes, and so, no doubt, they are in some cases, and they should certainly be provided against; but we are quite convinced that the most common cause is the well-intentioned practice of feeding sows highly before they farrow, with a view of forcing the milk, or in stuffing them with all the rich, stimulating, milk-producing food they will take as soon as the pigs are born—of course, with a like object. This feeding for milk is laudable enough if practised at the right time; indeed, it is essential to the vigor and quick growth of the pigs; but it is a poor sort of sow, and one that should not have a place in a breeding herd, that does not produce enough milk for her offspring during the first few days of their existence on very ordinary fare. Experience goes to show that the sows most likely to suffer from so called "milk fever" directly after farrowing are those that have large pendent mammae, and normally give a large quantity of milk—popularly recognized as "good mothers"—and that have been highly fed as the date of parturition approaches in order that the supply of milk may be abundant The quantity secreted is larger than the newly-born pigs require, or can take, and as they cannot get it away fast enough, the teats become what the pigman calls "caked," the gland structure swollen and hard, and in flammation results from retention. There is also every reason to believe that high feeding and insufficient exercise, with which is generally associated constipation, during the closing days of gestation, and continued, as regards the former, immediately after farrowing, induce a feverish condition of body which accounts for many of the cases of sudden stoppage of secretion or "drying-up" of the milk, concerning which complaints are common, especially among breeders lacking proper convenience for this branch of pig-keeping, and whose sows are kept entirely in confinement, and often in very restricted quarters at that. We rarely come across one of these cases of loss of milk and difficulty of dealing with the practically orphaned little pigs, but that investigation shows that the sow has been highly fed in order that she might produce plenty of milk for them.

INJUDICIOUS FEEDING FOR MILK

It should be obvious that young pigs at birth, and for several days after, do not want, and cannot take, the quantity of milk they require as they get older and bigger. Yet a great many begin at once to feed their sows as though the very existence of the young pigs depended on it. Their existence is, on the contrary, often imperiled by it, for when the sow loses her milk when they are a few days old, the bringing of them up by hand is difficult, often a failure, and always troublesome and unprofitable. All large breeders of experience deprecate high feeding as parturition approaches and immediately afterwards, and recommend that in-pig sows should not be kept in too high condition. Needless to say, there is a vast difference between having a sow so fat that she can hardly wadle and having her farrowing down in a state of weakness due to a poor or insufficient food. The happy medium —that best described as "nice breeding condition"—is what should be aimed at.

VEGETABLE FEEDING

A grass run, supplemented by a few beans, peas, or other dry grain is the ideal place for the in-pig sow, but everyone who breeds pigs has not a suitable place for his sows to run out —those who have often neglect to use it—and in these circumstances vegetable food, with a little mixed meal, should form the diet until within a week or so of farrowing, when roots, and especially mangels, should be stopped, and sharps substituted. The same kind of feeding, with a little bran added, should be continued for a month after farrowing. All the time better results are obtained by teaching the youngsters to eat early than by overfeeding their mother with heating foods.

TREATMENT OF INFLAMMATION.

When, soon after farrowing, the mammae of the sow are found to be red, hot, full, hard, and tender to touch, so tender that she refuses to let the pigs suck—the first thing to be done is to give a saline aperient, which it may be necessary to repeat several times in smaller doses as a febrifuge. A full dose of Epsom salts in combination with nitrate of potash is as good as anything that can be given. If fever runs high, and there is much constitutional disturbance, as there generally is in bad cases, tincture of aconite should be given in small doses at intervals of two hours until the temperature falls. Local treatment should consist in free fomentation with hot water—it is practically impossible to poultice as in the case of the cow—followed by careful drying, and gentle rubbing or working with the hands—call it massage—using camphor ointment or camphorated oil as a lubricant. Where the udders are much swollen and very painful, an ointment or lotion containing extract of bella-donna, which any chemist will supply, is excellent for relieving the tension. Complete recovery is, unfortunately, the least common result of mammary inflammaeion, and animals that have suffered from it are generally best fattened out for the butcher. In any case where there is induration or atrophy of any of the udders, or blind teats, no attempt should be made to breed from the animal again, or there will inevitably be trouble at the next farrowing. There is invariably a necessity for removing the pigs, but how to deal with them is another story.—Pately Bridge in Farm and Home.

WILSON'S FLY PAD. POISON

Good housekeepers commence using Wilson's Fly Pads early in the season. **Do it now.** You will not kill many, but every one represents thousands that would infest your home later on.

Ox Warble Flies.

The ox warbles or bots (Hypoderma bovis Geer and Hypoderma lineata Villers) belong to the Diptera family Oestridae. Both are found in Europe. According to Railliet, H. bovis is also found in Asia and Africa. Up to now only H. lineata has been met with in North America. According to a communication from the Government of the Commonwealth of Australia, that continent is free from warble flies. On imported cattle in some cases warbles were observed, but the animals were quarantined and the larvae destroyed.

HOW THE EGGS ARE DEPOSITED.

An official of the United States Bureau of Animal Industry observed that the female of H. lineata deposited its eggs, about 1 mm. in length, by means of a blunt ovipositor on the hair of the cattle, most frequently preferring the hair of the forelegs. As many as six eggs have been found on one hair. Every egg has an appendage, which adheres to the hair. The eggs contain fully developed young larvae. Egg-laying takes place during the warmest part of the year. Cooper Curtice found in 1890 young larvae of H. lineata in the throat of cattle, and it is probable that the eggs are licked off by the animals and thus find their way into the cavity of the mouth, where the larvae hatch out. They migrate thence into the muscular tissue of the gullet and moult after some time. Later, in the winter months, warble larvae are found in the adipose tissue of the spinal cavity and towards spring they appear under the skin. Here they moult twice, producing abscesses. They bore an aperture through the skin, which at first serves for the introduction of air; then, when they have completed the bot or maggot stage, as a passage by which they leave their host. They then fall to the ground on which, or just under the surface, they turn to pupae and emerge, after from three to six weeks, as perfect sexually mature flies. In the Southern States of the United States the first warble flies appear in the spring; in Europe their appear-

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ance is limited to the summer months from June to August. The fully developed warble fly has only rudimentary mouth paths; it consequently takes no food and lives but a short time.

What has been said of H. lineata holds good for H. bovis, with the exception that until lately no investigator had been able to ascertain whether this oestrid also laid its eggs on the hair of cattle and which part of the animal it preferred. In the summer of 1912, Glaser, however, was enabled to observe an unfecundated female of H. bovis laying eggs. He set the fly on the back of a bull, and saw after some time that this fly drove its ovipositor into the coat of the animal. He then found, on a spot about half a square centimetre in extent, eight eggs, and on another, about one square centimetre, upon which the fly had also stopped, six eggs adhering to the hair on the back of the bull, and rather close to the skin. The eggs were visible only when the hair was rubbed the wrong way. According to this observation it is very probable that under natural conditions normally developed and fecundated females of H. bovis lay their eggs on the coats of cattle, and, like H. lineata, attach them to the hairs. In support of this view is the fact that the eggs of both species are provided with an appendage which serves for fastening the eggs to the hair. Carpenter supposes that H. bovis also lays its eggs by preference on the hair of the feet, because he observed that in Ireland warble flies swarmed especially round the feet of animals.

Opinions are still divided as to how the larvae of H. bovis find their way into the body of the cattle. Hinrichsen had (according to Railliet) already in 1884 discovered larvae of these flies in the throats of cattle. Other investigators have found larvae in the midribb, in the spinal cavity, and in the muscular tissue under the skin. Stub sets up the theory that the larvae found in the throat do not attain full development, but perish in the body of the animal. According to him the larvae of H. bovis can only develop normally when they have bored a passage through the skin from the outside. Peter is of opinion that the larvae enter the animal by the gullet, bore through the hide from the inside as far as the roots of the hairs, and from this point to the outside the opening is completed indirectly by inflammatory processes. In support he gives several figures showing cross sections and a longitudinal section of such passages.

PROTECTIVE EXPERIMENTS.

Carpenter has been conducting experiments for some years past in Ireland with the object of ascertaining how Hypoderma larvae enter the bodies of cattle. He kept during the year 1904 and 1905 four calves always covered with a cloth together with other calves on the pasture; in the summer of 1905 four other calves were provided with coverings for their limbs also, and further six calves completely covered were kept on the pasture. Of these only one lived to the next spring. The average number of warbles found on the calves protected by clothing differed very little from that found on the unprotected animals. Only the completely clothed surviving calf was found in spring to be quite free from the larvae. (At the last counting of the larvae in May it was not possible to ascertain with certainty which of the calves had been completely clothed during the preceding year.)

In the summers of 1906, 1907, 1908 and 1909 Carpenter provided several calves with leather muzzles and kept them with other calves on a pasture. The muzzles were to prevent the calves from licking themselves and thus affording warble larvae of their eggs the means of passing through the calves' mouths into their bodies. During the night, and whilst feeding their necks were fastened in such a manner to a kind of wooden frame that the animals could not lick themselves, besides which, the forelegs were clothed. Nevertheless, in the spring of 1907 five of these muzzled calves had ten to twenty-seven warble larvae on them; only one was completely free. Two calves which had worn muzzles in 1907 bore no warbles in 1908. In the summer of 1908 other six calves were kept muzzled on pasture. Instead of clothing their forelegs, a kind of apron formed by a sack was hung around the animals' necks to prevent them from licking their forelegs. The above-mentioned wooden frame was also used. In spite of these measures, in the following spring, all the protected calves had an average of 4.66 warbles, against an average of 4.33 warbles on the nine unmuzzled control calves. In the summer of 1909 five muzzled calves were kept on the pasture. Over the leather muzzle a large wire one was placed so as to prevent the calves taking up larvae through the openings in the leather muzzle. The other precautions were the same as had been previously taken. Together with these five calves fifteen control calves were sent into the same pasture. Each of these latter calves had in the spring of 1910 an average of 6.33 warbles. Threee of the muzzled calves had only one warble each, one had three and one had four. Carpenter adds that by means of the double muzzle at least a partial protection against the larvae was obtained. The results would probably have been better if the wire muzzles had been immediately used with the leather ones. But the former arrived only at the end of May, so that the calves were protected during the very warm last week in May only by the leather muzzles. Carpenter is continuing his experiments.

INJURY CAUSED BY WARBLE FLIES.

There can be no doubt that warble flies injure cattle in various ways. In the first place, their presence disturbs grazing cattle. The injury that the animals suffer from the larvae can consist in lower milk yield and in the depreciation of their flesh and hides. The loss in milk is valued by some as high as 20 per cent. but this estimation cannot be accurately checked. The injury to the flesh consists in the inflammatory modifications it undergoes in consequence of the presence of the presence of the larvae; the inflammation is revealed by the effusion of serum in the connective tissue and renders the meat unsightly; so-called "licked beef." The most mischief is that done to hides. Krause calculated that in 1910 about 24 per cent. of all the hides in Germany were damaged by warbles. The total number of damaged skins amounted to 941,994—a total loss in Germany of £178,142 8s. The English Board of Agriculture was informed by a tannery that out of 132,000 hides which had been worked, 40,000 were damaged by warbles. In another tannery only 1,500 hides out of 20,000 were damaged. The depreciation amounted to from 2s. 6d. to 5s.

From the United States no recent figures are available. In Canada warble infection is especially considerable in the provinces of Manitoba, Saskatchewan and Alberta. It is customery to reduce the purchase price by two dollars for every head of cattle found suffering from warbles.

DESTRUCTION OF WARBLE FLIES

This has not hitherto been rendered compulsory by legislation in any country except the German State of Oldenburg. In Great Britain, Belgium, Switzerland, Austria, the United States and Canada official action has hitherto been limited to instructing farmers by means of publications on warble flies. The State Entomologist for Queensland has psoposed to the Australian Government to render the Commonwealth Quarantine Act more stringent in respect to cattle affected by warbles. The Government will take an amendment of the quarantine measures into consideration.—"Bulletin of the International Institute of Agriculture."

An Insect Injurious to Cattle Raising

Cattle raisers in almost all parts of Canada are familiar with the small lumps that appear on the backs of their animals during the winter months and from which white grubs or maggots emerge at a later date. Many theories exist as to the exact life history of the insect, known as the Warble Fly, of which the white grub is the larva. The opinion generally held that the eggs are laid on the backs of the cattle, and when hatched work their way beneath the skin, is proved by careful investigation to be incorrect. Dr. Seymour Hadwin, 1st. Assistant Pathologist of the Health of Animals Branch of the Dominion Department of Agriculture, who has studied the subject, claims that the eggs are not laid on the back but on the legs of the cattle. This appears to bear out the theory that the newly hatched insects are licked by the animals and thus taken into the system and ultimately find their way to the backs where they develop beneath the skin.

The matter of chief importance to the cattle raiser is not the exact course taken by the insect within the body of the cattle beast but rather the economic effect of the grubs upon the business of cattle raising. To throw light on this phase of the subject Dr. Hadwin has written a bulletin, which is numbered 16 of the Health of Animals Branch, dealing with the economical aspect of warble flies. In this it is shown that enormous losses occur each year through damage to hides caused by these insects. Tanners consulted on the subject claim that during the "grubby season," extending from January to July, from 25 to 75 per cent of hides are warbled and that about 20 per cent of Canadian hides are more or less damaged. The extent of damage is variously estimated by 16 large tanners to be from about 50 cents to $1.00 per hide; the estimate of one Ontario tanner was 10 per cent which is equal to $180.000 per annum. The author observes that the man who undoubtedly loses is the farmer; the tanner does not want warbled hides at any price and several of them testify that they buy hides only during the season when hides are not grubby. He estimates the annual loss to be between 25 and 30 per cent.

This bulletin of twenty pages, which is the first to have been issued on the subject in Canada, is helpfully illustrated. Copies will be made in response to applications made for it to the Publications Branch of the Department of Agriculture at Ottawa.

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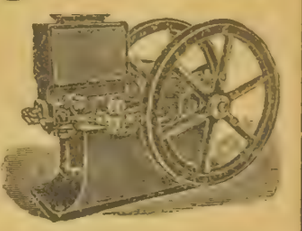

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THE HORSE.

Parasitic Mange in Horses.

Parasitic mange is the name given to a condition of the skin caused by parasites, which are known as mites or acari. They belong to the family Acaridae. Mange assumes the character of a contagious disease, since the parasites may be conveyed to other equine animals. The mange mites are exceedingly small, round or oval in shape, and usually only visible when magnified by the use of a hand lens or microscope.

FORMS OF MANGE.

Three varieties of parasitic mange affect horses, asses, and muffes, viz.: (1) Sarcoptic, (2) psoroptic ,(3) symbiotic. Each is caused by a special mite which has a somewhat different mode of life.

The Sarcoptic form spreads slowly, but is the most serious on account of its being the most difficult to cure. The mites, known as the Sarcoptes, bore their way through the outer skin, burrow underneath it, and cause irritation to the animal, setting up inflammation of the skin. In the small galleries or tunnels thus formed the mites lay their eggs. It is on accodnt of this burrowing habit that it is difficult to reach the parasites with destructive agents. The mites may attack any part of the body, but they usually settle first about those parts which come in contact with the saddle or other harness, from which they may spread to other parts. The psoroptic form of mange is analogous to the itch or scabies of man. The Psoroptic form generally spreads more rapidly over the body. It is more prevalent than the Sarcoptic form. At first it is usually confined to those parts situated near the long hair of the body, such as the neck, withers, rump, and base of tail, but in advanced or neglected cases the parasites may spread all over the body, and be found on the buttocks and inside the thighs. The mites, which are known as Psoroptes, live on the outer surface of the skin, and cling to it by means of their mouths and limbs. They bite the skin to obtain food, causing irritation and inflammation. Over the injured parts scabs are formed and scurf accumulates, amongst which the mites shelter, feed, and breed. The scab increases in size as the mites increase in number, and each new generation of young parasites selects fresh feeding ground, usually around the edge of the older scab, or the mites may, through the grooming, be disturbed and distributed, setting up additional centres of disease on other parts of the skin. The Symbiotic form is probably the most prevalent, but it is not so serious as the two former. This form is usually confined to the extremities of the legs, but may also affect the tail. It develops slowly, and only exceptionally invades other parts af the body. An animal may harbour more than one form of mange at the same time.

SYMPTOMS.

Mange may not always be detected until it has made considerable progress, or the early symptoms may not have been regarded with importance by the owner or the attendants. The first indications are that the animal is restless, appears to be itchy, is incessantly rubbing against any objects within reach, including the pole or shafts of the cart, or against other horses, as is frequently seen at grass. Affected animals will even bite and gnaw the parts attacked by the parasites, scratch the parts with the hind limbs if accessible, and stand rubbing one leg against the other. They may be seen or heard scraping, pawing, kicking, or stamping the feet a good deal, especially during the night in a warm stable. There may also be switching and rubbing of the tail. When the scabby parts are touched with the hand or passed over the grooming tools, the animal will lean towards the attendant and manifest a sense of pleasure, which is frequently accompanied by a nibbling movement of the lips. The hair over the affected parts bristles or stands erect, and in more advanced cases is twisted or broken off short. Bare patches of skin are seen, due to the hair falling out or having been pulled or rubbed out. The skin may show an inflamed, pimply surface, with some long or broken hairs still in place, or the part may be quite bare and scurfy. The parasites cause pimples to appear on the skin wherever they bite. Yellowish lymph exudes from the pimples, and helps to form small scabs. This lymph may mat the scabs and hairs together into a hard mass, which may be partly or entirely rubbed off, leaving an excoriated surface. On the hairless parts red, scabby spots may be seen, which readily bleed, and there may be patches of scab containing blood adhering to the skin. In advanced, neglected, and bad cases the skin loses its elasticity, becomes dry and hard, and is wrinkled or corrugated into folds. Finally the scabby skin may crack, forming deep fissues. These may bleed and leave nasty, unhealthy-looking sores, which in turn may fester or suppurate. There is also an offensively smelling discharge in many cases. If

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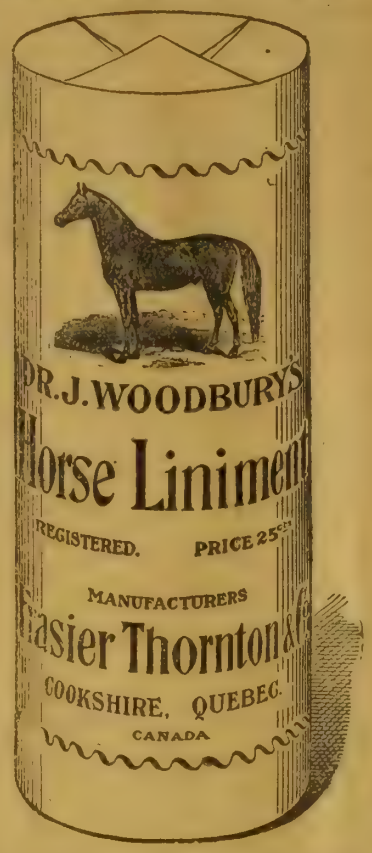

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ABSORBINE, JR., the antiseptic liniment for mankind. For Synovitis, Strains, Gouty or Rheumatic deposits, Swollen, Painful Varicose Veins. Will tell you more if you write, $1 and $2 per bottle at dealers or delivered. Manufactured only by W. F. YOUNG, P.D.F. 124 Lymans Bldg., Montreal, Can.

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the disease is allowed to proceed unchecked the animal speedily loses condition, and becomes emaciated. The animal gets no rest from the incessant irritation, the appetite fails, the animal has a very dejected and repulsive appearance, becomes weaker and weaker, and may even die in a state of exhaustion.

In the Symbiotic form of mange a horse may do serious injury to its limbs, particularly to the coronet, by bruising it with the opposite foot in making attempts to relieve the itchiness.

TREATMENT.

Mange is not primarily a disease, but a condition of the skin resulting from the presence and action of the parasites or mites, which obtain their nourishment by piercing the skin. The treatment must be directed to the destruction of the parasites and their eggs, and it is possible to use effective local remedies in the form of skin dressings, which will not only destroy the mites without causing further injury to the inflamed and irritated areas, but will act beneficially by allaying the irritation. The treatment is essentially an external one, but plenty of good food should be given, and if the animal's condition has been reduced or the health materially impaired, tonic medicine given internally may be indicated. Usually, however, recovery is affected without internal treatment.

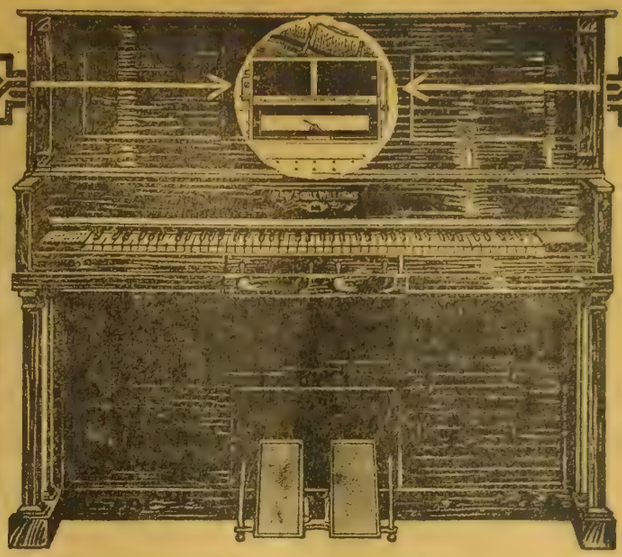
PREVENTION.

All newly-purchased animals should be carefully examined for suspicious areas on the skin, and if such are present the animals should be isolated and kept under observation until expert advice can be obtained, but those in charge must not forget that mange caused by Saroptes or Psoroptes in equine animals is a notifiable disease. Care should be taken not to use second-hand or borrowed harness, clothing, grooming and stable utensils which have not been thoroughly cleansed and disinfected. Owners should be particular about the livery stable which their horses frequent, and litter which has been used for other animals should be regarded with suspicion.

In addition to the isolation and treatment of an animal actually affected with mange, particular attention must be paid to cleansing and disinfecting the stable, litter, harness, and all articles that have been used about the patient. The premises and articles to be included in the disinfection must be reckoned from a time prior to the recognition of the disease.

Depraved Appetite.

W. A. R., has a driving horse that has for some time been troubled with pimples on shoulders and sides, and has also eaten his dung when he could get at it. All symptoms are worse when not on grass, and when off grass he steadily grows poor on good feed. Symptoms are usually attributed to a lack of mineral matter in feed. Keep before this animal at all times a mixture of salt, 2 parts, sulphur 1 part, wood ashes 1 part, and powdered charcoal 2 parts. Begin by giving on an empty stomach at one dose, 1½ quarts raw linseed oil and 2 ounces of turpentine well mixed, followed in three days with powder given below in feed twice a day. Powdered sulphate of iron 2 ounces, powdered nux vomica 1 ounce, sulphate of soda 4 ounces, and powdered licorice root 4 ounces. Feed liberally with coarse bran, and give the molasses if you choose. It works very well with some horses. Dose, a tablespoonful morning and night.



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Scratches.

Scratches, also called cracked heels, or mud-fever, can be prevented by careful stable management. Cases are rarely met with in well kept barns, but are often seen in dirty, poorly-drained stables. Dryness and cleanliness of the floor of the stall are the two most important factors in the prevention of scratches.

Horses should not be allowed to stand in piles of manure and decomposing urine. These irritate and inflame the thin skin in the fold of the ankle, just below the fet-lock. The skin then becomes thickened, due to the inflammation, and breaks or cracks in it appear and if allowed to go untreated, the condition grows gradually worse. The affected area grows larger, the cracks become deeper, and the animal is in an unsightly and painful condition.

Owners of horses can prevent the trouble in the majority of cases, by doing two things. Do not allow manure to accumulate behind your horses, and see that your stalls are so constructed that the urine will drain away promptly. If your horses show any tendency toward the condition, apply a small amount of carbolized vaseline, benzoinated lard, or zinc oxide ointment, well rubbed into th affected parts. These remedies will soften the skin and protect it from external moisture and irritating substances. During wet weather, or when the roads and streets are muddy or slushy, extra precautions should be taken to prevent the condition. Do not wash cracked heels, as water and rubbing only aggravate the condition. —Dr. H. Preston Hoskins, University Farm, St. Paul.

POULTRY.

Eggs to be Bought and Sold on Quality Basis After June 1st.

After June 1st next eggs will be bought and sold in Canada on their merits of freshness, cleanliness and quality. Such was the resolution adopted by the Canadian Farm Produce Association at their recent meeting in Toronto.

For a long period the wholesale egg dealers in this country have been dissatisfied with the case count basis, upon which eggs are bought and sold. The chief fault is that it put a premium on bad eggs; just as much is paid for bad eggs as good ones. For years anything and everything covered with a shell went as salable eggs, whether one hour, one month or one year old. This is manifestly unfair to shipper of even reasonably fresh eggs, he getting no benefit, being placed on the same price level as the careless, indifferent producer. The aim is to put the egg trade on a better basis. All who handle eggs, the producer, merchant and consumer have to pay their share for the bad eggs that are marketed. The purpose is to remedy this.

Eggs will be candled by receivers and paid for according to grade. Rots will not be paid for, but a higher price will be given for good eggs.

Legislation has been proposed, to penalize for the sale of impure (stale and rotten) eggs. Education does not seem to remedy this evil and legislations must be had to give more force to the teaching.

The poultry Superintendent will be pleased to render any assistance to dealers in the way of instruction in testing eggs. With the present facilities of egg testing it is an easy matter to detect any impure egg, and thus prevent the loss of receiving bad eggs and have them turned down by the dealers, after expressing them long distances.—Seth Jones, Poultry Superintendent.

The Brahma as a Utility Fowl.

Uncle Isaac Felch, in recent writings, is again extolling the merits of the Light Brahma fowl as a utility bird. Mr. Felch in his contention is correct. He has shown that this variety cannot only be made excellent winter egg producers, but that for broilers or roasters they have no superior.

The writer has bred Brahmas for years—probably as long as has Mr. Felch. Tae first love was the Dark variety, but since the introduction of the Light Brahma that former variety seems to be placed in the background.

Between the two varieties, however—the Light and the Dark—the former far excel. In point of plumage they about equally divide honors. But it is to the Light variety that we wish to particularly refer.

As winter layers, Light Brahmas, if properly feh and cared for, will give more eggs than any other breed the writer has ever tried; not only do they show their ability in numbers, but the size of the egg exceeds that of any of the American or Asiatic classes, and, besides, the color—a rich brown—is of the best, and just such a shade that would fill the breeders of the American class with joy.

It does not end with their laying. They will make quick broilers—in ten weeks from the time they are born they are plump chickens. We can never forget a lot of young stock we some years ago saw on a farm in Massachusetts. They were but sixty-one days old, and the weights were, cockerels,—we weighed only eleven—three pounds and one ounce for heaviest, and two pounds and four ounces for lightest. The pullets weighed two pounds and eight ounces for heaviest, and two pounds for lightest. These were live weights.

Mr. Felch himself accompanied us to that farm so that he might prove his contention that Light Brahma chicks at eight weeks of age make good, plump broilers.

But there is a market objection to the Brahma as a broiler. It comes not in quantity nor quality of flesh, neither is it in the time of maturity, but simply in the fact that the American fad does not want feathers on the legs. And why not? We do not eat the legs, but the peculiarity of our market buyers say it spoils the appearance. We must cater to the whims of the market.

However, there is a place for them where there can be no objection, and that is in the roaster class. In this way they are ideal. Large enough and fit enough for a king. There is both quality and quantity of meat. At six months of age they are in prime condition, weighing easily a pound for each month's age—six pounds for six months—and if they are kept over for a full year, all that time properly fed and cared for, they will give twelve full pounds for that year's lease of life.

Truthfully it has been said the Light Brahma is the king of the roasting fowls, but we wish to add

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To judge how fast our business is growing, you'll remember we stated in a previous announcement that our business last year doubled that of the year before. Well, this year the first two months' sales total more than twice the 1912 sales for the same period. More and more is it being recognized by those in the local telephone business who are interested in depreciating the success of the independent telephone movement and the development of municipal systems. On the other hand, our business lies wholly and directly with the independent telephone systems, and it is to our own best interests to look after these systems well, as on their success depends the growth of our business.

If you would like a list of the large independent telephone systems built in Ontario during the last twelve months, just drop us a line. We would be glad to send you a list of the systems, with the make of the telephones they are using. In fact, if you'll name over the large independent systems built during the last year in Western, Northern and Eastern Ontario you'll find that nine out of every ten are using our telephones and equipment.

You are absolutely safe in equipping your system with our telephones. We guarantee them as regards material and workmanship. In fact, we guarantee all Our equipment and materials. And in addition we offer to send our telephones for ***Free Trial,*** so you can test and compare them with others right on your own lines before risking a dollar.

Ask for our No. 3 Bulletin—containing the latest information about building telephone lines—Also No. 4, describing our magneto telephones, is free on request.

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an amendment—it is the Peer of the Utility Class.

It is not only hard to sell a lean chicken in market, but it also is poor eating. A little care and feed will make them more inviting.

It is claimed that a single comb fowl fattens best. An English authority says that he has found that a single comb fowl always grows fatter and plumper than any others.

It is a waste of food to keep young cockerels after they weigh five pounds to the pair, as they are sold as "old roosters" after their combs grow. While the market rate for old roosters is from five to nine cents a pound, young ones often sell at from 15 to 20 cents per pound. It is a loss to keep them longer than when they are old enough to sell.

One part of cedar oil and two parts of vaseline is an excellent treatment for sore head.

When the hens become too fat the result is apt to be egg bound, soft and irregular shaped eggs, dizziness, applexy, liver complaint and kindred diseases.

It is claimed that nux vomica is a specific for liver complaint in fowls, if taken in time. The dose is given in Homeopathic form, allowing six pills three times a day to a large fowl and less to a smaller one.

The following formula for roup pills is recommended: Half a dram each of cayenne pepper, ginger, mustard; half ounce of plain vaseline or clear lard; mix thoroughly and add enough flour to make a tough dough. Make into pills the size of a pea. Dose, one night and morning.

The following is said to be the recipe for making Vale's roup pills, a popular English remedy: Hydrastin, 2 grains; sulphate of iron (dried) and sulphate of copper, 3 grains each; powdered capsicum, 12 grains; oil of copaiba, 20 drops; Venetian turpentine and calcined magnesia, of each enough to make 24 pills. Dose for adult fowls, one or two pills, night and morning.

Diseases of the liver are caused by overfeeding of fat producing food or by the use of too much spice or stimulating substances. This particular trouble, is hypertrophy of the liver, which is an enlargement of that organ, and is often found in hens kept over the second winter. It is due to feeding too much fatty food, combined with a lack of exercise. In the early stages the disease may be arrested by feeding lightly on bran mashes and green food, and to each quart of drinking water adding one-half teaspoonful of muriate of ammonia.

The trap nest is a regular detective. It tells the facts of the case, it tames the hen, it gives accurate reports, it it arrests the robber hens, it gives an honest count, and it exposes the fraudulent hens.

Some egg farmers candle all eggs each day as they are received from the nests. Their reason for so doing is to throw out all such that show blood clots—that is, every now and then a hen in straining to lay her egg is apt to rupture a minute blood vessel and this clot of blood sometimes shows itself inside the egg, and at other times we find the blood on the shell. When candling, this blood clot is easily seen if in the egg.

The Houdan is a small-bound fowl, having a thick breast, and the flesh is tender and juicy. They make fine broilers and the best roasters.

Some poulterers, in order to obtain the best prices for their broilers, hatch from October 1 to February 1, and have all the stock marketed by July 1.

The skin of the Langshan is a pure white, and not a dark or bluish white. The meat is fine grained, tender and juicy; thin skin and small bone, and while possibly not so much admired in the market as the yellow-skinned breeds, none surpasses it for tenderness and flavor when served on the table.

Capon and poularde rearing is a general industry in Normandy, Maine and LaBresse (a capon is a castrated male bird; a poularde is a female that has been operated upon.) Poulardes are peculiar to the LeFleche and LeMans breeds. It is the peasant farmer who fattens the young hens and creates the industry.

The main reliance of the poultry breeder is the certainty that he will always have a fairly profitable market for his meat and eggs. This is the bedrock of the industry.

The late Morgan Bates once said that the class of poultrymen that are supplying the market with eggs and poultry, are the bulwark of the poultry industry of the nation.

Because there are failures with poultry is no argument that the business is a failure. There are lots of people who never make a success of anything they undertake. Work out your own salvation, and nver mind what the croakers have to say.

A correspondent gives the following advice for trapping minks, skunks, weasles, etc.: Minks, weasles, skunks, etc., often visit the poultry house and in one night destroy from six to twenty fowls. The best way to capture minks is with a steel trap properly concealed and baited with a bird or fish. Minks travel several miles to get in a poultry yard or house. If there is a pond or stream near the house it is best to trap them along the place of their natural haunts. Take the fat from some fish and [illegible] out and pour it in a bottle. Leave the cork out and expose it until the oil decays and becomes very strong. A few drops of this placed upon any bait will attract a mink a long distance. Cover the trap with fine leaves or break up coarse leaves so that the jaws of the trap will not be filled up when it springs. If trapping the minks near the water it is best to set the trap under the water and make a fence with weeds so as to compel it to come out at the place where the trap is set.

Whiteduck feathers average in price in the market at from 37 to 39 cents per pound. Colored feathers bring from 17 to 23 cents per pound.

Indian Runner ducks are to the duck family, in egg production what the Mediterranean Class of fowls is to the chicken world. They are small ducks, averaging about four pounds in weight. English breeders claim that an Indian Runner duck at eight years old will lay as many eggs as a year-old duck of any other variety.

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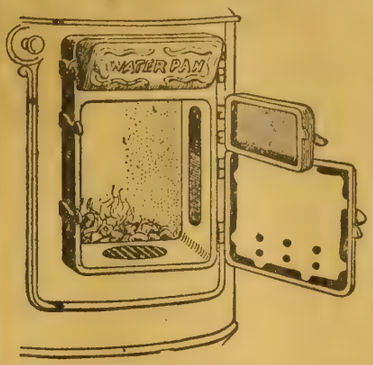

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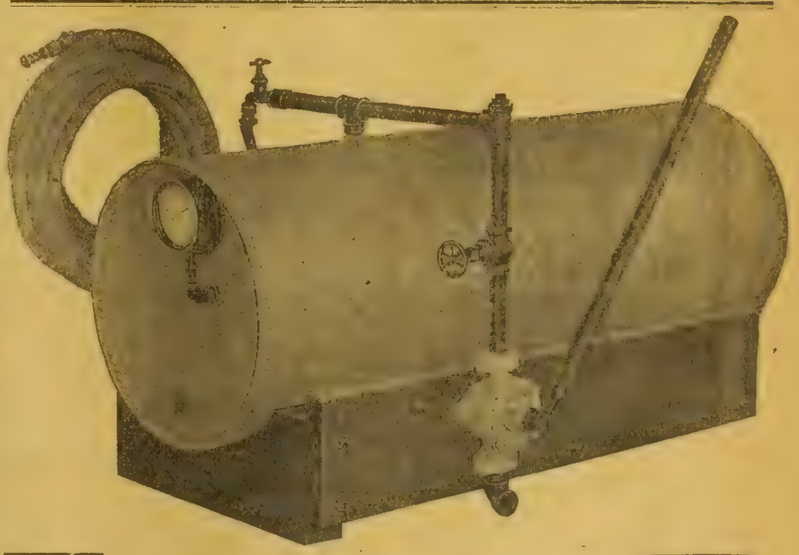
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David Copperfield.

By Charles Dickens.

(Continued from last issue.)

Here Peggotty paused, and softly beat upon my hand a little while.

"The last time I saw her like her own dear self, was the night when you came home, my dear. The day you went away, she said to me, "I never shall see my pretty darling again. Something tells me so, that tells the truth, I know."

"She tried to hold up after that; and many a time, when they told her she was thoughtless and light-hearted, made believe to be so; but it was all a bygone then. She never told her husband what she had told me—she was afraid of saying it to anyone else—till one night, a little more than a week before it happened, when she said to him: 'My dear, I think I am dying.'

"It's off my mind now, Peggotty," she told me, when I laid her in her bed that night. "He will believe it more and more, poor fellow, every day for a few days to come; and then it will be past. I am very tired. If this is sleep, sit by me while I sleep: don't leave me. God bless both my children! God protect and keep my fatherless boy!"

"I never left her afterwards," said Peggotty. "She often talked to the two down stairs—for she loved them; she couldn't bear not to love any one who was about her—but when they went away from her bedside, she always turned to me, as if there was rest where Peggotty was, and never fell asleep in any other way.

"On the last night, in the evening, she kissed me, and said: "If my baby should die too, Peggotty, please let him lay in my arms, and bury us together." (It was done; for the poor lamb lived but a day beyond her.) "Let my dearest boy go with us to our resting place," she said "and tell him that his mother, when she lay here, blessed him not once, but a thousand times."

Another silence followed this, and then another gentle beating on my hand.

"It was pretty far in the night," said Peggotty, "when she asked me for some drink; and when she had taken it, gave me such a patient smile, the dear!—so beautiful!

"Daybreak had come, and the sun was rising, when she said to me, how kind and considerate Mr. Copperfield had always been to her, and how he had borne with her, and told her, when she doubted herself, that a loving heart was better and stronger than wisdom, and that he was a happy man in hers. Peggotty, my dear, she said then, "put me nearer to you," for she was very weak. "Lay your good arm underneath my neck," she said, 'and turn me to you, for your face is going far off, and I want it to be near."I put it as she asked; and oh Davy! the time had come when my first parting words to you were true—when she was glad to lay her head on her stupid, cross old Peggotty's arm—and she died like a child that had gone to sleep!"

Thus ended Peggotty's narration. From the moment of my knowing of the death of my mother, the idea of her as she had been of late vanished from me. I remembered her, from that instant, only as the young mother of my earliest impressions, who had been used to wind her bright curls round and round my finger, and to dance with me at twilight in the parlor. What Peggotty had told me now, was so far from bringing me back to the later period, that it rooted the earlier image in my mind. It may be curious, but it is true. In her death she winged her way back to her calm untroubled youth, and cancelled all the rest.

The mother who lay in the grave, was the mother of my infancy. the little creature in her arms, was myself, as I had once been, hushed forever on her bosom.

CHAPTER X

I Become Neglected, and am Provided for.

The first act of business Miss Murdstone performed when the day of solemnity was over, and light was freely admitted into the house, was to give Peggotty a month's warning. Much as Peggotty would have disliked such a service, I believe she would have retained it, for my sake, in preference to the best upon earth. She told me we must part, and told me why; and we condoled with one another, in all sincerity.

As to me or my future, not a word was said, or a step taken. Happy they would have been, I dare say, if they could have dismissed me at a month's warning too. I mustered courage once, to ask Miss Murdstone when I was going back to school; and she answered dryly, she believed I was not going back at all. I was told nothing more. I was very anxious to know what was going to be done with me, and so was Peggotty; but neither she nor I could pick up any information on the subject.

There was one change in my condition, which, while it relieved me of a great deal of present uneasiness, might have made me, if I had been capable of considering it closely, yet more uncomfortable about the future. It was this. The constraint that had been put upon me was quite abandoned. I was so far from being required in the parlor that on several occasionssions, when I took my seat there Miss Murdstone frowned to me to go away. I was so far from being warned off from Peggotty's society, that, provided I was not in Mr. Murdstone's, I was never sought out or inquired for. At first I was in daily dread of his taking my education in hand again, or of Miss Murdstone's devoting herself to it; but I soon began to think that such fears were groundless, and that all I had to anticipate was neglect.

I do not conceive that this discovery gave me much pain then. I was still giddy with the shock of my mother's death, and in a kind of a stunned state as to all tributary things. I can recollect, indeed, to have speculated at odd times, on the possibility of my not being taught any more, or cared for any more; and and growing up to be a shabby, moody man, lounging an idle life away, about the village; as well as on the feasibility of getting rid of this picture by going away somewhere, like the hero in a story, to seek my fortune: but these were transient visions, day dreams I sat looking at sometimes, as if they were faintly painted or written on the wall of my room, and which, as they melted away, left the wall blank again.

"Peggotty," I said in a thoughtful whisper, one evening, when I was warming my hands at the kitchen fire, "Mr. Murdstone likes me less than he used to. He never liked me much, Peggotty; but he would rather not even see me now, if he can help it."

"Perhaps it's his sorrow," said Peggotty, stroking my hair.

"I am sure, Peggotty, I am sorry too. If I believed it was his sorrow, I should not think of it at all. But it's not that; oh, no, it's not that."

";How do you know it's not that?" said Peggotty, after a silence.

"Oh his sorrow is another and quite a different thing. He is sorry at this moment, sitting by the fireside with Miss Murdstone; but if I was to go in, Peggotty, he would be something besides."

"What would he be?" said Peggotty.

"Angry," I answered, with an involuntary imitation of his dark frown. "If he was only sorry, he wouldn't look at me as he does. I am only sorry, and it makes me feel kinder."

Peggotty said nothing for a little while; and I warmed my hands as silent as she.

"Davy," she said at length.

"Yes, Peggotty?"

"I have tried my dear, all ways I could think of—all the ways there are, and all the ways there ain't in short—to get a suitable service here, in Blunderstone; but there's no such a thing, my love."

"And what do you mean to do, Peggotty," says I, wistfully. "Do you mean to go and seek your fortune?"

"I expect I shall be forced to go to Yarmouth," replied Peggotty, "and live there."

"You might have gone farther off," I said, brightening a little, "and been as bad as lost. I shall see you sometimes, my dear old Peggotty, there. You won't be quite at the other end of the world, will you?"

"Contrary ways, please God!" cried Peggotty, with great animation. "As long as you are here, my pet, I shall come over every week of my life to see you. One day every week of my life!"

I felt a great weight taken off my mind by this promise; but even this was not all, for Peggotty went on to say:

"I'm a going, Davy, you see, to my brother's, first, for another fortnight's visit—just till I have had time to look about me, and get to be something like myself again. Now, I have been thinking, that perhaps, as they don't want you here at present, you might be let to go along with me."

If anything, short of being in a different relation to every one about me, Peggotty excepted, could have given me a sense of pleasure at that time, it would have been this project of all others. The idea of being again surrounded by those honest faces, shining welcome on me; of renewing the peacefulness of the sweet Sunday morning, when the bells were ringing, the stones dropping in the water, and the shadowy ships breaking through the mist; or roaming up and down with little Emily, telling her my troubles, and finding charms against them in the shells and pebbles on the beach; made a calm in my heart. It was ruffled next moment, to be sure, by a doubt of Miss Murdstone giving her consent; but even that was set at rest soon, for she came out to take an evening grope in the store-closet while we were yet in conversation, and Peggotty, with a boldness that amazed me, broached the topic on the spot.

"The boy will be idle there," said Miss Murdstone, looking into a pickle jar, "and idleness is the root of all evil. But to be sure, he would be idle here—or anywhere, in my opinion."

Peggotty had an angry answer ready, I could see; but she swallowed it for my sake, and remained silent.

"Humph!" said Miss Murdstone, still keeping her eye on the pickles; ";it is of more importance than anything else—it is of paramount importance—that my brother should not be disturbed or made uncomfortable. I suppose I had better say yes."

I thanked her, without making any demonstration of joy, lest it should induce her to withdraw her assent. Nor could I help thinking this a prudent course, when she looked at me out of the pirkle-jar, with as great an access of sourness as if her black

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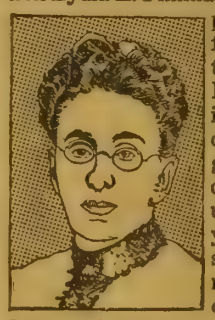

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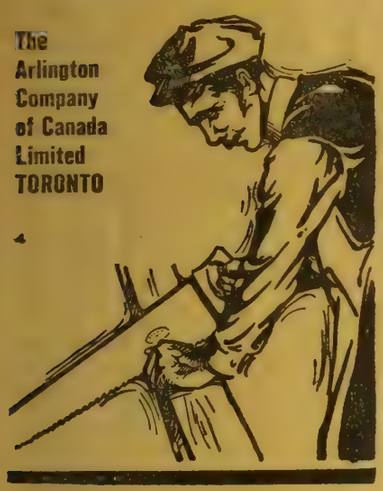

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eyes had absorbed its contents. However, the permission was given, and was never retracted; for when the month was out, Peggotty and I were ready to depart.

Mr. Barkis came into the house for Peggotty's boxes. I had never known him to pass the garden-gate before, but on this occasion he came into the house. And he gave me a look as he shouldered the largest box and went out, which I thought had meaning in it, if meaning could ever be said to find its way into Mr. Barkis's visage.

Peggotty was naturally in low spirits at leaving what had been her home so many years, and where the two strong attachments of her life—for my mother and myself—had been formed. She had been walking in the church yard, too, very early; and she got into the cart, and sat in it with her handkerchief at her eyes.

So long as she remained in this condition, Mr. Barkis gave no sign of life whatever. He sat in his usual place and attitude, like a great stuffed figure. But when she began to look about her, and to speak to me, he nodded his head and grinned several times. I have not the least notion at whom or what he meant by it.

"It's a beautiful day, Mr. Barkis!" I said, as an act of politeness.

"It ain't bad," said Mr. Barkis, who generally qualified his speech, and rarely committed himself.

"Peggotty is quite comfortable now Mr. Barkis," I remarked, for his satisfaction.

"Is she, though?" said Mr. Barkis.

After reflecting about it, with a sagacious air, Mr. Barkis eyed her, and said:

"Are you pretty comfortable?"

Peggotty laughed and answered in the affirmative.

"But really and truly you know. Are you?" growled Mr. Barkis, sliding nearer to her on the seat, and nudging her with his elbow. "Are you? Really and truly, pretty comfortable? Are you? Eh?" At each of these inquiries Mr. Barkis shuffled nearer to her, and gave her another nudge; so that at last we were all crowded together in the left hand corner of the cart, and I was so squeezed that I could hardly bear it.

Peggotty calling his attention to my sufferings, Mr. Barkis gave me a little more room at once, and got away by degrees. But I could not help observing that he seemed to think he had hit upon a wonderful expedient for expressing himself in a neat, agreeable, and pointed manner, without the inconvenience of inventing conversation. He manifestly chuckled over it for some time. By-and-by he turned to Peggotty again, and repeating "Are you pretty comfortable, though?" bore down upon us as before, until the breath was nearly wedged out of my body. By-the-by he made another descent upon us with the same inquiry, and the same result. At length, I got up whenever I saw him coming, and standing on the footboard, pretended to look at the prospect; after which I did very well.

He was so polite as to stop at a public-house, expressly on our account and entertain us with broiled mutton and beef. Even when Peggotty was in the act of drinking, he was seized with one of those approaches, and almost choked her. But as we drew near to the end of our journey, he had more to do and less time for gallantry; and when we got on Yarmouth pavement, we were all to much shaken and jolted, I apprehend, to have any leisure for anything else.

Mr. Peggotty and Ham waited for us at the old place. They received me and Peggotty in an affectionate manner, and shook hands with Mr. Barkis, who, with his hat on the very back of his head and a shame-faced leer upon his countenance, and pervading his very legs, presented but a vacant appearance, I thought. They each took one of Peggotty's trunks, and we were going away, when Mr. Barkis solemnly made a sign to me with his forefinger to come under an archway.

"I say," growled Mr. Barkis, "it was all right."

I looked up into his face, and answered, with an attempt to be very profound: "Oh!"

"It didn't come to an end there," said Mr. Barkis, nodding confidentially. "It was all right."

Again I answered, "Oh!"

"You know who was willin'," said my friend. "It was Barkis, and Barkis only."

I nodded assent.

"It's all right," said Mr. Barkis, shaking hands; "I'm a friend of your'n. You made it all right, first It's all right."

In his attempts to be particularly lucid, Mr. Barkis was so extremely mysterious that I might have stood looking in his face for an hour, and most assuredly should have got as much information out of it as out of the face of a clock that had stopped, but for Peggotty's calling me away. As we were going along, she asked me what he had said; and I told her he had said it was all right.

"Like his impudence," said Peggotty, "but I don't mind that! Davy dear, what should you think if I was to think of being married?"

"Why—I suppose you would like me as much then, Peggotty, as you do now?" I returned, after a little consideration.

Greatly to the astonishment of the passengers in the street, as well as of her relations going on before, the good soul was obliged to stop and embrace me on the spot, with many

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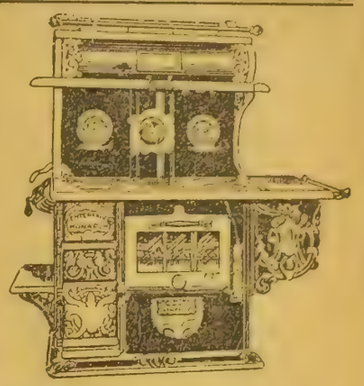

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I will mail, free of all charge, my home treatment with full instructions for all forms of women's ailments. I want to tell all women about this cure — you, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men cannot understand women's sufferings. What we women know from experience, we know better than any doctor. I know that my home treatment is a safe and sure cure for Leucorrhoea, Whitish discharges, Ulceration, Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or Growths, also pains in the head; back and bowels, **bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar** to our sex.

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to test the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address,** tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost,** my book—**"WOMAN'S OWN MEDICAL ADVISER"** with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. It cures **all, old or young.** To **Mothers of Daughters,** I will explain a simple home treatment which speedily and effectually cures Leucorrhœa, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all woman's diseases and makes women well, strong, plump and robust. **Just send me your address,** and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 308 - - - - WINDSOR, Ont.

Dr. Morse's Indian Root Pills

exactly meet the need which so often arises in every family for a medicine to open up and regulate the bowels. Not only are they effective in all cases of Constipation, but they help greatly in breaking up a Cold or La Grippe by cleaning out the system and purifying the blood. In the same way they relieve or cure Biliousness, Indigestion, Sick Headaches, Rheumatism and other common ailments. In the fullest sense of the words Dr. Morse's Indian Root Pills are 47

A Household Remedy

Any little girl can do the churning with

MAXWELL'S

Favorite Churn.

It makes the smoothest, richest, most delicious butter you ever tasted.

The roller bearings—and hand and foot levers—make churning an easy task, even for a child.

All sizes from ½ to 30 gallons.

Write for catalogue if your dealer does not handle this churn and Maxwell's "Champion" Washer.

David Maxwell & Sons,
St. Mary's, Ont.

A Woman's Sympathy

Are you discouraged? Is your doctor's bill a heavy financial load? Is your pain a heavy physical burden? I know what these mean to delicate women—I have been discouraged, too; but learned how to cure myself. I want to relieve your burdens. Why not end the pain and stop the doctor's bill? I can do this for you and will if you will assist me.

All you need do is to write for a free box of the remedy which has been placed in my hands to be given away. Perhaps this one box will cure you—it has done so for others. If so, I shall be happy and you will be cured for 2c (the cost of a postage stamp). Your letters held confidentially. Write to-day for my free treatment. MRS. F. E CURRAH, Windsor, Ont.

For sale by all Leading Druggists

ALEXANDRA HOSPITAL, MONTREAL

For Contagious Diseases

APPLICANTS for Nurses' Training School.

Probationers (of the age of 19 to 25 years) wanted for a period of one year; lectures given and certificates granted. Intimate arrangements exist with the Montreal General, Royal Victoria, and Western Hospitals, and the Toronto General Hospital, Toronto, by which our Nurses properly accredited are received at those Hospitals under favourable conditions. The strictest references are required. For forms of application and particulars apply to,

Miss Grace M. Fairley,
Lady Superintendent.

HANDY CLOTHES SPRINKLER

INSURES EVEN DAMPENING
NICKELED BRASS
25¢ POST PAID
LASTS A LIFETIME
AGENTS WANTED

HOME MFG. CO. Box 772, HALIFAX, N.S.

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

protestations of her unalterable love.

"Tell me what should you say, darling?" she asked again, when this was over, and we were walking on.

"If you were thinking of being married—to Mr. Barkis, Peggotty?"

"Yes," said Peggotty.

"I should think it would be a very good thing. For then you know, Peggotty, you would always have the horse and cart to bring you over to see me, and could come for nothing, and be sure of coming."

"The sense of the dear!" cried Peggotty. "What I have been thinking of, this month back! Yes, my precious; and I think I should be more independent altogether, you see; let alone my working with a better heart in my own house, than I could in anybody else's now. I don't know what I might be fit for now, as a servant to a stranger. And I shall always be near my pretty's resting-place," said Peggotty musing, "and be able to see it when I like; and when I lie down to rest, I may be laid not far off from my darling girl!"

We neither of us said anything for a little while.

(To be continued)

Home-Made Toilet Powders.

A woman can save considerable by making her toilet powders at home, and when she prepares them herself she knows they are safe to use. A good and safe powder for the face is made with the common prepared chalk. Get the best quality of chalk, put it in a china bowl and break the pieces into small bits; then cover with cold rainwater, stir it up well and let stand over night. Then pour all of that water off and pour more water on and stir it up again; let stand all day or night and repeat this four or five times. When the last water is poured off, place the dish in the sun until the chalk is thoroughly dried out. Keep the dish covered to keep out all dust, and when perfectly dry a little perfume and a little pink powder can be added if desired. The best covering for the dish is a piece of white cheesecloth.

Another good powder is made by mixing well together half a pound of pure rice powder, twelve drops of oil of rose and six grains of carmine. Mix and sift several times through a fine hair sieve. A cake of sulphur soap is excellent in itself for pimples and blackheads, but used by the same person with a powder containing mercury would ruin the complexion. Great care should be given to the selection of powders or pastes used for cleansing the teeth. There are several good powders that can be made at home and with very little trouble or expense. An excellent powder is made with one part each of pulverized castile soap and boric powder and two parts precipitated chalk. This must be well mixed and sifted three or four times. For a greasy or shiny skin add boric powder to the prepared chalk. There is nothing better to use as a powder for perspiration than one part af the chalk and two parts of the boric powder. For young children use equal parts of pulverized starch and the boric powder well mixed, and if this is used every day it will prevent chapping and soreness of the skin.

A little of the dry boric powder sprinkled on the inside on the soles of the shoes every morning will absorb the moisture and make the shoes feel much easier on the feet. When the feet are irritated and hurt it causes numerous worried lines in the face, and this makes wrinkles.

The Selection of Wall Paper.

Although the selection of wall paper is largely a matter of personal

THIS BARREL

Contains flour guaranteed to give satisfaction or you get your money back. Regal Flour is always preferred by careful cooks because it insures good bread *always*—and palatable as bread can be made.

REGAL FLOUR

MAKE NO MISTAKE. Always insist upon Regal Flour and you can be sure of the quality.

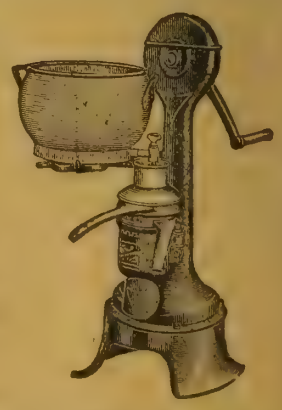
THE ST. LAWRENCE FLOUR MILLS COMPANY LIMITED.

MONTREAL

Cut Your Work in Two

By starting in to use a large capacity

Waterloo Boy Cream Separator



The favorite everywhere it goes. Note the heavy compact construction, with low down handy supply can.

The 900 lb. size Waterloo when at speed and skimming takes no more power than the ordinary 500 lb. size separator of other makes.

The large capacity Waterloo hand separator will save you time, labor and expense, because it will cut the labor of skimming the milk more than in two, not only because it turns easier than most other hand separators, regardless of capacity, but because it does the work in half the time.

In these busy days, when labor is so scarce and so expensive and so unsatisfactory, a saving in time is a great direct saving in money to you.

Please write us a post card to-day asking for Free book describing this cream separator.

The Sussex Motor Co., Ltd.,
SUSSEX, N. B.

We have for sale a few second hand machines of other makes that we have taken in exchange for our Waterloo Boy. Come in and see them.

WAS SO NERVOUS
COULD NOT EAT OR SLEEP.

There are many people who become worn, weak and miserable because their nerves become so unstrung they cannot sleep, and wherever there are ones troubled in this way they will find that Milburn's Heart and Nerve Pills will restore the deranged nerves to full life and activity.

They do this by their invigorating effect on the nerve centes, and will tone up the whole system to a perfect condition.

Mr. George McBeath, Round Hill, N.B., writes:—"I take the pleasure of writing to tell you the great benefit Milburn's Heart and Nerve Pills did for me. I was so nervous I could not eat or sleep, and could not even do my work, and I failed to a shadow. Finally I consented to try Milburn's Heart and Nerve Pills, and have only taken two boxes, and am able to work as well as ever, and can eat and sleep as well as ever I did. I can't praise your medicine too highly. My wife is taking them now for palpitation of the heart and is improving greatly."

The price of Milburn's Heart and Nerve Pills is 50 cents per box, 3 boxes for $1.25.

For sale at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Quality Butter

That's the kind you make with Maxwell's "Favorite" Churn.—

Maxwell's "Favorite" is used all over the world—in Denmark, the butter country of the world—in the United States, in spite of high tariffe—and in every Section of Canada. Our Agricultural Colleges and Govt. Inspectors recommend it, because it is the finest butter-maker in the world.

Write for catalogue if your dealer does not handle it.

DAVID MAXWELL & SONS,
ST. MARY'S, ONT. 94

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

taste, there are a few rules or truths that must be taken into consideration. The whole family should have something to say about the selection of wall paper and a final vote taken of three or four patterns sifted down from a possible fifteen. There are several little things which should govern the selection of colors and patterns. Deep and ornate borders should never be used in low rooms. Highly figured patterns are also bad for these rooms or, in fact, anywhere, for they are very fatiguing and confusing, and the eye soon tires of them. Striped or plain papers have a tendency to add to the apparent height of a room. Gaudy and unusual patterns should be avoided, for they spoil the effect of the furniture.

A room occupied by an invalid should be papered in plain, restful colors, for a large-figured, confusing design will drive one almost frantic if they have to live with it all the time. A plain background is best where pictures are to be hung or where there is much bric-a-brac. Large figures and varied colors are too confusing for such rooms. Color plays a very important part in our health, happiness and comfort.

Each room should be treated in relation to the others around it so that conflicting colors will not spoil the harmony. With this idea in view, many people successfully treat an entire floor in one color. Color sometimes makes a room look larger or smaller than it really is. Red has a tendency to contract a room and make it coty and small; that is why this color is used so much in dens. Green and brown do not seem to make any difference, but blues, yellows, tans, pinks and grays seem to add space. Yellow is a delightfully sunshiny color, very good for a north room. Red is a stimulating color, but should be in awell lighted room, as it absorbs light. Blue is usually a failure in a much used room, for it has a depressing quality. Green is restful, but, like red, absorbs light. Delicately tinted papers are the most expensive, for they fade easiest. Light sunny rooms should have good, substantial colors. In the long run it pays best to get papers of a good grade, for where the hanging must be hired done it costs as much to hang the poor as the good, and the latter will last much longer.

Prevent Moth Injury.

Plenty of sunshine and fresh air are the most effective helps the housewife has in her fight against the insect pests in our homes. Clothes moths infest closets and drawers where unused garments are stored, and while the moths themselves are harmless, they should be killed whenever seen, because they lay eggs from which the caterpillars develop. These feed mostly on woolens and carpets, fur and feathers. Fortunately they are rarely seen in winter, and are short-lived, but articles that are stored away should be taken out in the sunshine and air occasionally, and carefully examined and brushed to prevent serious damage. Moth balls and various other repellants may keep moths out of an article, but have no effect on those already there. Another moth, which is often mistaken for the smaller clothes moth, infests all kinds of dried grains and fruits.—Alice McFeely, University Farm, St. Paul.

Visitor (to facetious farmer): "I'd like to know why on earth you call that white pig 'Ink'?"—Facetious Farmer: "Because he's always running from the pen!"

DICKESON'S TEA
THE BEVERAGE of the OLD COUNTRY.
PURE FRAGRANT & DELICIOUS.
RICHARD DICKESON & COMPY., LIMITED. LONDON, ENGLAND.

THE FINEST TEA YOU EVER TASTED

Breakfast, Dinner and Supper taste better when you drink

DICKESON'S TEA

1-2 pound and 1 pound Packages also Bulk

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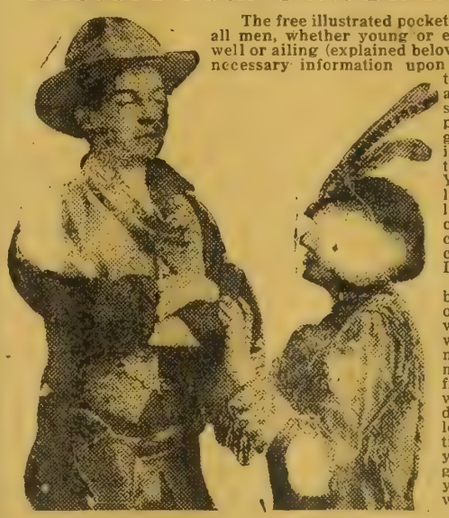
Something New for Men
Restore Your Own Strength--No Drugs



Manly Men Fascinate the Whole World

The free illustrated pocket compendium of private advice for all men, whether young or elderly, single or married, whether well or ailing (explained below), not only contains a great fund of necessary information upon certain avoided private subjects, telling you what to avoid, what to do and what not to do, but also fully describes a new small mechanical appliance called a VITALIZER which generates a natural force and which is now being worn by men all over the world who seek new manly vigor. You, yourself, no matter where you live, may easily have one of these little VITALIZERS to try out in your own case. Therefore, please use the coupon below and get this free pocket compendium by return mail. SANDEN, AUTHOR.

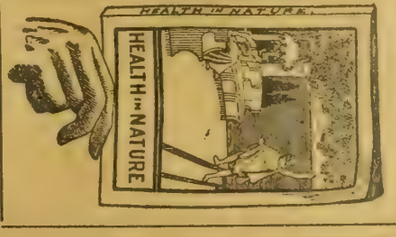
How would YOU, reader, like to be strong, vigorous, vital and manly once more, without an ache, pain or weakness? If you really seek and want this new vigor, this rugged manly strength, then please call at my office or write today and get my free book that you may know the whole wonderful story of this great, drugless, self-treatment, this marvellous little VITALIZER of my invention, which you wear comfortably on your body, and which sends its steady gentle, silent supply of FORCE into your nerves, blood and organism while you sleep.

Real manhood with a perfect manly strength is not only nature's own gift, but, according to my belief, may easily be within the reach of practically any man. Of course, we all know that it is the husky, vigorous, vital fellow who attracts both women and men to him, and it is he, also, who is ever sought out and who achieves the really big things of life. Sturdy, vital manhood is, without doubt, the one great, silent universal power which fascinates us all, no matter how we may argue to the contrary. Therefore, reader, I care not what may be your age, nationality or creed, whether you are married or single, whether you are a bank president or work on the farm or in the shop, nor do I care how unstrung or nervous you may feel, or what past acts may have left you debilitated and enervated, I say to you in all seriousness, if I can show you an easy, drugless way by which you may treat yourself with the object of bringing back full vigor to your organism, then I will show you the road to new hope and new manhood. A man may be small in stature, yet as strong and attractive as a giant, or he may be big in stature, yet unstrung, nervous and unmanly. It is all a question of your own vigorous strength. Therefore, let me suggest that you call or write at once, then, after reading my book, if you decide you want to try out my little vitalizer in your own case, and will write to me saying so, I will reply to your letter and guarantee to make an easy proposition which should enable you to have one of the vitalizers at once. At all events, you need the knowledge that my little book contains, whether you ever get a vitalizer or not, so please call or fill in and send the coupon.

NOTE—With special attachments my VITALIZER is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, nervousness and general ill health.

Free Self-Help Book For Men

I publish a little illustrated pocket compendium in booklet form, as mentioned above, which is meant to guide both single and married men along the road of Vigorous Health and Moral Rectitude, so they may be as vigorous and strong as the best, and may live to a ripe, healthy old age. There is a lot in this little compendium which every young or elderly man should know and can refer to from time to time with great profit to his own physical health. The booklet in one part fully describes my new VITALIZER, the great drugless self-treatment. If it is not convenient or if you are too far away to call, please write for this booklet today. It will come to you in plain, sealed envelope by return mail. Please use coupon. Office hours, 9 to 6.



Dr. M. F. SANDEN, CO.,
140 Yonge St., Toronto; Ont.

Dear Sirs—Please forward me your book, as advertised, free, sealed

NAME .....

Address.....

Fishy Flavor in Butter.

The fishy flavor of butter has been known for a number of years, one of the first references being of its presence in Australia butter sent to England in 1900. A considerable depreciation in prices resulted and a dairy expert in New South Wales set to work to discover the cause. In his opinion the fishiness of Australia butter was due to a mould and pasteurization was advised.

Later in 1909, L. A. Rogers, of the United States Department of Agriculture, published a bulletin on fishy flavor in butter, in which he states that the trouble is widespread in occurrence, but most noticeable in newer dairy sections. It occurred at times in fresh butter made during the summer months, but usually appeared in cold storage butter after it had been held over some time in cold storage, and even low temperatures did not prevent the development of the fishy flavor.

In the opinion of this author, fishy flavor is caused by a slow, spontaneous chemical change by which acid is developed and which is favored by small amounts of oxygen. As a means of prevention be advocated making butter from pasteurized sweet cream; and butter made from pasteurized sweet cream with a starter, without ripening, seldom, if ever, becomes fishy.

OPINIONS OF DEALERS.

Several large exporters of butter in Montreal were asked if they had any experience with this defect in Canadian butter, and if so to what extent and to what degree it depreciated the value of the article. The replies may be summarized as follows:

"There have been many theories as to the cause of "Fishy Flavor" in butter. Formerly "Fish" was given as a reason, then "Salt," then "Salt that had been near fish," then "Salt stowed in vessels crossing the ocean:" but more recently the fault has been attributed to "Dirt" in various forms, the flavor being taken in through the milk or cream or through the salt. Probably the fault comes more frequently through the salt than in any other way, but we are satisfied that there are other causes."

"We have met with this flavor in butter quite frequently, and fishy flavor butter usually sells at one to two cents per pound under the price of finest, the depreciation, of course, depending upon market conditions. It has been our experience that fishy flavor is not often met with in new butter, but generally arises in butter that has been held in cold storage for some length of time. We have also noticed that when butter is very mild salted and fishy flavor does not seem to develop to the same extent as in higher salted butter,"

"Re Fishy Flavored Butter. This is a common fault with all held butter, and we think only an exaggerated term for "staleness," at least the two go hand in hand. It is a question of degrees. The lower the temperature the slower the process. We think salt sometimes turns butter fishy. "Saltless" butter is rarely fishy in low temperature. As to the value of the faulty flavored butters, it is a question of degree again. Personally, I would not have fishy butter on my table as a gift, but there are many people who seldom or never get anything else; of course, they don't know as I do. Ordinarily, such butters have to be sold at 1 to 4 cts. per lb., under finest, mild, fresh flavored. Canadian tastes have changed very much the last few years as regards butter, and it is more difficult to sell low grades than formerly, even at the reduction. There is not so much fishy butter as formerly be-

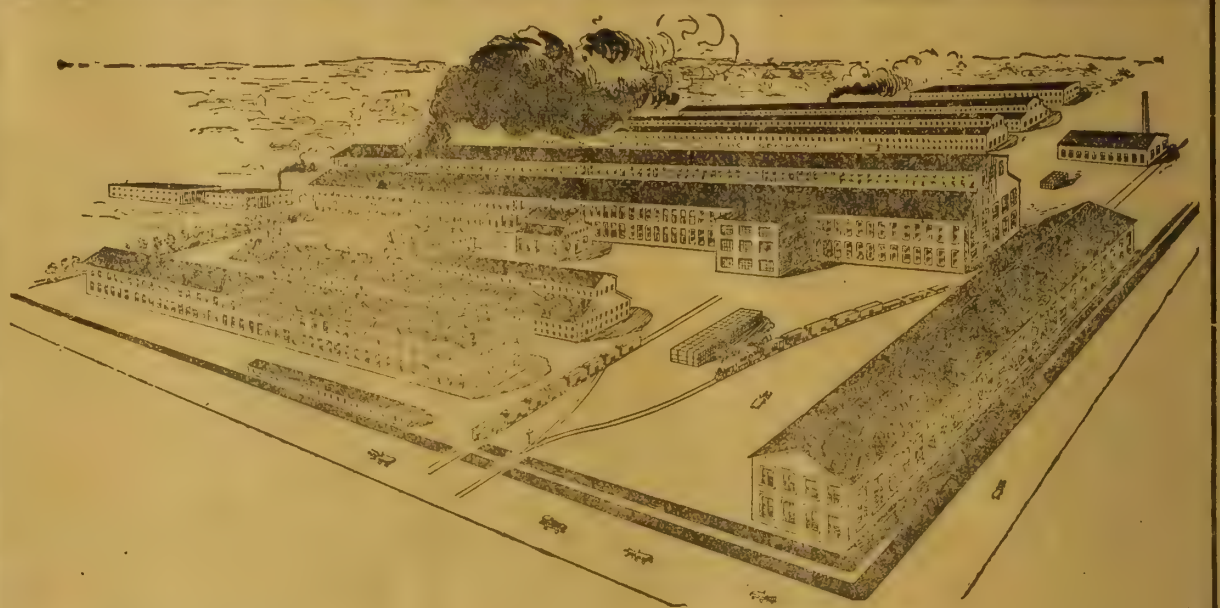
RU-BER-OID
TRADE MARK REGISTERED

The original prepared roofing, which for 22 years has withstood the severest climatic conditions, on all classes of buildings. RU-BER-OID has over 300 imitations, but no equal. It is weatherproof, fire resisting, easy to lay, and gives longer service per dollar of cost than any other roofing.

KA-LOR-OID (colored RU-BER-OID), in Red and Green, makes very handsome roofs which never lose their color.

For Samples and Booklets write
Standard Paint Co. of Canada, Limited. 107
Montreal—Winnipeg—Calgary—Vancouver.

ROOFING



THE Canadian General Electric People wanted a roofing that would *successfully* withstand the *fiercest* assaults of Roofing's *worst* enemies--*Acids* and *Fire:* So they specified

Brantford-Roofing

because, after *rigid* investigation, they found it to be *practically imperishable.*

Glance at the immense plant shown here. It represents a *huge* investment. And--it is protected with *Brantford Roofing.*

Since *Brantford Roofing* is good enough for these people, shouldn't it be good enough for you? It costs no more than ordinary roofing, yet it gives *ample* protection. Figure out your roofing needs and write us for full particulars. Our Big, FREE Book will interest you.

Brantford Roofing Co., Ltd., Brantford, Canada

Warehouses:---Toronto, Montreal, Winnipeg

cause we think it goes into consumption more regularly now than in former years."

MAY BE DUE TO SALT.

I think it is reasonable to assume that fishy flavor may be imparted to butter by poor salt, probably of sea origin, and by certain small crustacea, but we may set these reasons aside, for under our conditions these are seldom, if ever, met with. Let us discuss, therefore, those most likely to occur under our own conditions. I think most makers who have to make butter from gathered cream will agree with me that during the hot weather the cream received at the factory is over-ripe. It has quite a high degree of acidity, and in many cases a secondary fermentation is commencing. The task of the maker to produce a first-rate article from such raw materials becomes at once a very difficult one, for the control of the acid fermentation is beyond his control, and secondary products are being formed in the butter by a variety of organisms. Even pasteurization of stale cream would not bring the best results, for many of the changes go on without the organisms, but through the agency of enzymes, elaborated by them.

MEANS OF PREVENTION

Undoubtedly Roger's remedy of making butter from pastiurized sweet cream prevents fishy flavor, but this remedy cannot be carried out under our present system of making butter from gathered cream.

We must either take precaution to obtain cream in better condition or use some method of treatment in the factory.

The most obvious method of improving the gathered cream is a campaign of education to show patrons the necessity of cleanliness in each detail connected with milking and separating, and the importance of immediate cooling and holding the cream at a cool temperature, until it arrives at the factory. These details have been given so often that I need not enlarge on these at the present time.

The proper treatment of the over-ripened cream at the factory is a more difficult question. Some recent experiments have shown that ozone may be used for deoderizing stale cream. The cream is first parteurized and then carried on to an agitator and treated with ozone for 40 minutes. The cream is slightly bleached by this process and completely deodorized and the acidity reduced one half. After cooling the cream is churned into butter. Butter made by this process grades as No. 1. Such a process would have to be carefully investigated under factory conditions, and the cost carefully computed before it could be adopted with certainty, but if makers are finding it difficult to manage gathered cream successfully, and if they cannot obtain cream sufficiently sweet for the best manufacturing result, then some process such as that described would seem advisable in order to secure the best results.—From an address by Dr. F, C. Harrison at Western Ontario, Dairymen's Convention.

Profitable use of the By-Products of the Dairy.

By the term by-products we mean buttermilk, milk and whey.

BUTTERMILK.

When allowed to stand 12 hours and the water taken off buttermilk is one of the best of foods for pigs and chickens. It is not only valuable in itself but it helps to digest other foods and so makes them valuable. It is specially good for fowls who are in a winter range as the acid in the milk supplies the lack of vegetable acid and so aids digestion. It is only by using up the by-products to feed the different animals that Dairy Farming pays. Butter-making alone does not pay. It is by making butter and cheese and using the by-products to feed the different animals that Dairy Farming is a profitable business.

Buttermilk may be utilized in two ways:

(1) As a drink for man.

(2) As a food for animals.

BUTTERMILK as a drink for man has lately been very highly recommended by medical men. It is recommended as an aid to digestion owing to the large percentage of lactic acid waich aids digestion and prevents fermentation. In summer it is used largely as a cooling drink.

Its composition varies according to the making of the butter, but if the butter is churned at the proper temperature and no loss of fat takes place the average composition is as follows:—

Water 94.44 p. c., Fat .20 p. c., Casein and albumen 3.56 p. c. Milk sugar with lactic acid 1.10 p. c. Ash .70 p. c.

Buttermilk itself is rather thin and tasteless. To make it more palatable it is prepared in the following manner: Allow it to stand twelve hours, then skim off the water. To every twelve gallons of Buttermilk add six gallons of skim milk, which has been prepared in the following manner.—Heat or pasteurize the skim milk to 165 degrees F.; cool quickly to 80 degrees F.; add 1 tea-cup of starter to every gallon of milk, then allow to stand 12 hours when it should be thick and coagulated. Then strain through a fine hair-sieve in order to get rid of any lumps and add to buttermilk.

STARTER.

Another pure lactic ferment drink that is very much recommended by physicians and which is more nutritious than buttermilk is STARTER. After the starter is made it is propagated with fresh new milk which makes it more of a nourishing drink than buttermilk.

PROCESS OF MAKING STARTER:—Take a gallon of fresh separated milk, heat to 188 degrees F. and keep at that temperature for 30 minutes. Then cool to 88 F. and add bottle of pure Lactic Ferment (which may be bought at the D Laval Dairy Co., William Street, Montreal). Stir the bottle of Lactic Ferment well into milk and keep at a temperature of 88 degrees F. for 12 hours. In 12 hours if the milk is thick and coagulated it may be propagated, if not the temperature should be kept at 88 degrees F., and if necessary kept another 12 hours until it is quite thick and coagulated.

If it takes longer than 24 hours to coagulate the powder has been useless and a fresh culture should be used, the other being thrown away. To propagate the Starter take one gallon of new milk, heat to 165 degrees F.,cool to 80 degrees F., then add 1 tea-cup of the culture Starter; stir well in and allow to stand another 12 hours when it should be thick and ready for use. Before using, the top of starter should be skimmed and thrown away and the rest always strained through a sieve.

You Can Make Better Foods For The Children With "Beaver" Flour Than You Can Buy

Next to a returning Arctic Explorer, the hungriest mortal on earth is a growing boy. He is always ravenous. "He will eat anything". But why should he?

Right now is the time when his parent should be most particular about his food—to prevent injudicious eating and to protect him against unsuitable food.

Good, home-made bread, made of "Beaver" Flour—light, flaky biscuits made of "Beaver" Flour—these are real foods for growing children. "Beaver" Flour is a blended flour. That is, it is made of exact proportions of nutritious, beautifully flavored Ontario Fall Wheat and a smaller proportion of the stronger Western Spring Wheat.

It is both a bread flour and a pastry flour—and makes the real nutty flavored home-made bread and delicious pastry such as cannot be made with any purely Western Wheat Flour.

Just try "Beaver" Flour—and see for yourself how thoroughly satisfactory and dependable it is for all kinds of baking. Your grocer sells "Beaver" Flour or can get it for you. Dealers—Write us for prices on Feed, Coarse Grains and Cereals.

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Improvement of the Dairy Herd.

(Continued from page 635)

the cheese season, and have December and January dry, as they should have two months rest in the year. For my own conditions, I believe and practice dairying all the year round as I consider it the best line of farming both for the farmer who practises it, and the country at large, as in the case of butter at least, it takes nothing from the soil, and by the application of the valuable amount of manure produced, he is yearly in the position that he can hope to grow more feed and carry more stock.

The man who takes $500 from hay and grain gets the money, for his labour and the fertility that he has sold, but the produce is gone from him and he can get no further benefit from it. But the man who takes $500 for butter creates at the same time conditions on his farm that will make it easier to do so another year and be a benefit for years afterward.

Dairy cattle in the line of "live stock" as wealth producers are in a class by themselves, for they can use for the production of milk the heaviest producing crops such as corn and roots that yield by far the most feed per acre of any of our farm crops. Horses are said to be profitable at present prices, but they must be fed the lighter yielding hay and grain so we are limited to the number we can carry. Poultry while also a profitable line must be largely fed the light producing crops. Sheep are in the same class. But large numbers of dairy cattle can be fed on a very small farm, after being gradually brought under this intensive system of corn, roots and green fodder which a dairy farmer with a large quantity of manure is enabled to grow, that it does not matter so much re size of the farm as the help available to handle the crops, etc.

Did you ever consider the amount of milk feed on fifty acres of roots and corn, or the amount of milk to be produced from one acre of 1000 bushels of roots, well it is really wonderful, and explains, how Denmark and some other countries are producing so much milk. They require great labor to produce. Yes! Isn't that an advantage? Isn't it well for the country that many farms that formerly supported one family are now keeping two or three? Isn't the fact that an up-to-date dairy farmer, must spend more money on an improved plant and machinery, (than an ordinary mixed farmer) a good thing for the country he spends that money in, and if by his method of farming he gradually doubles the production, or builds another farm on top of the one he used to have, isn't that also a good thing for himself and the country in which he farms? This is why Governments all over the world are doing all in their power to induce dairying to be more intensively pursued.

Any line of farming that will give profitable employment, the year round, is the farming that this Province requires, the system that will divide the work up in the year, that will allow the farmer some freedom to grow his crop in summer and manufacture it in winter, when he can personally oversee the detail work, is when good calves can be raised, when good big records can be made.

Feed is the same from month to month, temperature in the stable the same (if you wish it so) and no flies or other pests to annoy the cows. This is when there is time to give the calves proper attention, and they will not bother you again in the rush of summer.

These are some of the reasons why I follow dairying, work that is often classed as slavish, a mistake that originated in the age when a full day's work was first done and milking extra afterwards. That is plan now followed by progressive dairymen, it pays to milk and they take the time in the regular hours of the day (whatever time it takes), and in conclusion I would urge if you are following this work keep track of what you are doing, weigh and test every ten days, increase the feed and weigh it as well as the milk, so you may learn to feed profitably. Keep strict account of the work of each cow, and aim to have every bunch of calves an improvemnt on their predecessors and success is assured.—Paper read by Walter M. Lea before the Annual Meeting of the P. E. I. Provincial Dairymen's Association.

Some trees and shrubs are loaded every season with plant lice. On those affected last year one is likely to find shrubs early, and burn the trimmings, shortly become loaded with lice. Why not, therefore, trim hedges and now small, black, shiny eggs at the ends of the twigs. These can be seen on fruit and other trees, various ornamental shrubs, and particularly on the buckthorn. As soon as the tender leaves begin to unfold on this shrub the eggs hatch, and the leaves burn as well all prunnings of fruit trees? It is very well known that plant lice increase at a tremendous rate when once started, therefore, each egg destroyed now, means the death of hundreds of lice, and the consequent lessening of the work of spraying later.—F. L. Washburn, Entomologist, University Farm, St. Paul.

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has supplied both these requirements.

We employed men to make a thorough investigation of the farmer's requirements; to find out where and how he could use concrete with profit to himself; to discover all problems he might come across and to solve them. This investigation was expensive. But when it was completed we had the material for our campaign to show the farmer how and where to use concrete, and we printed a book, "What the Farmer Can do With Concrete," for free distribution. That book makes every farmer who reads it a concrete expert, as far as his needs are concerned. He finds that there is nothing mysterious about concrete—that a few simple rules supply all the knowledge required.

At the same time we met the farmers' second objection—inability to test the quality of cement—by producing cement of a quality that does not need to be tested.

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The Feeding of Roots.

(Continued from page 637)

ROOTS FOR LAMBS.

Every feeder knows something of the importance of roots for sheep in general, and it is difficult to get a really satisfactory substitute. At the Michigan Experiment Station sugar beets gave better results than corn silage for fattening lambs, but turnips were scarcely equal to silage.

At the Iowa Experiment Station mangels were fed against corn silage. The daily gain was slightly in favor of mangels, and the grain consumed for 100 lbs. gain was less for the lot receiving mangels, but the lower cost of corn silage made it the more economical food of the two. In Great Britain, roots are used very liberally in sheep feeding, and the quality of sheep produced in that country speaks well for the suitability of the ration.

ROOTS FOR HOGS.

The average results of feeding roots to hogs at five experiment stations show that 100 lbs. of grain was replaced by feeding 557 lbs. of roots. In tests at the Ontario Agricultural College our best showing for roots was 442 lbs. of roots equivalent to 100 pounds of grain, which may be regarded as an abnormally high value for roots.

In extensive feeding trials in Denmark, it was found that one pound of ground barley was equal to:

	% Dry matter	% Sugar
7.5 lbs. mangel beets containing	11.0	6.7
6.5 " " " "	13.6	8.9
5.0 " " " "	16.5	10.9
4.0 " " " "	21.2	14.0

The very high return from feeding roots at the Ontario Agricultural College is due probably to the fact that the hogs which were not fed roots received an exclusive meal ration, and the roots appeared to stimulate the appetite, and aid digestion which was shown in the more thrifty appearance of the root fed hogs. In the Danish trials dairy by-products were fed to all the hogs, and hence the roots did not show to as great advantage, the dairy by-products giving the desired variety in the ration of the hogs which received no roots. It has also been found that hogs fed equal weights of roots and meal produced a better quality of bacon than those fed grain alone, but every horseman knows the beneficial defects.

Sanborn of the Utah Experiment Station, investigated the influence of roots upon the carcass of the animal. In his summary of results he makes the following statements: (1) The live weight gain for cattle and sheep was greater, and for hogs less, when fed on roots. (2) The dressed weight of cattle, sheep and hogs showed in every case greater shrinkage for those fed on roots. (3) The root fed animals contained more blood and necessarily more water in the blood. (4) The root fed steers had heavier vital organs. (5) The fat was always less for the root fed animals.

To summarize the whole question it may be said that corn silage is a cheap and efficient substitute for roots in some cases, but for certain classes of stock, and especially in the case of young animals, it is difficult to find anything that will take the place of roots.—By Prof. G. E. Day, O. A. C., Guelph, Ont. in Farm and Dairy.

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Mutton and Its Value as a Food.

Farmers' Bu,letin 526, "Mutton and Its Value in the Diet," which has just been ussued by the Department of Agriculture, Washington, tells of good ways of preparing old dishes and of new ways to utilize, and new dishes which can be made from mutton.

Mutton and lamb have always been regarded as particularly wholesome, and there is reason for this belief, as shown by work of the Department of Agriculture. Of the two meats lamb has been the more popular in the United States in recent years, perhaps because special attention has been given to raising it for the market and to extending its season. On the other hand, mutton is the favorite in England. The whole question is simply one of taste, and mutton in some form or other has always been a staple and favorite food, used in large quantities, and, on account of its good qualities worthy of much more extensive use.

In composition and nutritive value mutton is practically the same as beef, and the average loss in weight in preparing the two kinds of meat for the table is also practically the same, yet mutton has for some time been a cheaper meat in our markets than beef. Buying in quantity is recognized as economical where the housewife has facilities for storage. There are many cases where a side of mutton could be economically purchased for home use where a side of beef would be too large for such a purpose. This would inply an economy in the selection of the mutton.

As regards digestibility, there is no practical difference in beef and mutton, both being very thoroughly assimilated. The characteristic flavor of mutton is commonly said to have its origin in the fat. It is generally relished, and may be developed or modified by various methods of cookery to meet the tastes of the family. That mutton fat can be used in the household in many ways has been demonstrated by experiments which have been made with it.

The ways in which mutton can be prepared for the table are very numerous. Some of these are well known to the housewife, and others are less familiar. All are worthy of a trial, since the ability to make many dishes with any given foodstuff is an easy way in securing variety in the diet, which is so desirable. The housewife who wishes to economize can make many savory dishes from the inexpensive cuts of mutton, which are palatable as well as wholesome.

Judged by its composition, palatability, wholesomeness, digestibilityi relative cost, and the number of ways in which it can be prepared for the home table, mutton is an important foodstuff. which is well worth the attention of the housekeeper who wishes to provide her family with an attractive and palatable diet at a reasonable cost.

A Cause of Loss in Cattle Breeding.

Unfortunately for Canadian cattle raisers, many calves are lost each year through accident of premature birth. While no doubt many of these losses are due to injuries, a much greater number are caused by contagious abortion.

For the information of cattle raisers the Veterinary Director-General has issued a reprint of a leaflet of the British Board of Agriculture and Fisheries on this disease, which is being made the subject of very careful study and experiment in the Old Country.

This reprint, which constitutes a brief pamphlet of less than four pages, deals with the subject under the following heads: Animals Affect-

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d, The Microbe, Virulent Material and method of Infection, Symptoms and prevention.

It is written in plain language and contains information of great value to all cattle raisers and persons who are studying the disease. It is printed for free distribution to those who apply for it, but it is not sent out to the regular mailing list of the Publications Branch of the Department of Agriculture at Ottawa.

Milking Standard for Shorthorns.

Bulls.—Admitted after having four daughters in the Record of Performance, each from a different dam.

Cows.—Admitted after fulfilling the following requirements of production, and breeding as supervised by the Live Stock Branch of the Department of Agriculture.

All cows admitted must equal or exceed both the records specified below:—

	Lbs. Milk	Lbs. Butter Fat
Two-year-old class	...4,000	140
Three-year-old class	...4,500	157.5
Four-year-old class	... 5,000	175
Mature class	... 5,500	192.5

The per cent. of butter fat shall be determined by Babcock test.

Year's Milk Record.—If the test be commenced the day the animal is two years old or previous to that day, she must produce within 365 consecutive days from that date, 4,000 pounds of milk. For each day the animal is over two years old at the beginning of her year's test, the amount of milk she will be required to produce in the year will be determined by adding 1.37 pounds for each such day to the 4,000 pounds required when in the two-year-old class. This ratio is applicable until the animal is five years old, when the required amount will have reached 5,500 pounds which will be the minimum amount of milk required of all cows five years old and over.

Years' Butter Fat Record.—If test be commenced the day the animal is two years old or previous to year will be determined by adding .048 of a pound for each such day to the 140 pounds required when in the two-year-old class. This ratio is applicable until the animals is five years old when the required amount will have reached 192.5 pounds, which will be the minimum amount of butter fat required of all cows five years old and over.

Every cow accepted for registration of performance must drop a calf within fifteen months after the commencement of the test. In the four-year-old class and the mature class no cows will be accepted for registration of performance if the beginning of her previous lactation period was more than fifteen months before the commencement of the test.

All applications for the test must be mailed to W. C. Pettit, Freeman, Ont., Secretary of the Dominion Short-horn Breeders' Association.

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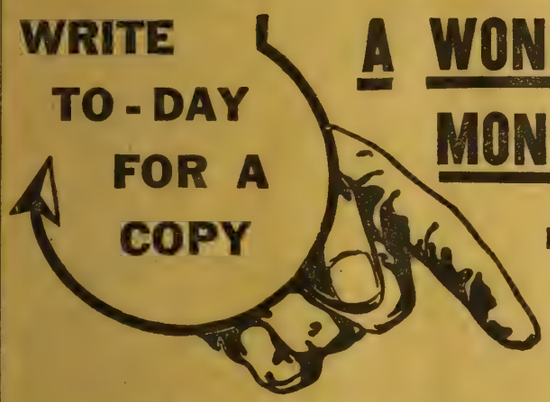

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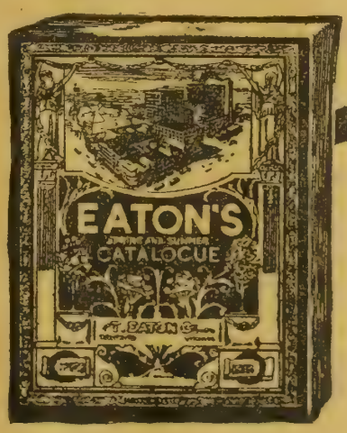

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Nova Scotia Provincial Exhibition September 3rd to 11th.

Notwithstanding the fact that the Nova Scotia Provincial Exhibition has always offered, and paid out far more prize money for Stock and Agricultural exhibits than any of the lower Province Fairs, yet they are not content with this honor but are prepared to keep up with the times and at the same time assist and encourage the farmer in his work by adding to the Prize List.

In the Horse Department a new class has been added, viz:—

Light Draught or Agricultural, in which the same prizes are offered as in the Heavy Draught, and General Purpose Horses.

In the Dairy Classes, a distinct addition has been added in the classes, viz:—

Section for Dry Cows, 4 years and upwards, while in all the female sections 4th and 5th prizes are added, where there are more than six or eight exhibits respectively.

In the Sheep Department extra prize money has been added in each section, or a total of twenty dollars in each pure bred class.

In the Swine Department the same addition has been made as in the Sheep Classes, or a total of twenty-four dollars in each class.

These additions swell this year's list by nearly $1,000, and are in classes in which there has always been strong competition and consequently the Commission will be called upon to pay a larger percentage of this increase. The farms throughout the Province should take these facts into consideration and show their appreciation by patronizing the Exhibition at Halifax.

Any persons who have not received copy of Prize List may have same mailed them by writing M. McF. Hall, Secretary, Halifax, N. S.

Important Appointment at the Nova Scotia Agricultural College.

Principal Cumming has just returned from a trip to the Eastern States and Upper Canada in quest of men for the Agricultural College staff and has been most fortunate in securing as successor to Mr. Stevenson, in the position of the Professor of Agriculture and Farm Superintendent, Prof. J. M. Trueman, B. S. A., at present Professor of Dairying and Head of the Dairy Husbandry Division at Storrs Agricultural College and Experiment Station, Connecticut.

Professor Trueman is one of the strongest men in his line in America, his services having recently been sought by a number of institutions. He was born in Point De Bute, Westmorland Co., N. B., being a son of the late Howard Trueman, one of the best known agriculturists in New Brunswick. He has occupied important positions in the United States for nearly twenty years but, like many another Maritime Province man, could not but recognize the call of the East when it came to him.

Mr. Trueman graduated from the School of Agriculture, Truro, in the early nineties and from Cornell Agricultural College in 1895. From 1895-97 he was Instructor in Dairying and Assistant Agriculturist at Dakota. Fow the following seven years he managed two of the largest private owned farms in the State of Pennsylvania, after which he returned to his Alma Mater, Cornell, as Assistant Professor of Dairying. From 1905-07 he occupied a similar position in Illinois and from 1907 to the present date, he has been at the head of the Dairy Department at Connecticut Agricultural College.

Mr. Trueman comes to Nova Scotia thoroughly familiar with the prevailing local conditions. He has the advantage of nearly twenty years experience in some of the leading Agricultural Colleges and farms in the United States. Wherever he is known in that country, he is recognized as a thoroughly practical man and a true friend and good adviser to the farmer. The addition of such a strong, well-known and experienced man to the College staff at Truro will, no doubt, be greatly appreciated by the students, visitors and farmers, of the Province generally, who sees in practical Agricultural education one of the greatest means to progress in this or any other country.

Cows as Weed Seed Destroyers.

An experiment conducted in Maryland tends to show that a larger number of weed seeds will pass uninjured through a horse than through a cow. A cow and horse were each fed 2 lb. of unground grain screenings with mid dlings, bran and wheat straw each morning and night for seven days. On the evening of the seventh day they were bedded with sawdust and the dung of one night collected. The sawdust and dung were thoroughly mixed and put in boxes and set on a bench in the greenhouse. The dung was collected on May 24th. On June 21st the following weeds had germinated and grown:—Cow's dung: Lamb's quarters, 149; pigweeds, 12; bindweed, 14; oxtail, 4; timothy, 2. Horse dung: Lamb's-quarters, 1,213; foxtail, 28; pigweeds, 11; bindweed, 12; timothy, 6; clover, 3; morning glory, 2; mustard, 5.

Dates to Remember.

Nova Scotia Provincial Exhibition, Halifax, N. S., September 3 to 11, 1913.

Miramichi Exhibition, Chatham, N. B., September 8 to 13, 1913.

Charlotte County Exhibition, St. Stephen, N. B., September 22 to 26 1913.

Fredericton Exhibition, Fredericton, N. B., September 15-20, 1913.

P. E. I. Provincial Exhibition, Charlottetown, P. E. I., September 23 to 26, 1913.

Canada Eastern Exhibition, Sherbrooke, Que., August 30 to September 6, 1913.

Canada National Exhibition, Toronto, Ont., August 23 to September 8, 1913.

Central Canada Exhibition, Ottawa Ont., September 5 to 13, 1913.

Maritime Winter Fair, Amherst, N. S., December 8 to 11, 1913.

Fredericton Poultry Show, Fredericton, N. B., February 17 to 19, 1914.

Dominion Exhibition, Brandon, Man., July 15 to 25, 1913.

Get a Start Cheap!

Six Sicilian Buttercups eggs, four Turkeys eggs, (Bronze), five of my best Single Comb Rhode Red eggs, $2.00 for the fifteen.

Four handsome pairs of Sicilian Buttercups $5.00 A pair

Sicilian Buttercups generally agreed among those who breed them to be the best layers known $3.00 for 15 eggs.

Bronze Turkeys eggs $3.00 for eleven.

Single Comb Rhode Island Reds good birds in every way, and splendid to hatch and rear turkeys $2.00 for 15 eggs

I have plenty of all these eggs I can supply any number. Order straight from this adv. and save time.

Terms, Cash with order.

SARAH E. MOSES SMITH,
Woodward's Cove, N. B.

A pen of Indian Runner Ducks three females, one male $5.00

Holstein Bulls For Sale

We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
Loch Lomond West Nova Scotia

HEREFORD STOCK FARM

Let us know how much money you want to invest in Hereford bulls, heifers, or cows with calf by her side or bred to "Prime Lad".

Buff Orpingtons and White Wyandottes, good laying and Utility strains, eggs $1.50 per 13.

R. R. BLACK, Amherst, N. S.

CORNING TURNIP SEED FOR SALE

About 1000 lbs. of the famous Gr. Top "Corning" Turnip Seed, crop 1912, grown from selected roots. Price 50c., postpaid 55c.

S. P. GOUDEY, Yarmouth, N. S.

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

C. C. H. EATON,
Canard, N. S.

Raspberry Plants!

Wishing to remove all Raspberry stock from ground they now occupy, we are making the following low prices for April: King (early), $1.25 per 100. The celebrated "Herbert," $2.00 per 100. Hiram, $1.00 per 100. Cuthbert, $1.25 per 100. Eaton (new), $1.50 per 100. Any variety mailed, postpaid, 50c per doz.

Orchard Hill Farm,
Brown's Flats, N. B

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.B.

Elmshade Jerseys

Bulls from six to twenty mos. Sired by College Fox whose dam made a record of 678 lbs. butter in one year.

Horse 7 yrs. old, weight 1200 lbs., good driver and good worker, would make a good express horse.

J. R. SEMPLE, Brule, N. S.

OCULUM

For Roup, Canker, Cholera and White Diarrhoea.

Greatest Poultry Tonic on Earth Sent prepaid for $1.00 per bottle.

GEO. H. SEAMAN, Moncton, N. B.,
Sales Agent for Oculum

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N. B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire attle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

Stewart Bros., Alliston, P. E. I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.

Shropshires

C. A. Archibald, Truro, N. S.

POULTRY.

Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

Springbrook Ayrshires !

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

SPRINGVALE FARM AYRSHIRES

Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd.
Young Stock For Sale.

FRED S. BLACK, Amherst, N. S.

"HILLSIDE STOCK FARM"

We have for sale at right prices four Ayrshire bulls from twelve to fifteen mos. old. They are sired by the champion bull of 1911; a son of the renowned Scotch champion "Spicy Sam."

Prescott Blanchard, Truro, N. S.

Sea View Stock Farm

offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

Sgd. J. D. IRVING,
Buctouche, N. B.

ROSE BANK FARM
Jerseys & Yorkshires For Sale

Jersey bull calves by Foxhall's St. John O'Dreamwold, and two litters of Yorkshire pigs, ready to ship in June.

JOSSELYN & YOUNG, Silver Falls, St. John, N.B.

Lawndale Stock Farm Shorthorns

We offer at present a few young heifers and bulls, as well as three cows, all bred in the purple. One two year old bull in service, very low.

Information cheerfully supplied to enquirers, Address,

. M. LOVITT, M. D., P. O. Box 352, Yarmouth, N. S.

FOR SALE!

A few choice White Leghorn Cockerels from prize stock. Eggs for hatching all breeds. Send for catalogue.

Maritime Poultry Supply Co.
MONCTON, N. B.

NORTHERN GROWN TREES

Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery —no agents. Send list of your wants for prices, etc.

E. L COLPITTS
Petitcodiac, New Brunswick

FOR SALE

We have a number of choice cockerels and pullets of Barred Plymouth Rock, White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Eggs for hatching $1.00 per setting. Apply to

Walter McMonagle & Sons, Sussex Corner, N. B.

Pure Bred Ayrshire Bull Calf

Dropped Jan. 12th, 1913. Bred from a daughter of Barcheskie Kings Own. Come and see him and his dam. Stables near the station.

ALLANDALE FARM, - Hampton, N. B.

Commercial Strawberry Plants
FOR SALE

Senator Dunlap — Perfect blossom, very vigorous, good size, good quality, very productive, $3.50 per 1000 f. o. b.
Sample—Imperfect blossom, very large, very productive, fair quality. $4 00 per 100 f. o. b.
Cash must accompany order.

L. D. ROBINSON,
Berwick, N. S.

EGGS FOR HATCHING

From prize mating Rose and Single Comb R. I. Reds and Buff Orpingtons and S. C. Brown Leghorns. Eggs $2.00 per 15. Send for mating list.

W. H. HENRY, Shubenacadie, N. S.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Fullline of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

SHORTHORN CATTLE

To avoid inbreeding am obliged to offer my splendid. dark red, imported stock bull for sale. Bred by The Right Hon. Earl of Moray. Doune, Scotland, is of the low down kind and represents the best quality and families of this breed in Scotland. His color alone is worth his price to anyone wanting a head for a herd.

J. E. Hetherington,
Codys, N. B.

BARRED ROCKS
(Exclusively.)

Never beaten out in 15 years of competition. Now holders of Silver Cup for Best Birds at Amherst Fair, 1912. Offering eggs from six pens—every bird an exhibition specimen. Prices cheertully given on application. A few colonies of Bees for sale.

CRAIG BROS., Amherst, N. S.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

DROP A CARD

KINGSDALE MATING LIST
Our mating list is now ready for 1913.

KINGSDALE POULTRY SUPPLY CATALOG
Fully illustrated 60 pages all up to date.

EVERYTHING FOR THE POULTRY KEEPER

KINGSDALE POULTRY & SUPPLY CO., SUSSEX, NEW BRUNSWICK

WISH-TON-WISH STOCK FARM
Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaFoxit Iac, who won first prize wherever shown. Can spare a good Berkshow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

AYRSHIRE BULLS FOR SALE

I am offering a two-year-old bull for sale. He is out of the famous cow White Heather of St. Annes. I have also two other choice bulls that are fit for service. Correspondence solicited.

J. FRANK ROACH, - - Sussex, N. B.

BRAMPTON JERSEYS !

Champions of Canada. **Champion of World.**

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

YOUNG HOLSTEIN BULLS !

We have lots of them, all ages, from one to six months. Show Calves from our best cows. Now is the time to get your choice. Females all ages, bred for the fall shows and dairy tests. Some excellent high grades fresh or springing. Also Three Draft Fillies rising two, three and four, and a quantity of Seed Potatoes.

LEA & CLARK, VICTORIA, P. E. I.

Rockview Farm, Welsford, N.B.

(Wm. S. Harding, Jr., Proprietor)

High Class Holstein Cattle. Young stock bred from heavy producing and showing ancestry for sale.

Cobequid Farm Holsteins

Present offering. One fine bull fit for service and several bull calves three or four months old, sired by Helbon Dehols Prince, and from cows that are producers. Among them one whose two nearest dams average over 26 lbs. butter in 7 days. For particulars and prices write

Samuel Dickie & Son, Central Onslow, Col. Co. N.S.

BELLEVIEW STOCK FARM
Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

C. A. ARCHIBALD, - Truro, N. S.

HOMESTEAD FARM

Holstein--Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

LOGAN BROS.
R. R. I.
Amherst, N. S.

Long distance 'Phone

JOHN RICHARDS,
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Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

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Northern Electric Telephones

If this Happened to *You* What would *You* do?

When your Binder breaks at harvest time and you have to drive miles for spare parts, how much does it cost YOU in time and money?

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The

MARITIME FARMER

AND CO-OPERATIVE DAIRYMAN

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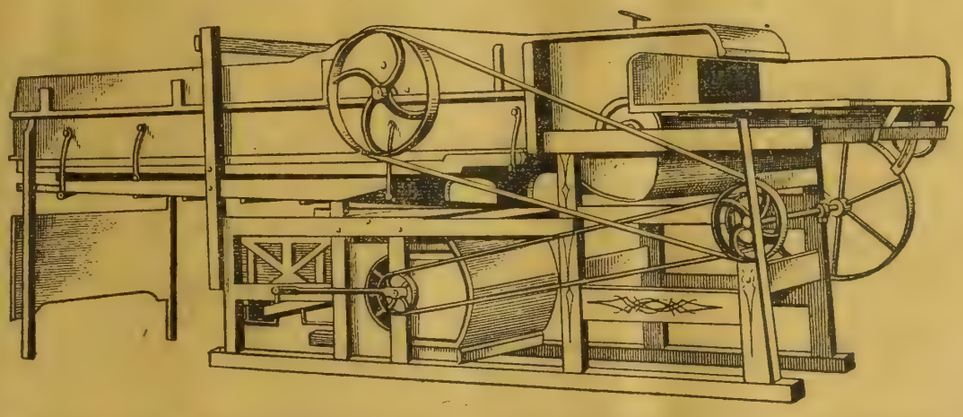
Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 18. SUSSEX, N. B., JUNE 24, 1913 No. 18

Little Giant Threshing Machine



¶This machine has a thirty year unbroken record for efficiency. It is made by The Hall Manufacturing Company of Summerside, P. E. I. We have sold a good many of these machines to our customers in the past few years, and it has been a pleasure to us, as everyone has been so well pleased with his purchase.

¶These machines are coming into use in Ontario and the West also, as farmers are seeing that it is an advantage to have their own machine and do their threshing, when and how they please. These machines are inexpensive, varying in price from $120.00 to $210.00 f.o.b. Point du Chene, N. B.

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Let's make a Jelly Roll—
With FIVE ROSES flour.

Its *Strength* and *Fineness* hold your batter together in the long well-greased pan.

Bakes *evenly.*

Smooth Texture—soft, golden Crumb, spongy, porous, yielding.

No holes, nor lumps to *vex* you.

And when you turn it out on the damp napkin hot and *savory*, and you spread the under side with "jell"—

It doesn't get *soggy* nor crumbly.

Roll it gently, carefully.

Not a *crack*—not a *break*.

Perfect Smoothness—a Perfect Roll *Yours.*

Bake anything, make anything.

Use FIVE ROSES—*bread and pastry.*

Melting puff paste—flaky pie crust—crinkly fritters—tooth some rolls.

FIVE ROSES for anything—*everything.*

Be flourwise.

Five Roses Flour

Not Bleached — LAKE OF THE WOODS MILLING COMPANY KEEWATIN TRADE MARK REGISTERED — Not Blended

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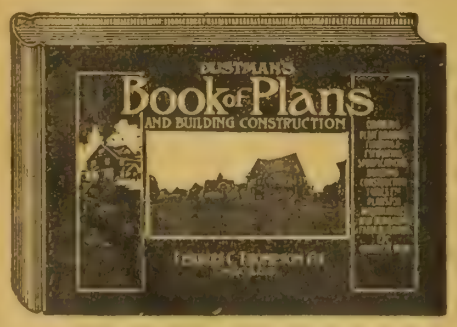

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By U. M. DUSTMAN, (*Licensed Architect*)

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Here's a different book from those upon the market. It contains information not generally known outside the building trades; just such information which the building public want. The author has written a book in which he has embodied the cream of over thirty years successful experience. He is widely known as a practical and expert architect and is an authority on the construction of medium priced homes.

Everyone interested directly or indirectly in building should have this book. 250 pages; oblong size, 9x13 inches; bound in blue cloth; white hand stamping—150 plans for modern houses, bungalows, barns. farm buildings, store fronts, store buildings, garages, etc., etc.

CONTENTS : General Construction Plans—Arrangement of Rooms—Things to be Considered in Laying out a building—Heating Facilities—How to Estimate Cost—Figuring Amount of Material Required—Time Saving Tables—Mechanical Drawing and How it is Applied in Construction of a Building—Plans with Estimated Cost of 150 Houses, Bungalows Barns, in Frame, Concrete or Brick Construction—Country Houses—General Barns, Cattle and Horse Stables—Dairy Barns—Poultry Houses and Silos—Hints as to Best Style of Structure—Details of Interior Construction and Finish—Window and Door Framing—Stairways—Store Fronts—Roof Construction—General Directions For Mixing and Placing Concrete - Proportions—Sand and Gravel—Itamized List of Material Costs—Writing of Specifications.

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THE MARITIME FARMER, SUSSEX, N. B.

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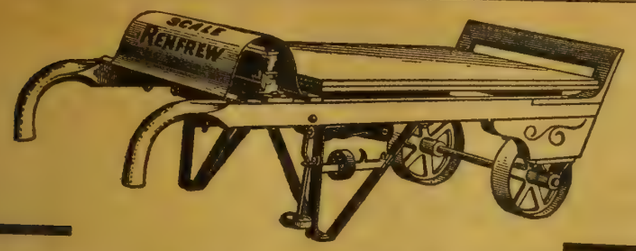

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SAVES MONEY FOR FARMERS AND DAIRYMEN

Thousands of farmers are losing money yearly through the inaccuracy of their scales

It was to protect the farmers against these losses that the Renfrew Truck Scale was designed and built.

And it does protect them—by being absolutely accurate. Gives the farmer *all* his profits on everything he sells by weight.

Saves for him time and labor,—simply wheel the scale to what you want to weigh.

Weighs everything from one pound to 2000 lbs—and weighs it right.

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"The Profit In The Last Ounce." It tells in an interesting way the business side of farming, and how money is saved with a "RENFREW" Handy Two-Wheel Truck Scale.

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Please send me Free of charge, booklet "The Profit in The Last Ounce."

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are summed up briefly under the following captions:

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Our goods are made to suit you no matter what your occupation may be or what they are needed for.

We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited
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Make Your Coal Oil Lamp Your Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
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A
FAIR
TRIAL

EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

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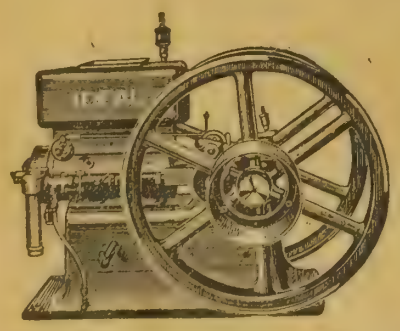

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Volume 18. SUSSEX, NEW BRUNSWICK, JUNE 24, 1913. Number 18.

Knowledge of Animal Nutrition Essential in Feeding

By Prof. P. A. Campbell in Maine Farmer.

THE five general compounds which have to do with the animal nutrition are water, ash or minerals, protein, carbohydrates, and fat.

Water is found in all feed stuffs, varying in amount from a few percent in some of the grains and their by-products to about 90 percent in some of the succulent feeds like turnips. The animal body also contains a considerable amount of water, varying upon the condition of the animals as well as upon the age and species of animals. In general, more than half the weight of the animal body is water, which is continually being given off from the body in the form of vapor from the lungs; in the form of perspiration from the body, and in considerable amounts through the kidneys, and, in the case of the milking cow, large quantities are used in milk elaboration. Large amounts are necessary for the body functions, and a regular supply is necessary. It is the water held in the plant which gives to green or succulent feeds their palatibility, and through this palatability increases the secretion of the digestive juices in the alimentary tract, thus effecting a more thorough digestion, and usually creating a natural laxativeness. Consequently at seasons when animals are usually kept on dry feeds, if the ration is supplemented with some succulent feed, whether it be in a green form (just as it grows) or in a form in which it can be stored in its natural condition like the root crops, or preserved in the form of silage, the results are beneficial and the feeder gets through it a more thorough digestion of all the feed stuffs fed, and better results in the health, growth and production of his animal.

As all feed stuffs contain more or less ash or mineral matter, it is generally conceded, even by experienced feeders, that in the natural course of feeding, the animal will be supplied with sufficient ash for its requirements. But with the endeavor to produce a greater economy in feeding, and with the modern methods of milling, it is more than likely that the supply of ash sometimes becomes unbalanced, and there is need for paying more attention to it. The ash is what remains of the animal after all that burns has passed away, and in the live animal it has a direct connection with the life processes.

Jordan states that 83.9 percent of the ash content of the bone is calci- -phosphate, and to this compound is due the hardness and stability of the bone. If there is a deficiency of calcium and phosphorus in the food, it results in a mal-nutrition of the bones if continued, as is shown by a lack of development of those parts. The animal will lack size, muscular growth is interfered with, and in mild cases the growth is very largely of fat. The bone probably acts as a sort of storehouse for the mineral matter and supplies the rest of the body if the food supply becomes low, in order that the metabolic processes may be maintained. At the Wisconsin Experiment Station a cow gave off 5.5 more lime in milk and excretements than was in the food, when fed a ration low in lime. A condition like this results in brittleness and porosity of the bone, and if it were continued, would mean disaster to the animal. At the Geneva Experiment Station it has been proven that it is the mineral constituents of wheat bran which make it a laxative for ruminants at least, and the bran when freed from these salts is quite constipating.

Iron is a part of the haemoglobin of the red-corpuscles, and through its affinity for oxygen; the oxygen is carried from the lungs to the tissues, there to unite with the carbohydrate nutrients of the cells, which causes a breaking down into carbon-dioxide and water, thus the heat or energy which was used in binding them together in the leaves is liberated. This energy came, of course, from the sun, and, to quote directly from Forbes "When liberated in the animal cell", it is manifested in heat and in the various movements and processes which constitute life." Thus it is seen that iron, although of minute quantity in the animal body, is absolutely essential.

Citing a few other uses of ash in the animal body as given by Forbes of the Ohio Experiment Station, we find that calcium in the blood is essential to its coagulation, without which small wounds would result in death by bleeding. Again, mineral chlorides furnish the chlorine of the hydrochloric acid in the gastric juice; the ferment pepsin being inactive except in the presence of hydrochloric acid. There are other uses to which the ash is put in the animal body, but sufficient has been said to indicate the relative importance of the mineral elements and the necessity of giving them consideration, although as yet enough is not known about them so that the feeder can give a great deal of attention, except to get an idea of those feed stuffs which carry an abundance. and of those which are deficient; for example, among the common feeding stuffs it is well known that wheat bran, clover hay, and meat meals are richer in ash, while anyone who has fed hogs on a clear corn ration knows it is deficient in ash, as is shown by the fact that the hog fattens quickly but does not grow bone of sufficient size so that it goes down; that is, the body gets too heavy for the strength of the bone.

The compounds— carbohydrates and fat—are known as the heat and energy producers. Each is made of the three elements—carbon, hydrogen, and oxygen; in the carbohydrates the unit of hydrogen and oxygen being in the proportion of two to one, while in the fat there is a larger number of carbon and hydrogen units in the proportion to the oxygen.

The cell walls—thin and tender in the growing plant, hardy and woody in the mature plant—form what is called cellulose or fibre.

The nitrogen-free-extract is the total dry matter of the plant, less the ash, crude protein, fibre and fat,—and is composed of the starches, sugars, pentoses and non-nitrogenous organic acids.

The fibre and nitrogen-free-extract, together constitute the compound that is termed carbohydrates. A feed stuff which carries a large percentage of carbohydrates is spoken of as carbonaceous. Thus most of the roughages except the legumes are carbonaceous, also corn and most of its by-products.

Glucose, or glucose-like sugars, are the only forms in which the carbohydrates can be used in the animal body, except milk sugars, which may be absorbed in minute quantities from the alimentary tract. The saliva secreted from the glands of the mouth contain a ferment, ptyalin, which partially changes the starches into sugars. Aside from this, the saliva moistens the food and thereby aids mastication. It is said by some authorities that an average-sized cow will secrete 112 lbs. of saliva in 24 hours. Ptyalin action may continue in the first part of the stomach; from the stomach most of the carbohydrates are carried on into the small intestine, and are acted on by the amylopsin.

There seems to be no ferment especially adapted to digesting the cellulose, and bacteria of the alimentary tract attack it.

The fats become broken up into glycerine and fatty acids, and become partially saponified. These soaps and the glycerine are absorbed by the intestinal walls, in the cells of which they are reunited into fats, and are given into the circulation as such. It is plainly evident that the fats in the feed stuffs fed to the animals indicate to a certain extent the character of the fat, after it has become absorbed and known as animal fat. Fats of a low melting point, when fed to animals, produce animal fat with a low melting point, and vice versa with fats of a high melting point; hence the reason why some of the dry feeds, barley and cotton-seed meal, produce a milk fat of which the fat globules are hard and require a higher churning temperature; also why corn and its products, linseed meal and some of the succulent feeds, produce fat of a low melting point and a soft butter unless the cream is kept at a lower temperature,

The uses to which carbohydrates and fats are put in the animal body are not materially different. Fat has a greater heat or energy producing value than the carbohydrates, which, as near as can be determined by the chemist, is supposed to be 2¼ times as great.

After the carbohydrates in the form of glucose have entered the circulation, it is found stored in the liver in the form of glycogen, and in very minute quantities in the muscles and blood. When work is done, the glycogen of the muscles is first drawn upon, then that which is stored in the liver. The glucoses may also be converted into fats and stored as body fat, thus it is seen that fats and carbohydrates practically do the same work—that of producing heat and energy, or storing up body fat.

Protein, the last of the compounds to be considered, differs from carbohydrates, in that it contains nitrogen, sulphur and sometimes phosphorus. The percentage of protein in a feed stuff is determined by taking the amount of nitrogen and multiplying by 6¼, as it is found by the chemist that about 16 percent of the plant proteins is nitrogen. Protein is made up of various proteids, and varies more or less according to the source, although as yet there is not a very clear understanding just how the part they play in animal nutrition varies.

Protein digestion begins in the stomach, and follows in the small intestine. The protein is attacked by ferments and is split up into simpler compounds which take up water and become more soluble.

After being split up and acted upon by the various ferments until they are in their simplest forms, animo acids, and are soluble in the intestinal juices, they are then ready for transference through the intestinal walls

and constitute the nitrogenous building material out of which the protein tissues of the animal body are built.

Most of the digestion and absorption takes place before the large intestine is reached, and the contents of the large intestine consists of undigested substances of all kinds taken in with the food—bile salts which have escaped resorption, water, mineral salts, and fragments of the lining of the small intestine. A small amount of digestion may occur here if ferments have escaped from the small intestine and there is more or less bacterial action. Any soluble products which may arise here as a result of digestion are absorbed. The waste which finally escapes from the large intestine forms the excrement or feces of the animal.

Considering the process of digestion it can readily be seen that it is not the food which the animal eats, but that which is digested and finally absorbed into the animal body, which actually counts. Again, for an economy of the food nutrients, it is desirable that they be in the right proportions to prevent the animal body from wasting them.

All the tissues of the animal body are continually breaking down and wasting away, and are being continually repaired from the new food nutrients which are assimilated. The nitrogen passes from the body in the urine, and the amount passing is considerable; even if protein is entirely withheld, the nitrogen continues to be thrown off from the body in this manner, first drawing upon the circulating protein and then at the expense of the organiced tissue. If the protein is increased until nitrogen equilibrium is reached, it will top the body waste, but in matare animals is not likely to result in storing up body protein.

If protein is fed in excess, it does not become an entire waste, as the nitrogen part may be split off and the remainder or non-nitrogenous part be converted into glucose; thus while the protein may do the work of the carbohydrates and fat to a certain degree, the carbohydrates and fat will not take the place of protein.

This does not, however, signify that it is an economical method of feeding. In both the plant and animal food the most expensive element is nitrogen, and so far as the animal feeder is concerned, when an excess is fed it becomes an entire waste, also is expensive from the standpoint of the animal body as the cost of digesting, assimilating, and freeing the body from the excess nitrogen uses up considerable energy and overworks the animal body, especially the excretory organs.

What is the Actual Selling Value of a Cow?

This question is often asked by the farmer and the man who does not ordinarily deal in cows. It is a question well deserving an answer, and should demand much thought and consideration on the part of the man who attempts to make a reply. The value of a cow should depend largely upon what she is capable of doing at the pail. If she is a good producer, she is worth more than an ordinary cow or scrub, all will admit that, but just how to estimate roughly the selling value of all cows has been problematic. In a recent talk before the Jackson's Farmers' Club, the writer attempted to answer the question of values on cows regardless of breed, and will attempt to put on paper as full a reply as was given them.

THE COMMERCIAL NALUE.

The commercial value of a cow now and possibly for all time to come, should be based upon first, her individuality. She must be sound, a sure breeder, and between the ages of three years and eight, as a first consideration, granting this, her value will depend upon her record or possibly her estimated record if the buyer has a speculative turn of mind.

In times past, the value of a cow has been largely an estimated value, and with this estimate, the buyer often took into account the looks more than any other one thing. This, in so far as the buyer is able to read the relation of form to production, is a most excellent way of judging. The more modern way of fixing the price would be to name it upon a cow's ability during her lactation period. This necessitates testing of a herd, but no thoroughly practical dairyman would think of conducting a dairy without doing this so the testing of itself is a new thing. My method of estimating the value of a cow would certainly be an incentive for all farmers to weigh and sample the milk from their herds.

The average Minnesota scrub cow is worth about $48.00 for the dairy, if she is fat, she is worth more for beef than for dairy purposes. This cow produces about 160 lbs. of butter in a year according to Prof. Haecher and Commissioner Winkjer. This is arrived at by adding 1.5 to the butter fat for overrun. The average price paid for butter is 30 cents the year round or thereabout. If the average cow produces 160 lbs. of butter in a year, which will sell for 30 cents, she will produce in gross profit $48.00. If the cow is capable of making 320 lbs. of butter in a year, she is worth double this amount or $96.00. If she is sound and can do this she is worth the sum mentioned regardless of her looks, but the chances are very good that, in order to make as good a showing as this, she had had at least one cross of good blood in her veins.

The practical man with the cows will at once admit that this will catch the selling values very near in most cases. But when a man asks over $100.00 for a grade cow the buyer usually thinks the seller is unreasonably high in his prices. Let us stop to consider that, if a grade is capable of producing 460 lbs. of butter, you have very little more food of maintenance to feed her than you need for the 160 lbs. cow, and still have only one cow to care for and milk. The 460 lbs. butter cow should be worth $138.00 to the buyer, and the seller ought to receive more for a cow of this kind on account of her skill in breeding, and to pay the actual expense of testing his herd. The commercial value then, regardless of any sentiment connected with the sale of a good dairy cow, should be based on her yearly production. A buyer can afford to pay as much cash as she will return gross profit in a year. If a grade cow has enough good top crosses to cause her to produce 550 lbs. of butter, she should be worth in any common dairy, where she is not to be turned off for beef, $165.00. If she will produce 550 lbs. butter in one year, she should produce a reasonable amount every year. Aside from her increased value because of her individual ability over that of the average scrub, this ability is transmitted to her heifers, and they, in turn, are more valuable to keep in the herd.

WHAT IS THE REAL VALUE OF THE PURE BRED

The commercial value of the pure bred is a difficult matter to decide. It will never be answered accurately because there are animals whose prepotent powers can never be estimated by rule. In general, however, a pure bred is worth four times as much as a grade, and we get at this valuation by the selling value of the bull calves. Many breeders are not selling their pure bred females so no returns can be figured on them only in the building up of their herd, because until either they or their progeny are sold, they have no greater value so far as production is concerned than a high producing grade. The real additional value because of the pedigree, comes when stock change hands.

A dairy cow lives to the approximate age of 10 and ½ years. She drops her first calf at 2½ years, so that she should give her owner eight calves during her life time. Half of these are bulls which, from a grade cow, have little or no commercial value, but, if from a pure bred cow, they can be sold according to the record of the dam. If she is one of those 350 lbs. of butter cows, as she must be in order to be worth $400.00, the average of her bull calves, if sound, would be worth $100.00 each. Four of these are worth $400.00, and the owner has the heifers to pay the interest, risk and investment. If a pure bred has made an honest record of 600 lbs. butter in a year, she is worth in round numbers $700,00, and the average estimated value of her bull calves would be the same amount until it is learned by actual trial that they do not transmit their inherited ability to their daughters.

You ask, as we do not give the sire credit for his inherited ability at production? Most certainly, we go on the supposition that a cow is always bred to a bull with at least as good blood lines as she herself has. This should be, and nearly always is, the case in common herds.

A heifer at one year old is worth about half the value of her dam, not more, because it requires a year's feed and care to bring her into milk and the risk in buying heifers is much greater than when buying cows that have had at least one good calf.

ESTIMATING THE VALUE OF A YOUNG BULL.

To return to the matter of estimating the value of a pure bred bull calf either to sell or place at the head of a herd.

This article has based all valuations on yearly records, but seven and thirty day records are also of value in estimating what a cow may be capable of doing during her lactation period, and especially so if this record for seven days is made ten or eleven months after calving.

In estimating the commercial value of a bull calf, the record of his dam is of first importance, then the records of at least two of the sire's A. R. daughters from different cows. These should be added together and an average found. To this average, add the record of the calf's dam, and average again. If the sire of the bull calf in question is not old enough to have tested daughters, an average of the sire's estimated inheritance should be struck by adding the record of his dam and either two of the grandsire's A. R. daughters' records or the record of his dam, and go one step further back for tested daughters. It will thus be seen that the first dam's record counts half in fixing the young bull's value, while the dam of the sire only counts one fourth.

Record prices of thousands for pure breds are only warranted as a rule for a splendid individual backed by a long line of record dams and producing sires which gives reasonable promise that the young bull must get producers. If when a bull comes to maturity, a large percentage of his heifers are much better than their dams, the bull is priceless in value if kept in a good herd.

TO RECAPITULATE.

1. The value of any dairy cow, granting she is sound and not too old, should be based upon her ability at the pail.

If she produces 160 pounds butter in a year at 30 cents, she is worth $48.

If she produces 260 lbs. butter in a year at 30 cents, she is worth $78.

If she produces 360 lbs. butter in a year at 30 cents, she is worth $108.

If she produces 460 lbs. butter in a year at 30 cents, she is worth $138.

If she produces 560 lbs. butter in a year at 30 cents, she is worth $168.

If she produces 660 lbs. butter in a year, at 30 cents, she is worth $198.

2. The estimated value and selling price of a yearling heifer is half that of her dam as figured above.

3. The estimated value of a pure bred cow is four times that of a grade based on the above figures. By this way of figuring, the 660 lbs. pure bred is worth $192.00. As a matter of fact, tnre 160 lbs. pure bred is not worth anything if that is all she is ever capable of making.

4. The estimated value of a pure bred bull calf is the average of the sum of his dam's record in pounds of butter taken with the average production inheritance of the bull's sire; for example, if a well marked and good individual bull calf is out of a 400 lb. fat dam or 480 lbs. butter, as we have been figuring, and his sire has two A. R. daughters whose average record is 500 lbs. fat or 600 lbs. butter, or his dam has a record of 500 lbs. fat, and the grand sire two A. R. daughters with an average of 500 lbs. fat, and 600 lbs. butter, we add the 480 lbs. and 600 lbs. together, divide by 2, and we have 540 lbs. of butter, multiplied by 30 cents gives $162.00, the estimated selling price of the bull calf.

5. Some animals whose prepotency has been demonstrated are priceless in building up a good herd.—By George P. Grout in Guernsey Breeders' Gazette.

A representative enjoyed the privilege one day last week of a stroll into the orchard of Mr. William Miller, in Clarence. The orchard was one mass of white and pink bloom, and with the green of the North Mountain in the background, presented a picturesque scene. One tree, however, particularly attracted our attention. It was of the Bishop Pippin variety, and is said to be the largest apple tree in Canada. From the huge trunk diverge a dozen or more branches, each as large as ordinary apple trees. Mr. Miller has taken over twenty-five barrels of fruit from this tree in one season, and the Bishop Pippin is not considered aprolific variety.—Monitor Sentinel.

The calf on the average farm is sadly neglected. It's a wonder that many of them turn out as well as they do.

Value of Dragging Earth, Clay and Gravel Roads

Maintenance at Minimum Cost With the Split Log or the Steel Road Drag.

The maintenance of earth, clay and gravel roads, which require attention more often than other types, and if they do not receive that attention, quickly become rough and unfit for any kind of traffic, is a problem that has not yet been completely solved. In the rural sections of Canada there are thousands of miles of these roads, some of them good, but many of them in a disreputable condition from lack of proper repairing. The statute labor system cannot be commended for results in road improvement. In fact, there appears to be but little system "system" in this method of maintaining the country roads. Road maintenance is one of the most important problems with which our rural municipalities have to deal, and the solution, whereby we will have good driving roads at all seasons, warm or cold, wet or dry, is attracting more attention to-day than ever before.

The road drag, the simple framework, whether it be made of logs, planks or of steel, is proving its worth in the maintenance of earth roads, and slowly but surely it is coming ito general use. The Manitoba Good Roads Association has done more than any other body in Canada to put forth the value of the road drag. The annual split-log drag contest of this association is creating more and more interest every year, and the 1913 contest, the results of which will be announced later in "Good Roads Canada", promises to be the best yet held. The contestants are provided with a road drag, and are each given a section of road to work on. At the end of a specified time the judges make a tour of inspection, making the awards. In this way public interest is centered in the road drag, and as a result it is coming into general use for the maintenance of Manitoba's earth roads, of which there are many miles in the rural sections.

The Chatham Automobile Club, of Chatham, Ontario, also deserves credit for bringing the road drag to the attention of the farmers of that district. Six split-log drags were purchased by the club and distributed among the farmers to be used on the roads on which their farms fronted. The results are most satisfactory, and the farmers, some of whom were at first doubtful as to the success of such an experiment, are more than pleased.

The split-log drag, as invented by D. Ward King, is the best known road drag, but the steel drags which several bridge companies are putting on the market, are meeting with success. In the March issue of "Good Roads Canada" a general description of the construction and use of the split-log drag was published, and, complying with numerous requests, some of this is repeated.

In construction, the split-log drag is a very simple affair, so simple, in fact, that mistakes are often made in building it. Two half-logs, preferably of dry red cedar, from 10 to 12 inches in dianeter, and from seven to eight feet long, are the principal parts, the heavier and better one being used in front. At a point in the front slab four inches from the end that is to be nearest the middle of the road, a hole is bored for a cross-stake, and 22 inches from the other end another hole is bored for another hole is bored for another cross-stake. A third cross-stake goes from midway between the two end ones. The cross-stakes should be about two inches in diameter, of strong, straight-grained wood, to withstand the strain when the drag is in operation. The distance between the two logs is thirty inches.

From the end of the back log that is to be nearest the centre of the road, measure 20 inches for the centre of the hole in which the first cross-stake is to fit. When this stake is in place, the end of the back log will be 16 inches nearer the centre of the road than the end of the front log. The holes for the two other stakes may be located by measuring the same distance on the back log that there is between the stakes in the front log. This leaves a space of six inches on the back log at the end to be nearest the edge of the road. A brace about 2 by 4 inches in diameter is then placed between the ditch ends of the two logs, so that it will be about one inch above the ground at the front, and slightly higher on the rear log. This frame should be made firm and strong, but the mistake that is often made is of having the logs too heavy. The drag should be light, the cutting edge of the logs and the ease with which it can be handled being of more importance than the weight, which may be varied according to the nature of the road by loading the frame with planks. An iron plate about three inches wide and a quarter of an inch in thickness, to extend from the hitch end of the front log to the middle of the log, to act as a blade, completes the drag. This last piece is firmly bolted on the flat forward side of the front log, so that the lower edge extends a trifle below the edge of the log. This should either be cupped or have a wedge placed under the lower edge so that it will be perpendicular and will have a greater cutting force.

A platform of boards, on which the driver stands, is placed over the cross-stakes, and the driver uses his weight to keep the drag running smoothly. This cannot be explained, but will be learned with practice.

An ordinary trace chain is strong enough to draw the implement, and is fastened through a hole in the ditch end of the log. At the end nearest the centre of the road, the chain is fastened around the cross-stake, and passed over the top of the log, so as to allow the earth free passage along the face of the slab. This completes the outfit, and after a little practice the driver will find it easy to manipulate.

Squared timbers are of little use for a drag because, having a flat surface against the road, they slide over it instead of cutting in. A fairly serviceable drag may be made of strong planking, but it is not as successful as the split-log drag.

The road drag is not an implement for use in moving large quantities of earth, nor does the maintenance of an earth road require the use of such an implement. A consideration of the theory of road dragging will help to make the use of the drag more fully understood.

THEORY OF ROAD DRAGGING.

If a sample of moist earth is taken from the traveled portion of a road over a gumbo, clay or black prairie soil, it will be found practically impervious to water, as may be proved by forming a roughly shaped dish of damp earth and filling it with water. It will be noticed that the dish is practically water-tight.

Earth in this condition is what the clay workers call puddled. It has been worked and reworked by the carriage wheels and animals' hoofs until nearly all the traveled portion of a sticky muddy road is covered with a layer of this impervious, puddled earth.

As usually found on most of the roads, this puddled earth is full of holes and ruts, which are filled with water that cannot escape throdgh the impervious soil. As long as the water remains the soil cannot dry out and the road is kept in a most uncomfortable if not impassable condition.

It is also a matter of observation that this puddled earth when compressed and dried becomes extremely hard. On these two facts, the imperviousness of puddled earth and its hardness when dried, rests the theory of road dragging.

THE EFFECT OF DRAGGING

When the road drag is properly used, it spreads out the layer of impervious soil over the surface of the road, filling up the ruts and hollows, until a smooth surface is secured. As a small amount of material is always to be pushed to the centre, a slightly rounded effect will be given to the road, which may be increased or decreased as desired by subsequent dragging. By forcing the mud into the hollows and ruts, it is evident that the water must go out, which it does by running off to the side of the road. The drying out of the road is thus much facilitated, and the road is made immediately firmer because the water is squeezed out.

The effect of traffic over the road tends to press down and thoroughly compact each thin layer of puddled earth which the drag spreads over the surface every time it is used. After the first few draggings, it will be noticed that the road is becoming constantly smoother and harder, so that the effect of a rain is scarcely noticeable, the water running off the surface, which is so smooth and hard as to absorb but little of it.

INSTRUCTIONS FOR DRAGGING.

The following points are to be borne in mind in dragging a road:

Make a light drag, which is hauled over the road at an angle, so that a small amount of earth is pushed to the centre of the road.

Drive the team at a walk.

Ride on the drag; do not walk.

Begin at one side of the road, returning on the opposite side.

Drag the road as soon after every rain as possible, but not when the mud is in such a condition as to stick to the drag.

Do not drag a dry road.

Drag whenever possible at all seasons of the year.

If a road is dragged immediately before a cold spell it will freeze in a smooth condition.

The width of traveled way to be maintained by the hrag should be from eighteen to twenty feet; first drag a little more than the width of a single wheel track, then gradually increase until the desired width is obtained.

Always drag a little earth towards the centre of the road until it is raised from ten to twelve inches above the dege of the traveled way. If the drag cuts in too much shorten the hitch.

The amount of earth that the drag will carry along can be very considerably controlled by the driver, according as he stands near the cutting end or away from it.

When the roads are first dragged after a very muddy spell, the wagons should drive, if possible, to one side until the roadway has a chance to freeze or partially dry out.

The best results from dragging are obtained only by repeated applications.

Remember that constant attention is necessary to maintain an earth road in its best condition.

Following are some points to be kept in mind, in the operation of the drag. It is hoped that they will not discourage prospective users of this efiective implement, because one thing should not be forgotten, that the poorest drag used in the poorest manner by a man who wants to learn will surely improve the roads.

No. 1—The Length of the Chain.—The length of the chain regulates the hold taken on the earth. To make the chain longer is equivalent to putting weight on the drag. If your drag is too heavy, shorten the chain.

No. 2—The position of the Snatch Hook, Which Attaches the Double-trees.—To remove much dirt or cut small weeds, hitch the hook close to the ditch end of the drag and stand as nearly on the end of the front slab as is safe. Drive very slowly when thus hitched. This one hitch seems to be the hardest to learn. The others suggest themselves.

No. 3—Position of the Driver on the Drag.—To move dirt, see above. In a soft spot, stand on rear slab. On a hard spot, stand on front slab and drive slowly. If the drag clogs with straw, weeds, sod or mud, step to a point as far as you can get from the ditch end of the drag. To drop dirt in a low place, step quickly from ditch end to other extreme. To fill a low place or mud hole nicely is the severest test of skill with a drag.

You may become thoroughly disgusted when you first make the effort. But remember, it will not be the fault of the drag if you fail.

No. 4—Presence or Absence and Sharpness or Dullness of the Steel—The steel may project half an inch below the wood at the ditch end of the steel, but should come up flush with the wood at other end of the steel. After a clay or gumbo road has been dragged four or five years, the soil becomes so tough and putty-like that one must study it closely to know what to do. Sometimes use sharp edge of steel; sometimes dull edge. Holes are bored in both sides of the steel so that it can be turned upside down and the same bolt holes used, and sometimes the plain wood.

This can be learned only by experience, and you have several years in which to study the problem.—Good Roads Canada.

Ayrshire Record

White Rose, owned by S. R. Cairns, Lower Freetown, P. E. I. recently led the Mature Cow Class in the Ayrshire Record of Performance with a record of 10,609 lbs. milk, 3.18 per cent fat, 404 lbs. fat.

Are you prepared to spray your potato fields?

Fungus and insect pests will very materially reduce the returns that you should receive for your labors if you do not take time by the forelock and spray.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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R. D. Robinson Publishing Co., Limited
Sussex, N. B.

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JUNE 24, 1913.

DATES OF ISSUE.

July 8-22
August 5-26

DEMANDS FOR GRADUATES OF AGRICULTURAL COLLEGES

We recently had a conversation with Principal Cumming who had just returned from a trip to the United States and Upper Canada where he went for the purpose of securing additional members for the staff of the Nova Scotia Agricultural College. He was telling us something of the difficulty of securing well trained men for such positions as he had in mind and he added that the demand for well equipped graduates of Agricultural Colleges was far beyond the supply. There are, he said, actually more positions open for good men than there are men to fill them.

The time was, he continued, when it was comparatively easy to secure the services of a good man for a position in an Agricultural College or Department of Agriculture, but every single man, whom he interviewed, with respect to positions in Nova Scotia, had at least one alternative offer and instead of these men seeking positions, positions were almost begging them.

Prof. Curtiss, Dean of the Agricultural College at Ames, Iowa, writes as follows in the College Magazine of May 1913, in regard to the demand for agricultural graduates of that institution: "We have more demands for the men trained in Agriculture than we can fill. Our enrolment of students in all year agricultural courses is now about 1,100. That is about twice as many as we had seven years ago. Yet with all this increase and with the larger number of graduates turned out every June the demand for trained men is greater than can be supplied. This is due to several causes. More of our men are going into farming; then agricultural education is expanding very rapidly, and now the Agricultural Advisor Movement is taking all the competent men it can secure. I believe that the time is not in sight when the demands will be less because we are just coming into the greatest development of agriculture."

Th same magazine contains a paragraph in regard to a Nova Scotia boy, Mr. K. G. MacKay, of Scotsburn, Pictou Co., N. S., who recently took his Master's degree from the Iowa State College:

"Mr. K. G. MacKay, a post graduate student, who recently took the examination for his Master's degree, has gone to Regina, Sask., where he will take up a position of Assistant Dairy Commissioner.

Just befor leaving, Mr. MacKay received a letter from the British Government asking him to accept a position in India as Deputy Director of Agriculture of that country. There is a handsome salary connected with the position and Mr. MacKay will likely take it up if he can release himself from the position he has in Regina."

The Agricultural College graduates in Canada are sought for for positions in connection with the Agricultural Colleges in the Provinces, with the various branches of the Dominion Department of agriculture, by such large railway corporations as the C. P. R. and by various manufacturing corporations such as fertilizer factories, packing houses, wheat mills, etc. President Creelman of the Ontario Agricultural College tells of one graduate of that institution who, a year ago, accepted a position as Chemical Advisor to a flour mill near Winnipeg at an initial salary of $1500 per annum. Within a single year this expert saved the mill thousands of dollars and his salary has been doubled.

Graduates of the Nova Scotia Agricultural College stand high among these men. The following are some who occupy prominent positions: E. S. Archibald, Dominion Animal Husbandman, P. H. Moore, Manager Dominion Experimental Farm, Agassiz, B. C., E. Lewis, Superintendent of Fairs and Institutes, Alberta, W. V. Longley, District Representative, Minnesota, N. MacKay, W. H. Porter and J. G. Taggart, District Representatives in Ontario, etc.

Prof. J. H. Trueman, who now comes back to his native country after occupying positions in the United States for twenty years, is an example of one of the older graduates. Prof. J. C. Blair, Head of the Horticultural Department at the University of Illinois, a former graduate of Truro, occupies one of the foremost positions in his line in the United States. Many more might be mentioned but the above list conveys some idea of the opportunities which are presented to well equipped graduates of Agricultural Colleges. The Nova Scotia Agricultural College graduates referred to in the foregoing are commanding salaries from $1200 to over $5000 per annum.

Principal Cumming stated in conclusion that the Nova Scotia Agricultural authorities take the greatest pride in their graduates who are carrying on farming in their own native Province. Over 90 per cent of the Truro graduates are so engaged. Nevertheless, he feels that the Maritime Province boys should know something of the opportnities in other lines which an agricultural college education affords. He states that it is only a matter of a few years until some 12 to 18 more graduates will be required to carry on demonstration work in the counties of Nova Scotia and many similar lines of work are opening up which will be filled almost as rapidly as trained men can be secured. With the strengthening of the faculty of the Nova Scotia Agricultural College, which we have from time to time referred to in our columns, that institution, which has already turned out so many good men, will be in a better position than ever to supply the experts that are being sought from the Atlantic to the Pacific in Canada as well as in other countries of the world.

WEEDS

The Canadian farmer sustains a loss each year of millions of dollars due to weeds. The farmer who allows weeds to grow in his fields to the damage or exclusion of his crops, loses something more than the money value of the crops. He loses the respect of his neighbors and of every traveler along the highway and more than that, he can't help losing some of his own self respect.

Not all cases of weeds are due to carelessness or ignorance, but much of the enormous loss could be saved if the farmer understood or appreciated the damage done by the presence of weeds in his fields. It is our observation that, as a rule, dairy farmers are among the best farmers, and yet we occasionally see examples of regret and wilful ignorance that makes one blush for their kind. The successful dairy farmers are not growing weeds in lieu of crops.

A few miles ride through any country will show fields well drained and cared for. No weeds there and, on the other hand, fields so poorly plowed and prepared for planting that weeds have the right of way over everything else.

We trust all our readers are waging a war against noxious weeds this season so that passersby may not have the opportunity of saying "I passed by the field of the slothful and him void of understanding and, lo, they were overgrown with weeds."

AFTER HIGH SCHOOL, WHAT?

Hundreds of young men, the sons of good dairy farmers, are putting the last touch on their high school education. In June they will receive a diploma which is the official statement of the school board that the student has finished the prescribed work offered by that school. After that, what?

Are they leaving the high school with an idea that their education is complete? Are they leaving the high school and the farm to seek employmentin the city? Have they an idea that the dairy farm offers nothing for a young man of their attainments? Or have they, through the wise guidance of father and mother, come out of the high school with a love for the dairy farm, determined to establish themselves in that work. If they are sustained by such a desire and have a determination to become the best dairy farmer in whatever community it may be their lot to make their home, there is still ahead of them the agricultural college and its offering for young men of that spirit.

The boy who wishes to become a dairyman and has had the good fortune to have lived his life thus far on a dairy farm,has just the foundation necessary to make this college training in dairy husbandry worth most to him.

If father and mother look at this thing right they will not, as too many parents do, wish a life of less work than they have had, but they will wish for their boy a life full of work guided by a better training for it than it was their fortune to get. Work never killed a man, but work without purpose or outlook has worried many a man into his grave.

You can wish for nothing better for your boy than that he may follow in your footsteps, not as you were compelled to go, but with all the experienceyou have accumulated plus the advantages of a technical training in dairy lines that will make him a better dairyman than you ever could be.

What is true in regard to training along dairy lines is also true in regard to horticulture and all other lines of farm practice.

This college training is not absolutely necessary but it will be a tremendous saving of his time, strength and energies in later years and will give him a personal power and ability to take advantage of opportunity in his calling as he cannot without it.

SPRAYING

Despite the fact that the most progressive fruit growers of the representative fruit districts of the Maritime Provinces and elsewhere have demonstrated that it pays to spray their orchards in order to be able to market a big percentage of their fruit in such a condition that it will be both profitable and creditable to themselves there are still too many, who, through skepticism or laziness do not follow this fundamental fruit growing practice.

The fruit growers who do not spray are a menace to the industry. Their orchards are veritable breeding grounds from which the various pests go forth to reinfest the orchards from which their kind had been exterminated by dint of hard work in previous years.

The members of the various co-operative fruit companies must spray their trees in order to comply with the rules which govern them. We believe the time is not far distant when compulsory spraying will be in force. An act of this kind would help to lessen the burden of the progressive fruit growers and would not in any way inconvenience those who do not spray at present as they would be more than amply repaid by the increased returns from their orchards. Their skepticism would soon be changed to ardent support.

The Calendar for the Nova Scotia Agricultural College for the year 1913-14 has been issued and is now available for distribution to all who may be interested in attending that institution. The College at Nova Scotia is equally free to all students from the Maritime Provinces. During this year large additions have been made to the buildings, the faculty has been increased so that the institution is in better shape than ever to afford the best instruction to its increasing number of students. Those who are interested should communicate with Principal Cumming, at Truro, who will send calendars on application and supply them with any information that they may request.

Advanced Agricultural Legislation in Nova Scotia.

The 1913 session of the Nova Scotia Legislature was very fruitful of bills providing for an advanced agricultural Policy. Notable among these were No. 29, providing for Demonstration Work in Agriculture; No. 30, for the encouragement of seed growing; No. 31, for the appointment of a Superintendent of Dairying; No. 32, for the appointment of a Provincial Entomologist; No. 33, for the increasing of grants to Agricultural Societies; No. 33, for the better organization of and the increasing of grants to County and District Exhibitions; No. 35, for the formation of the Nova Scotia Poultry Association; and No. 57, for amending the law for the Enrolment of Stallions adding thereto a provision for Optional Inspiction.

Several other Acts were passed which are of more or less general interest to the farmer. Among these were Bill No. 71, respecting Rural Telephone Companies, which provides that, if a farmer or group of farmers in any part of the Province wish telephone facilities, the Government will bonus a telephone line for the purpose to the extent of $20.00 per mile and that any existing telephone company must give such a branch line connection with the nearest exchange at a switching fee not to exceed five cents.

Bills No. 90 and 189 were passed giving farmers' "Fruit Produce and Warehouse Co-operative Associations" powers which enable them, in addition to buying and selling farm and fruit produce of all kinds, to also deal in spraying outfits, agricultural implements, fertilizers, feeds, flour and all manner of merchandise. There are now some thirty-five local co-operative Fruit Companies and the majority of them are united into the central "Nova Scotia Fruit Companies." Their former powers were confined to the buying and selling of fruit, etc., but this new Legislation greatly extends their powers adds to the practical value of their co-operation. New development in Nova Scotiestia is fraught with greater possibilities or is being more carefully watched both at home and abroad than this co-operative movement which is in line with recommendations that are being made all over the world in regard to the improvement of the farmer's business position.

Bill No. 19 "To Incorporate the Nova Scotia Veterinary Association" is of considerable interest to the farmer since according to this Bill, all practicing veterinarians must be members of the Nova Scotia Veterinary Association and it is illegal for anyone to practice unless he is a graduate of a recognized school or college and eligible for membership in the Nova Scotia Veterinary Association.

Farmers, too, are interested in the special road legislation passed at this session, which makes provision, in addition to the usual grants, for an expenditure of $10,000 per county upon special road work of a permanent character.

In regard to the more purely departmental Bills, already referred to, they are such as provide for a very progressive policy along agricultural lines.

The Bill for the establishment of Demonstration Work provides for demonstrations throughout the Province in the growing of Field Crops as well as for other farming operations and for the appointment of men, corresponding to the District Representatives of Ontario, to carry on this work in the respective counties of the Province. A beginning along this line has already been made in Cape Breton.

The Act for the Encouragement of Seed Growing provides for the further extension of Field Crop Competitions Seed Fairs, etc., with a view to encouraging farmers to grow more of their own seed and that of a better quality that heretofore.

The Act for the appointment of a Superintendent of Dairying provides for a very progressive policy along this important line. Heretofore, this Department has been largely under the direct control of the Secretary for Agriculture, but it has now assumed so much importance that it demands the undivided attention of a man. Mr. W. A. MacKay, formerly the successful manager of the Scotsburn Creamery, the most progressive creamery in the Maritime Provinces, has been appointed to this position and has already done very effective work.

The similar Bill for the appointment of a Provincial Entomologist is the result of a determination on the part of the farmers in general, and the fruit growers in particular, to keep Nova Scotia, as far as possible, free from these pernicious pests, which have, in other countries, caused so much trouble and added so heavily to the cost ol raising field produce and fruit. Dr. Matheson, who has been appointed to this important position, is a Nova Scotian and a distinguished graduate of Cornell. He held for two years a similar position in one of the States of the Union. Immediately following his appointment, special regulations were passed with respect to the control of nursery stock, etc., shipped in from other Provinces of the Dominion and the result has been that already the Province of Ontario has appointed a Provincial Entomologist and the managements of the large nursery plants are arranging to rid their plantations of the San Jose Scale and other pernicious pests.

The increase of grants to Agricultural Societies and Exhibitions is also a part of the progressive policy which the Department of Agriculture is carrying on. The number of Agricultural societies has grown from 164 in 1905, the year when the college was established, to 210, and the local Exhibitions during the same period have increased from three to twelve. These Agricultural Societies devote their attention especially to the purchase and maintainance of pure bred sires and under the superintendence of F. L. Fuller the character of the work has rapidly improved. In regard to local exhibitions, their whole development has been largely a matter of the past seven years, during which time their numbers have not only increased but their grants also from less than $1000, in 1905, to six or seven times that amount at the present time.

The Bill providing for the organization of the Nova Scotia Poultry Association is a very important measure. During the past few years, the poultry enthusiasts have been doing excellent work but they have not received that degree of assistance from the Government which the importance of the industry warranted. The Nova Scotia Poultrymen at the Agricultural College during the recent Short Course and the present legislation represents the results of their deliberations.

The Bill for the Inspection of Stallions is an amendment to the bill for the Enrolment of Stallions passed in 1912. This amendment provides for the Optional Inspection of Stallions offered for public service in Nova Scotia. Under the bill at present in force, a large enrolment has taken place and it is already evident that much good is bound to follow this Horse Improvement Legislation. Not a few of those whose horses will only enroll in class C. are making enquiries for pure bred horses that will enrol in Class A. With the added provision for Optional Inspection, the bill is bound to prove even more effective so far as Horse Improvement is concerned.

Altogether, the Legislation of 1913, portends a most progressive policy on the part of the Department of Agriculture. The anticipated Federal Subsidy for the encouragement of agriculture will, to a large extent, facilitate these measures and will no doubt lead to still greater advancement in future years.

Soiling Crops for Hogs.

All authorities on the economic production of pork emphasizes the importance of the soiling crops for hogs. There are a number of crops that are fairly well adapted to soiling purposes that are very valuable as pork producers. Probably rape ranks first in this respect. There are others, however, such as alfalfa, clover and peas, that are exceedingly valuable and well worth any farmer's attempt at growing them. The peas may be grown in conjunction with oats and yet be very valuable. Another crop that has considerable value as a soiling crop, especially early in the spring, is fall rye. The legume hay crops are frequently objected to as soiling crops on account of requiring so long to establish. Alfalfa and clover crops that are sown this year may be cut and fed as soiling crops in 1914, but under no consideration should stock be allowed to run on them. The high value of both these crops as roughage, (cured and in the green state) causes us to strongly recommend every stock owner to seed at least a small area of them.

Since the season is becoming somewhat too advanced for sowing peas and oats, excepting in very limited quantities for green feed for a short period during harvest, we would advise sowing a piece of well prepared soil to rape. It does not necessarily have to be put in on summer-fallow land. Any fairly well prepared land that has a relatively high per cent of moisture in it will grow a very satisfactory crop of rape. The rape would be sown with a drill on the level in rows 32 inches apart at the rate of four or five pounds per acre. Seeding it in this way is much better than broad casting or sowing from every sprout of the grain seeder because it allows room to work a cultivator and in this way cleans the soil of weeds and by forming a mulch conserves the moisture. Rape may be sown any time up till July 15 and will produce feed for hogs six weeks afterwards if weather conditions and cultural methods are at all favorable. Rape sown early in July will produce two crops in the season. Rape used as a soiling crop will produce more feed per acre than when it is pastured off. For this reason it is frequently advisable where the area of rape is limited to have the hogs on a turf pasture and cut and feed them so much rape each day. The hog raiser who has a piece of peas near the outbuildings would do well to reserve a small portion of it and enclose it with hurdles and allow the hogs to pasture it off part when the crop is still green and part when it is ripe. This plan has worked out admirably in a number of instances. Hogs while running in the mature crop will require very little meal, and will make wonderful gains. The meal for hogs on such pasture would have to be rich in carbo-hydrates.—Nor'-West Farmer.

A Review of the work of the Experimental Farms.

For more than a quarter of a century the Dominion Experimental Farms have been carrying on experiments to find out the best kinds of crops and animals and the best ways of handling them for profit. This has been going on not only at the Central Farm at Ottawa but also in the Maritime provinces, the Prairie provinces and in British Columbia. The benefits that have resulted to the Canadian farmer from this work are undoubtedly very great but still thousands of earnest men are not receiving the full advantage of what is being done for them. Perhaps many do not receive the reports and bulletins containing the information while others receive these publications regularly but do not find time to study out the lessons from them. In order to help especially this class of busy men and women there has been issued by direction of the Hon. Martin Burrell, Minister of Agriculture, a special bulletin containing the outstanding conclusions that have been reached during the 75 years that the Experimental Farms were under the directorship of Dr. Wm. Saunders recently retired.

This review which has been prepared by Mr. J. B. Spencer, B. S. A., Editor of the Publications Branch, tells of lessons that have been learned concerning fertiliziers, cereals, fodder crops, farm field work, live stock, horticulture, arboriculture, chemistry poultry, weeds and plant pests. In addition many of the recent developments of the farm system are enumerated. It is shown that not only have the farms and stations been increased in recent years to fourteen, but greater advancement is being made in all of the older farms. This review which is tastefully gotten up has been issued for free distribution by the Publications Branch of the Department of Agriculture at Ottawa.

Encouraging Horse Breeding in Newfoundland.

Mr. Harold McPherson, of Westertand, the late Agricultural Farm, St. John's, Newfoundland, has purchased the stallion, Rillington Statesman, registered in the Cleveland Bay Horse Society of Great Britain and Ireland No. 1717.

The Cleveland Bay, a hardy, powerful, yet fairly light and swift animal originated through a blending of the powerful charger of the middle ages, with the more active Barb and Arabian. The Cleveland Bay has lots of quality and substance with well defined sinews, large, clean, flat bones of a density equalled only in the Arab and thoroughbred. His long lineage gives him prepotence in impressing his splendid characteristics.

Rillington Statesman was bred among his native hills in the Cleveland Valley of Yorkshire. He is an excellent specimen, color deep, rich bay, height 16½ hands, weight about 1400 pounds. His action is high, free and open, his stride long, temper perfect; he is in all respects a perfect general utility horse, a free cheerful roadster, sure-footed, fearless of all objects and with marvellous endurance.

Rillington Statesman was entered for The Royal Show of England, 1912 but came to Newfoundland before the exhibition took place. His full sister "Rillington Attraction" then won highest honors of all Britain.

To stimulate the care for young stock and to encourage breeding better animals in Newfoundland, Mr. McPherson offers a $100.00 prize to the best two year old produced by Statesman; or a $300 offer will be made to purchase same outright (to be judged in 1916.) Westerland stock barred.

We congratulate Mr. McPherson for his enterprise in stimulating stock-raising in the Ancient Colony.

HORTICULTURE.

The "New Brunswick" Apple.

The omission of this important variety of apple from the prize list of the Fredericton Exhibition (Sept. 15 to 20) should be a matter of regret to all who have at heart the welfare of New Brunswick fruit growing. Attention of the management was called several years ago to this omission which was promised to be rectified. The original cause for dropping this valuable native apple from certain exhibition fruit lists, involves, of course, the old controversy New Brunswick vs. Duchess, concerning which there ought not to have been any controversy in the first place, and certainly none at the present moment, when New Brunswick stands fully recognized by the leading agriculturists of Canada, who have not only conceded our right to this apple but urged the desirability of keeping it distince from confusion with any others. On this point I can quote correspondence with Prof. Percy J. Shaw, of Truro; the Fruits Division, Ottawa, recognized it as a commercial variety in their last report of 1912; while the numerous exhibits at the St. John Apple Show, 1911, showed that growers would enter the apple under its true name if given an opportunity. The question ought to be finally and forever disposed of, on the ground of "authority" in the mind of anyone who will read the title "New Fruits" by Prof. Macoun, Dominion Horticulturist, in the April 1912 number of the
1912 number of The Fruit Magazine, B. C. "In the Province of New Brunswick," writes Prof. Macoun, "there are many apples originated in the province. Two of the most noted are the New Brunswicker and Crimson Beauty. The Dudley apple, which is also largely grown in the province, originated in Maine near the New Brunswick line and is said to have been grown from seed of the New Brunswicker."

What need for more to be said? Those growers who have been led to coosider our apple as nothing but the "Duchess of Oldenburg" might surely gracefully acknowledge their error. The distinct origin of the New Brunswicker is to be proved as clearly as that of many other discoveries. As our late Secretary for Agriculture, Hon. Charles Lugrin, wrote, "the word of Mr. Sharp, the discoverer, was accounted good on any other subject, and we do not see why it should not be so in this." The claim of origination rests not alone on the word of Mr. Sharp, but members of his family, and the late Darius A. Shaw, of Wakefield, who tended the nursery and picked the first fruit. If we grant that the New Brunswicker came from a seed, on scientific grounds alone we must recognize it, though I need scarcely say that as to the principles involved horticulture has been the last of the natural sciences to recognize, then, having come to do so only within the last few years. Those who wish to be fully informed on the subject should look over "Principles of Botany," by Bergen and Davis, 1906, Chapter XXXIX, Variation, Mutation and Origin of Species; and consult recent issues of "The Breeders Magazine". But though Botany is thus coming up into line abreast of other natural sciences, there are yet points to which the student will oeed to refer to the 1885 Report on Nomenclature of the American Onomatologist Union. Suffice for the present to say that there are serious blocks in the way of the advanced horticultural student, (1) lack of agreement among the rank and file of horticulturists as to what constitutes variety as distinguished from full species, (2) the antiquated and utterly worn-out notion that a system of names requires to be a system of classification (realtionship), (3) a positiveness of opinion about supposed relationships which our present knowledge of the laws of heredity does not warrant, and (4) the antiquated notion that fruit bearing plants can be classified (i. e. grouped according to relationship) by reference to fruit alone, a plan long ago attempted by botany but abandoned as misleading. These, however, are questions for the students, the educators of the next generation. The general reader would be more interested in the question, how if the New Brunswicker was a distinct variety it ever came to be supplanted, its name taken from it by the "Duchess" apple?

I have heretofore, had occasion to relate in some detail how the New Brunswicker originated. A seedling out of a lot of seed especially procured from Bangor, Me., of then well known varieties, to plant for new varieties as well as budding purposes in making a nursery. An exceptionally thrifty seedling from an unknown parent, possibly Aiexander, at once grafted onto an older tree, fruited. Other trees made as rapidly as possible, and about 1860 first orchard planted in Upper Woodstock, still living and producing, and in 1863 another orchard, Fisher's, Woodstock, and rapidly after that a great number of orchards around Woodstock. By 1875 and before 1880 the great nursery of Sharp's had stocked large numbers of trees in all parts of New Brunswick and Prince Edward Island and as far west as Massschusetts, and later at Vineland, N. J., New York State, Ontario and Manitoba.

Sharp also planted out the old Tingley nursery in Albert Co., and four large nurseries around Sussex, in root grafts, and a similarly stocked nursery at Houlton supplied many trees to New Brunswick and elsewhere. Thus the province was stocked all over with orchards of New Brunswicker, which are today flourishing and bearing condition. Many of these orchards are now masquerading as "Duchess." In the Western range J. S. Sharp's nursery operations, his trees, as well as his packed fruit came against "Duchess" which was first mentioned as a supposed Russian introduced into America. The influences pushing Duchess were the New York State nurseries pushing product into eastern territory, agents not content with claiming the New Brunswicker tress to be Duchess but going so far in P. E. I. as to assert that Sharp actually procured his trees of them! To compare and study the so-called "Duchess," Sharp bought two trees and planted them alongside a New Brunswicker orchard which we still own. In 1880, an event of some importance occurred, the Biennial Meeting of the American Pomoligical Society, a part of whose business was to catalogue existing varieties and recognize new ones. Mr. Sharp had formerly attended sessions of the society, but not this one. Mr. Sharp, however, prepared the report on fruits in New Brunswick, and will be duly found printed in the Society's report for that year in the N. Y. Public Library. It was handed in according to the printed record by a Mr. Grosvenor of Meductic, who attended a delegate though not a member of the Society. This report is important as being the first formal "listing" not only of New Brunswickers, but several other native varieties, including the Peabody Greening, Summer Harvey, and Honey Pink. In mentioning "New Brunswicker" Mr. Sharp added a few words—"It is not the same as Duchess. It is hardier and not so sour." At the next session, 1882, Mr. Grosvenor attended, so did Mr. S. L. Peters. Mr. Grosvenor made the report, which was condensed into a paragraph, naming a short list of thrifty apples as in the former report but presto! "New Brunswick" had been neatly flipped out and "Duchess" written in.

The succeeding reports have the same report as to this province. By so simple an operation as the twitter of a pen charged with writing fluid, the name "New Brunswick" has in effect taken from our extensive orchards, a proceeding for which there was no justification or any grounds. From his supposed friend Mr. Sharp deserved better. It is small wonder, then, that when the next edition of "Downing's Fruit Trees of America" came out, 1889, that "New Brunswick" was recognized, but placed as a "local name for Duchess." In 1890 at the First Convention of Canadian Fruit Growers' held at Ottawa, Mr. Peters, who was a delegate, being unable to attend, gave the report on the province and declared our flourishing and thrifty tree to be "Duchess," and steadily since, in certain exhibitions, the rightful name of our apple has been cut out. There are, it is true, some bearing Duchess trees in the province, but very few. I personally know every tree of bearing age in this locality.

The point taken by "Duchess" advocates is that the two cannot be distinguished. This is not the case either as to fruit or the tree itself. At the Grosvenor orchard, Meductic, are the two trees, and everybody in the vicinity knows the difference, calls them the "sweet" and "sour" New Brunswickers!

Commercially in this country they have not graded up to the New Brunswickers on the score of color, and would any grade, at best, as good No. 2's, as we used to grade.

It is also not so heavy a bearer, the orchards I know don't come up to more than half a good New Brunswick orchard in quantity let alone quality. For those who care to examine further, the tree itself shows differences in all this Northern country. The smooth limbs of Duchess are decidedly greenish in color, those of New Brunswicker's reddish. Of a bundle of 100 scions each, the New Brunswickers show strong with reddish in 95 per cent., the remaining 5 per cent being dark purplish all over like the Duchess. The leaves of Duchess are bluish-green, those of New Brunswicker yellowish-green. This "warm" tint which belongs in New Brunswick tint which belongs in New Brunswickers and not in Duchess, is, let it be known, the color nature provides for warmth, for protection from cold.

These comparisons are for this province, we do not go so far as to what they carry out in other districts, like Nova Scotia, in parts of which, as we have had information, neither our true New Brunswicker nor Crimson Beauty take on color in their fruit. No doubt, the resemblance to Duchess would be more marked there than here. Mr. Starr, of that province, informed me of some careful comparisons made by him in Nova Scotia, by grafting authentic New Brunswickers upon authentic Duchess. "I pointed out that his experiment did not provide a check against cross-fertilization, his fruit would likely be half Duchess and half N. B., and further, he had omitted to consider the very important fact of change occurring when plants are removed to a different climate. In neither case could his fruit be typical of the varieties. So unless comparisons keep in mind certain scientific principles they are utterly valueless. A glance back at the Apple Show of 1911, will show the confusion certain to occur to some extent even when we tardily put New Brunswicker back in its proper place. A number of exhibits, box and plate, of true New Brunswicker masqueraded as "Duchess". In the plate class for all New Brunswickers, out of seven entries there were two authentic Duchess, which were so manifestly inferior that they did not deserve awards. The judges, who were outsiders, seemed to have assumed that the fruit was correctly named and gave the prizes to the best colored fruit, and at last, three such, including the first prize, I traced to good old New Brunswicker orchards. Several persons entered what was to all appearances exactly the same identical fruit under the two names. But it seems to me that it is one thing to maintain as a matter of principle that both varieties are one, namely "Duchess," but quite another thing to so maintain, and at the same time enter the same fruit under both names. I cannot forbear speaking of the dilemma one well-known exhibitor got himself into. By an oversight he had placed his "Duchess" plate with the "New Brunswickers" and vice versa. I made discovery of the fact before the prizes were awarded; certainly as far as I could judge by the eye the samples were extraordinarily alike. Frankly, if I had been assured that they came from separate authentic trees, I should have to acknowledge much of what has been claimed by the advocate of "Duchess." Indeed, I would have to

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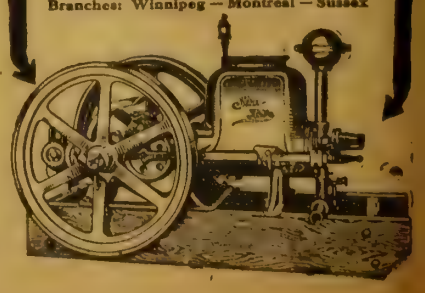

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say that as far as fruit alone went, they were the same. But when I called this exhibitor's attention to the oversight, my disposition being altogether friendly toward him, he astonished me by leaving the apples as they were and simply exchanged the labels. And he took a prize in Duchess class on what he had originally placed there labelled "New Brunswicker."

I trust there will not in future need to be any further discussion of this mooted subject. Error is often hard to eradicate. A slight dent on a surface will sometimes require long pounding to remove its trace. Let "Duchess" be taken simply on its merits, do not let it supplant an apple that for many years has had an honorable reputation, and should still be a means to no slight degree of advertising the apple growing possibilities of our province.

In the list of the Fredericton Exhibition it is not sufficient that New Brunswickers may be entered under "any other variety." The fact is, "Duchess," like the Cuckoo, has usurped the other bird's nest only in due course to throw the rightful fledglings out and occupy it himself.—Tappan Adney, Upper Woodstock, N. B.

Fertilzing the Orchard.

When doctors disagree, who then shall decide? This must run through the mind of many fruit growers who are following the various experiments in the fertilization of orchards. A while back the New York station startled growers with the broad statement that from many years' experiments there is nothing to show the need of additional fertilizers in the orchard, other than the soil carries. On the other hand, the Ohio station maintains that fertilization does pay, liberally. Much harm might follow either doctrine unless the individual grower knew the conditions of the experiments, and then carefully figured the proper course for his type of soil and climate. As a matter of fact the New York experiments were on a heavy type of soil, running strongly toward silt and clay loams. The Ohio experiments were on soil of a sandy nature.

It seems the Pennsylvania station is a step in advance of the other two, for the reason it located experiments in different parts of the state, on different types of soil, and then based conclusions thereon. Experiments were in commercial orchards, and under ordinary farm conditions. The Pennsylvania conclusions indicate that potash has little effect on the yield of fruit, but that nitrogen and phosphoric acid materially increased the yield. Rather contrary to the general belief, color and size seem to be little affected by any process of fertilization. It is argued that the color depends more on sunlight and maturity. One general statement is that if a fruiting orchard is making good annual wood growth, it is not advisable to add much fertilizer of any kind until after its value has been shown through careful trials.—N. E. Homestead.

Thinning Vegetables.

Because of limited space the rows of vegetables in a home garden are usually close together, and often the seed is planted thickly in order to have a large yield. This is a mistaken idea, as the plants cannot develop to their full size if crowded. Vegetables grown for their roots should be given as much space as a mature plant needs. The very early radishes which are ready for the table in three or four weeks can be thinned out as used, but the larger varieties should be allowed two or more inches of space. Beets can be thinned out and used for greens, giving those left to mature, about three inches of space.

Plants grown for their foliage, as lettuce, parsely, and spinach, need more room than those whose roots are edible, and those which bear fruit, need plenty of room in which to develop the fruit bearing branches.

Seeds of vining plants, as cucumber, melons, squash and pumpkin are usually planted thickly, as the early bugs and cutworms take some of the plants. Only three or four should be allowed to grow in each hill. Nearly all plants can be transplanted, some of them, as lettuce, and parsely, seeming to grow faster after being reset than before. The best guide as to the room needed is a good, reliable seed catalogue or garden text book, which usually gives the size of a fully developed plant.

Lenses for Fruit Growers.

Every fruit grower should have a hand lens as a pocket piece. It enables him to determine at once the causes of many things that otherwise might remain a mystery and to see many things of greatest practical importance. In winter it shows whether the buds have been winter killed or not, whether plant lice eggs are abundant on the branches, whether the San Jose scale is present, and numberless other points of great importance. In spring he can determine the effects of frost upon the blossoms the presence of minute insects, the quantity of pollen developed, etc. Throughout the rest of the year there are abundant opportunities for the use of these lenses.

These simple magnifying glasses can be bought at prices ranging from a few cents to several dollars. For ordinary uses the less expensive ones serve almost as well as the more costly ones.

Cultivating Tomatoes.

Tomatoes should have the best of cultivation if profits are expected either in fresh tomatoes for the city consumer or in canned fruit. The soil must be mulched by careful cultivation; weeds must be kept down and the tomato plants kept growing rapidly until time for fruit to form. One of the sources of loss in tomato growing is the large per cent of faulty and immature specimens of fruit. Strive to reduce this per cent to a minimum.

Cultivate Berry Plants.

As soon as the strawberry crop is all gathered and sold, if the season be at all favorable it would be advisable to cultivate the berry fields, taking care not to destroy the runners nor to injure the roots of the plants. The right kind of cultivation will establish a mulch to reduce evaporation during the trying days of summer and it will also destroy many weeds that, if allowed to grow, would usurp plant food and moisture that the berry plants need.

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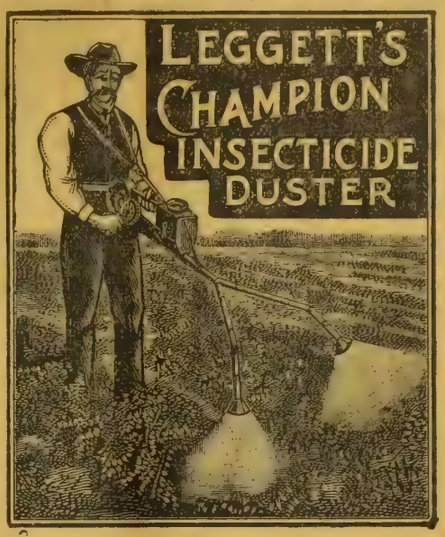

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The Prairie Market for Fruit.

Fruit growers in Ontario, British Columbia and Nova Scotia are all alike interested in the capacity of the market in Western Canada for apples, and from time to time estimates of varying degrees of accuracy have been made of the total quantity received annually by the provinces of Manitoba, Saskatchewan and Alberta. Last summer the Dominion fruit inspectors assigned to these three provinces were instructed to take notes as to the quantity of apples shipped into their several districts, and make a report to this office at the end of the season. These reports have been complied with the following results: The total quantity of apples marketed in these provinces for the season of 1912 was approximately 495,000 barrels, of which Ontario supplied 238,000, British Columbia 75,000, Noba Scotia 18,000 and the United States 164,000.

In addition to the prairie provinces there is a large and growing market in New Ontario which will afford an outlet for increasing quantities of Ontario apples. If we consider the present population of Fort William, Port Arthur, Sault Ste. Marie, North Bay, Sudbury, the Cobalt district, and similar sections, we shall find that 60,000 barrels is a conservative estimate for the quantity of apples marketed in this section during the past season. The proportion of the above total supplied by the United States would probably not exceed ten per cent.—Canadian Horticulturist.

Enemies of the Strawberry

One of the enemies to which the strawberry is subject is the white grub. It is the larva of the May beetle. The grub when fully grown is about an inch and a half long and three-eights of an inch thick, nearly white, with a brown head. They are usually more numerous in old pastures and meadows than elsewhere, because their principal food is the roots of different kinds of grass.—W. A. Dier, Ottawa.

A land and apple show will be conducted in the new auditorium of the Winnipeg Industrial Bureau, October 10th to the 18th. The show will be an all Canadian one. In addition to liberal cash prizes, diplomas will be awarded for the finest general display of grains and fruits exhibited by provincial governments, fruit growers' associations, and other organizations.

A sprained ankle may as a rule be cured in from three to four days by applying Chamberlain's Liniment and observing the directions with each bottle. For sale by all dealers.

DAIRYING.

Preparing the Cow for Milk Fever.

J. G. R.—Could you advise any precautionary measure to be used in feeding and dieting a cow six weeks before freshening that is subject to milk fever?

If a cow is in good physical condition and flesh, it is well not to feed very much, if any, grain, but give a liberal amount of succulent feed such as silage and alfalfa and all the good hay, preferably of the legume class, that she will consume without waste. If there are no succulent feeds, we believe it well to feed about one pound of oil meal daily together with some other feed like bran or ground oats. We suggest the oil meal because of its tendency to keep the bowels of the animal in good condition, but the succulent feed will do that if it is obtainable.

The time has come when we need pay but little attention to the feeding of the cow so far as milk fever is concerned. We believe in feeding her in such a manner that it will put her in proper shape for calving. If milk fever follows, the simple cure, the air treatment, may be applied. Every good dairyman should provide himself with the necessary instruments for inflating the udder with air. These instruments are advertised in our columns, but a bicycle pump, milking tube and a short piece of rubber hose will serve the purpose. Great care should be taken to have the tube that is inserted into the teat thoroughly sterilized—boiling is one of the ways. Care should be taken not to touch it with the fingers or have it come in contact with anything before inserting. Futhermore, the teat itself and the end should be thoroughly washed with a disinfectant, using one part of corrosive sublimate, to one thousand parts of water, which is a very effective antiseptic. Great care should be used in handling the corrosive sublimate because it is a deadly poison. An eight or ten per cent solution of carbolic acid is also a good antiseptic. If the operator is careful in thoroughly sterilizing the instruments and the end of the teat before inserting the instruments, there is no danger of infecting the udder, and furthermore, the air treatment is practically an absolute cure for milk fever.—Hoard's Dairyman.

Cool the Milk Quickly and Thoroughly.

The warmer days are here. Each change of season brings its attending problems to the dairyman. As the days become warmer the danger from sour milk becomes greater. The strictest attention is required in sanitation and proper handling if the dairyman does not wish to be annoyed by the refusal of milk that has turned.

We wish to call the attention of our readers to three things in respect to cooling:

1. Cool immediately after milking. The dairy house should be equipped so that every pail of milk will be run over the cooler while the next cow is being milked.

2. Cool quickly—There is a vast difference in results between cooling in a large can in a tank of water and running the milk over a cooler which will immediately reduce the temperature to within two or three degrees of the water used for cooling purposes.

The most efficient coolers are those which will, in a few seconds, do this work.

3. Cool thoroughly—bring it to less than 50 degrees F. if possible. A little understanding of the life history of bacteria would enable the dairyman to appreciate these admonitions. Most of the bacteria get into the milk during the process of milking. In the warm milk they begin at once to multiply very fast, and they keep it up until the milk is cooled to 50 degrees or less, hence the necessity of immediate, quick, and thorough work in cooling.

Patrons Lose Money by Selling Thin Cream.

A loss of $2,700 on sweet skimmilk was sustained by the patrons of one co-operative Wisconsin creamery last year on account of the average per cent of fat in the cream being less than 30. This loss was calculated by getting the difference between the actual weight of cream received and what it would have weighed had it tested 30 per eent. The value of the skim milk was placed at 25 cents per hundred pounds.

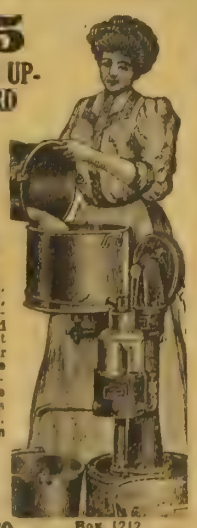
Prof. C. E. Lee, of the College of Agriculture, of the University of Wisconsin, reports this condition as more or less general, probably 75 per cent of the patrons delivering cream testing less than 25 per cent fat. The creamery patrons seem to believe that it is more difficult to test rich cream correctly, and that some cream is lost by sticking to the can. As a matter of fact, buttermakers always rinse the cream cans, while if a hauler collects the cream, the patron can avoid loss by rinsing the cans himself. There is no difficulty in determining accurately the test of rich cream.

Every creamery operator in Wisconsin should make an effort to have his patrons skim a richer cream, declares Prof. Lee. Several accomplished this by paying a cent or two less a pound of butterfat for cream testing below 25 per cent. Should all the factories pay according to the test and grade of cream delivered, the farmers of the state would be more likely to deliver cream that tested at least 30 per cent. Not only would each farmer then save from $25 to $40 yearly in skimmilk but the buttermaker would be able to turn out a much better product, as thin cream is difficult to handle properly in the creamery. Thin cream is thus seen to be objectionable from both the farmers' and the creameries' standpoint.

Cut Your Work Down One Third.

A decrease of labor with no diminution of income, but with general improvement of results, is a combination which appeals to any one. Labor-saving machinery and thoroughly efficient machines might just as well be used by dairy farmers as by any manufacturer. So the questions come: Have we efficient cows? Do they save or make work? Are they so good that they decrease both comparatively and actually the necessary amount of labour in keeping cows,

15 95 AND UP-WARD



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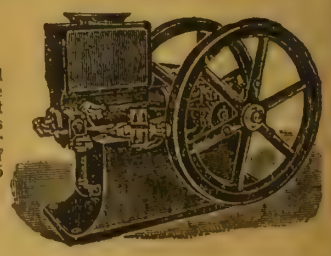

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and at the same time increase the income? Every dairy farmer needs to answer such questions as applied to his herd, and he can answer them satisfactorily when he keeps dairy records.

A statement made by the Dairy Division, Ottawa, regarding Ontario cows last year, was that dairymen are keeping sixteen cows to do the work of ten. So it is quite possible to cut down work one-third, and rejoice because possessing more efficient cows. To the scrap-heap with the old junk!

A Quebec dairyman after one year of cow testing writes the Dairy Division that he now gets as much milk from his 32 selected cows as he used to get from his larger herd of 42 cows. Ten inefficients were beefed. Dairy farmers have not time to waste working for poor cows, so make sure that each one pays.—C. F. W.

Receipe for Preserving Butter.

A contributor to "Hoard's Dairyman" gives the following recipe for preserving butter, which he says has no equal or superior: Churn and then wash well the butter in several cold waters so as to thoroughly remove every trace of the buttermilk. Drain well, spread it thinly and salt to suit the taste, sprinkling the salt thinly over every portion of it. Work well, drain again, and set in a cold cellar of even temperature or in a refrigerator until next day. Then work it again by means of a butter ladle and pat it into little cakes size of an egg and pat each one of these cakes (one at a time) until thin as a wafer so as to drain off all the water possible. Pack in earthern jars, filling within one inch from the top. Now, wring a white linen or muslin cloth from cold water (cutting it to lap a little over the jar), and on the top of the cloth put fine salt until it comes level with the top of the jar. Put a sheet of paraffin paper over the salt, seal covers on with wax and tie brown paper down over it all so as to insure excluding the air. "Butter preserved by this method cannot (the writer says) become strong, provided that all the equipment has been kept perfectly sweet and clean by thorough washing and scalding. Fill your jars or crocks full at once; never leave them over for the next churning. The butter is liable to become strong if the jars are left open a day or two. If cattle have been allowed to pasture in wild fields, which has caused the butter to have any disagreeable taste, or should there be any disagreeable new grass taste to the butter, if packed by my instructions, every particle of it will draw out in short order. My customers pronounce my butter O. K., and will not buy elsewhere as long as I can supply them.

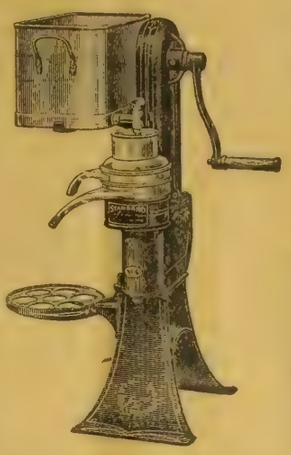
"The cloths which I use in my creamery are never used in any other kind of worv. I always wash, rinse and scald them each time they are used, and I hang them out in the air so that they will be fresh and sweet the next time they are to be used. Butter should be kept in a cold cellar of even temperature."

A Matitime Bred Cow Makes a Good Record.

On looking over the list of official record aged Holstein-Friesian cows that have recently been reported and accepted we find Minnie Rooker's Poem (7099), owned by the Colony Farm, Coquitlam, B. C., with a record of 568.1 ,bs. milk, 16.01 butter fat, equivalent to 20.01 lbs. butter, 80 per cent fat.

Minnie Rooker's Poem was bred by Logan Bros., Amherst Point, N. S. Our readers will probably remember Minnie Rooker's Poem as the junior champion Holstein female at Toronto in 1908.

For These Reasons



TO tell all the reasons why we believe your choice of a cream separator should be the Standard would be impossible in this space, but here are four: **First:** Because the

Standard

cream separator under ordinary conditions skims to .01 per cent. or less. It loses but one-tenth of a pound of butter fat in 1000 pounds of milk skimmed. The ordinary separator loses a full pound. **Second:** Because the Standard has a wide open bowl, and no cream or milk tubes to clog up. Everything easy to clean. **Third:** Because the supply can is more than a foot lower than on ordinary machines. No high or awkward lifting to do with the Standard. **Fourth:** Because the Standard has a self-oiling system and lubricates its working parts automatically all the time it is running.

The Standard will save more time and labor, and make more money for you, than any other cream separator. Try one and let the machine prove these facts.

FREE! Write for the Standard booklet, giving a full description of "The World's Greatest Separator," also folder entitled "Skimming Results."

The Renfrew Machinery Co., Limited

Head Office and Works, RENFREW, Canada. Branches: Sussex, N. B., Saskatoon, Sask., Calgary, Alta.

Agencies everywhere in Canada. 16

Ask yourself this question:—

Why should any piano be called

"Canada's Biggest Piano Value"

Now think! That claim must be either true or not true. Twelve hundred Canadian families proved its truth to their own satisfaction last year. They wrote direct to us for the proofs. They made a thorough investigation, and they satisfied themselves, beyond any reasonable doubt, that the

Sherlock-Manning 20th Century Piano

was one of the world's few **great** instruments—by all odds **the world's best** piano at the price. So they endorsed our claim in a **practical** manner by buying 1,200 Sherlock-Manning pianos. If you are thinking about buying a piano why not investigate our claims for yourself! Just write asking us to prove two points to you: First, that the Sherlock-Manning is **"Canada's Biggest Piano Value."** Second, that the Sherlock-Manning is one of the world's best pianos.

Style 105

Important: We'll prove these claims true and show how you may own this superb instrument and **save** $100. Write to-day. 42

SHERLOCK-MANNING PIANO CO.,

London, (No street address necessary) Canada

7% PROFIT SHARING BONDS IN SMALL DENOMINATIONS

We will gladly furnish particulars concerning this new form of investment in a Company which we can highly recommend. The nominal interest of 7% is guaranteed to the purchaser, who will then participate as well with the Company in any further earnings. Interest cheques mailed to investors twice a year.

National Securities Corporation LIMITED

CONFEDERATION LIFE BLDG., - TORONTO, ONT.

LIVE STOCK.

Forage and Pork Production.

Economical pork production for our state depends a great deal upon the forage crops furnished the pigs and upon the quality and quantity of grain fed at the same time.

At the Station we have tried several forage crops for a number of years past and find that winter rye furnishes the earliest possible forage crop as it is ready to pasture with the first warm dry days of spring.

The area planted to winter rye needs only be large enough to forage the herd until the middle of June if the summer forage is planted early in May.

For the summer forage we find our brome grass permanent pasture to be fairly good but the plots planted to a mixture of 1 bushel oats, 1 bushel Canadian field peas, 3 lbs. of rape and 2 lbs. of millet have given us better returns and the plot planted to rape alone gave us the best returns of any one of the forage plots. We pastured these plots here on the Station farm at the rate of about 16 pigs per acre. Our plots were exceptionally good and I doubt whether it would be safe to count on more than 12 pigs per acre unless the forage is sown on an exceptionally good piece of land.

On some of the lighter soils I believe it more safe to count on running ten pigs to the acre. About the middle of June the pigs can be put on the rape or other forage crop and if the pigs are 10 weeks old and have learn to eat at the trough they will take hold and grow well from the first.

We do not count on the pigs making all their living and storing up a goodly quantity of fat on the forage. We feed our pigs about 4 to 5 pounds of a mixture of feed per hundred lbs. live weight, daily, in thick slop mixed at feeding time.

From our experience in the past we find that when the pigs are started out on a forage crop as rape or the mixture of rape, oats, peas and millet that a good mixture is about 7 parts of corn, 3 parts of shorts, 1 part of bran and 1 part of a concentrated protein feed as oil meal, field pea meal or tankage.

In case ground oats or barley is used in place of corn to make up the ration, bran had best be dropped as the bulk of the feed would be more than the pigs could make the best use of.

If desired to finish lard hogs off for market in better shape after they have pastured the plots all summer it would be well to have an acre of Gehu or another of the flint varieties ofcorn for each 15 hogs you have to finish. Turning them in about September 1st weighing 150 pounds the pigs ought to gain 50-60 pounds in September or as long as the foarging on the corn paying, we find, when we have some field peas that can be foraged over in connection with the corn.

The feed fed as slop may, after the first month, be dropped to 3½ to 4 lbs. per hundred live weight but I would not change the proportion until August when the protein concentrate as oilmeal, pea meal or tankage may be dropped out with good gains following.

By planning ahead from today and getting the forage crops planted early we may rest assured of cheap, well finished pork as the harvest in November and December.—E. J. Thompson, in Exchange.

Will kill every fly in your house or store. All you have to do is to get the flies to the Pads.

Directions in each packet show how to do this.

Cattle Prospects for 1913.

Beef scarcity is not confined to the United States.

There is a world shortage of live stock, especially cattle. The populations of all civiliced nations are growing much faster than the general meat food supply. In England, Germany, France and all European countries, as well as the United States, meat is scarce and dear, beef has become a luxury, and the people are clamoring for legislation to give them relief.

The three great regions of live stock surplus are Austraiia, South America and the United States.

Australia is just recovering from a severe drought and her contributions must be moderate for a number of years to come.

ARGENTINE DROUGHT CRIPPLED.

Argentina's live stock interests have been crippled by three successive seasons of drought followed by "foot and mouth" disease, and having unfortunately sacrificed too many of their cows and heifers in an effort to hold the more valuable steers during the drought period, this region is now short of breeding stock. Argentina must first raise more breeding cows before she can begin to produce a normal crop of beef steers ready for slaughter. It is for this reason that they are endeavoring by legislation to prevent the slaughter of calves and of all female cattle under seven years of age. It will require from seven to ten years, at the least calculation, for her to fully recover. Besides, Argentina has strained herself to supply England's demands, and now Portugal, Spain, Italy, Switzerland and Bermuda are all drawing up on her stock.

SLAUGHTER EXCELLS INSRGASE

Owing to the increasing demands from foreign countries for Argentine beef, the annual slaughter of cattle far exceeds the increase of the herds, and legislation looking to the limiting of the number of cattle slaughtered to the number represented by the yearly increase is proposed as the sole solution. Recent advices from Argentina show greatly increased prices for young cattle, and record prices paid for breeding stock.

Brazil is not yet under headway, and cannot begin to export under a dozen years or more.

Even if the tariff on beef be removed, the United States will get no beef from South America, because the latter has not enough to supply both Europe and this country. North American cattle raisers have nothing to fear from South American competition.

CANADA IS SHORT.

Canada has none too many cattle, and with a severe climate, short season and without corn, cannot produce largely. Under normal conditions, England will outbid United States and the world for all the cattle Canada can produce. The relatively low prices there ofthe past season were due to abnormal conditions which may not occur again in twenty years.

Mexico, torn by several years of drought followed by a revolution now in progress, with her cattle industry demoralized, will take at least a decade to recover. Moreover, only common cheap cattle for grazing on what pastures are left in Oklahoma, Kansas, Colorado and one or two other states, can be expected from Mexico at best, and then not nearly so many as needed.

In the United States, according to Government figures, since 1900 the population has increased over 26 per cent, while the supply of beef cattle has declined fully 20 per cent, and during the same period the slaughter of calves has increased 600 per cent. With the decline of the ranges, cut up and partly occupies by settlements, restricted by legislation both state and national, advance of sheep raising, depleted by droughts, and closely marketed by reason of good prices; with the big cattle outfits nearly gone, and small settlers not ready to take their place in cattle growing, because they must raise quick cash crops until their lands and improvements are paid for before they can hold crops and borrow money to buy cattle with so as to raise, graze and hay-feed or feed them for market; and because corn belt farms and pastures have not yet begun to supply the deficiency, but are fact to face with the greatest scarcity of feeders ever known, nothing but a continued shortage of beef cattle may be looked for during the year 1913.

DEMAND FOR BEEF.

Ever since the close of 1907, there has been a tremendous demand for cheap beef, especially throughout the densely populated manufacturing section of the United States, lying east of Chicago, where the bulk of commercial meats are sold. To meet this demand for cheap beef, the stock of cows and heifers has been depleted all over the country, while the deficiency thus created has compelled the packers to draw heavily upon the supply of young steers that normally and properly belong in the feed lots.

This increased demand at market for light and medium steers for slaughter has tended to drain the country of such cattle until the supply has become very scarce in both range regions and corn belt. Farmers and cattle feeders have been forced to buy them at the larger markets because they could find them nowhere else. This has brought them in direct competition with the packers, and owing to the relatively higher prices bid by the packers for young steers, fewer cattle than usual have been going into the feed lots. The decrease in the feeder cattle movement from five markets during the first eleven months of this year, as compared with the corresponding period of 1911, is over 158,000 head.

Not only has the movement of cattle direct from the ranges to the feed lots ceased, but part of the feeder cattle movement shown by the above figures consists of young and female cattle bought for the purpose of restocking the ranges, and shipped from the markets to regions that have always heretofore been regarded as sources of market supply for such cattle.

HAD A TERRIBLE ATTACK OF DIARRHŒA.

Became Very Weak.

Diarrhœa, especially if allowed to run any length of time, causes great weakness, and the only thing to do is to check it on its first appearance. You will find that a few doses of Dr. Fowler's Extract of Wild Strawberry will do this quickly and effectively.

Mrs. Jacob Smith, Manor, Sask., writes:—"I am pleased to express my gratitude for your remedy. In my case, I had a terrible attack of diarrhœa. Just about every three minutes, I would have a passage, and it would keep this up for a week at a time, causing the passing of bloody water. I was so pained and weak, I could not do anything.

'Seing your Dr. Fowler's Extract of Wild Strawberry recommended, I tried it and it thoroughly cured me. It is the only medicine for this complaint I will now have.'"

"Dr. Fowler's" has been on the market for over sixty-five years, and is, without a doubt, the best remedy known for the cure of Diarrhœa, Dysentery, Colic, Cramps, Pain in the Stomach, Cholera Morbus, Cholera Infantum, and all Bowel Complaints.

When you ask for "Dr. Fowler's" see that you are not handed one of the many substitutes for this old reliable remedy.

Get the yellow wrapper on which appears the name of The T. Milburn Co., Limited, Toronto, Ont.

Price, 35 cents.

SHORTAGE IN CORNBELT.

The practical point to bear in mind is that the full extent of the deficiency in the supply of young cattle for corn belt feed lots is not indicated by the decrease in the feeder as shown by official reports from the principal western markets, and that the present general scarcity of such cattle is bound to show, in due season, in a corresponding scarcity of finished cattle at market.

Another grave consideration lies in in the fact that the partial drought of 1909 and 1911 in the United States, and the general drought of 1910, which extended over all Canada, Mexico and the western two-thirds of the United States forced prematurely to market vast numbers of young and female cattle, which still further reduced the stock of breeding cows in the country. The result is a big deficit of breeding cows from which to produce calves suitable for feed lot use.

In fact, there are not enough breeding cows left in the country to keep up the supply of beef steers. More cows of suitable breeding age must first be produced, developed and added to the stock of breeding cows now on hand, which will take at least four years, while, meantime, those that wear out, die and are slaughtered must be replenished, before the nation is ready to begin breeding for an adequate supply of beef steers. To produce a crop of calves will require another year. To raise and prepare the latter for market will require at least two years more, so that under the most favorable conditions not less than about seven years will be required to restore an adequate annual production of beef cattle.

RESTOCKING IS SLOW

The present stock of breeding cows

will not be bred before next May or June, 1913.

It will require nine months gestation, so that the next stock of calves, which will average about 80 per cent, only half females, will be born in February or March, 1914.

These females must be at least two years old before they can be bred, which will be in May or June, 1916.

It will then require nine months, or until February or March, 1917, for their cattle to be born, only half of which, or a 40 per cent increase, will be bull calves from which to make steers for feeding.

Another two years will be required to raise and prepare these steer calves for market as beef steers, which will extend the time to the spring or fall of 1419, or nearly seven years hence, at the earliest, before they can be restored to the country an adequate supply of beef steers ready for slaughter.

The above is a demonstration which any practical cattle raiser will verify.

SPASMODIC BREAKS.

Meantime, it is possible that there may occur spasmodic seasons of temporary overmarketing of the meagre supply of beef cattle in the country, which may depress values for short periods, followed by seasons of severe scarcity at market and abnormally high prices.

Such a season is liable to occur within the next 60 or 90 days, but may be easily avoided if only feeders of cattle will hold them, regardless of market fluctuations, until they are mature and ready for market. The only danger lies in a premature rush of unfinished cattle on the part of those who have not sufficient confidence in the stability of market prices to hold them until maturity, thereby bringing upon themselves and others the very conditions which they fear.

For, gainsay it as they will, the natural law of supply and demand governs the market values of live stock; otherwise there would be no explaining the prices of 1912, which have been the highest ever known.

CATTLE BREEDERS OPPORTUNITY.

The summing up of the whole cattle situation is this: (1) that tnere is a wild snortage of cattle, and cheap beef is a thing of the past; (2) that the farmers and stock raisers of the United States have nothing to fear in the way of cattle or beef competition from either Mexico, Canada, or South America, during the next decade, or longer: (3) that, henceforth, the corn belt farms must be looked to more than ever before for our domestic beef supply, or else the American people must face a beef famine: (4) that to save the calves and to breed and raise more and better cattle on their farms is not only a duty which corn belt farmers owe to their country, but also a necessity for preservation of the declining fertility of their own lands; and, (5) that by buying foundation herds of good cows and pure-bred bulls, of pure-bred animals of both sexes, at the present relatively very low cost of such breeding stock, which, owing to cessation of range demand, is almost on a level with beef prices, together with economical, improved methods of beef production, involving the raising of more corn, the building of silos for both winter and summer use, and the raising of alfalfa—such a course cao be made to pay a larger annual net profit, on an average through a series of years, and confer greater and more lasting benefits upon both producer and public, than any other now presented to the corn belt farmers of the United States.—J. A. Spoor.

Fly Repellent.

Will you kindly give me a good remedy for flies as my cattle are very much annoyed by the pests, especially at milking?—H. D.

On the whole, we believe it is fully as cheap and satisfactory to purchase some of the proprietary fly repellents as it is to make the mixture on the farm. The following is a recipe which has been used with fair success: Fish oil, three quarts; petroleum, one quart; carbolic acid, one ounce.

Ground oats make splendid feed for practically all of the growing stock on the farm.

The cow with a dainty appetite, the one that is a delicate eater, is seldom the most liberal producer.

The dairy that is properly equipped will bring more profit than one not so well arranged and it will get practically everything out of the product. Less butter-fat will go to waste.

WANTED!

Thousands of Farmers throughout the country and others interested in Sheep Raising to visit the

Dominion Government Department of Agriculture Sheep Extension Car

Which is due to arrive at different points throughout the Province of New Brunswick on dates as scheduled on page 690 of this issue.

Let every one interested in Sheep try to be present. Mr. James A. Telfer in charge of car will give talks and demonstrations along Sheep Husbandary lines, during the stop of car at each place.

Look up the date and remember it

THE HORSE.

Corns--Bruised Soles.

This expression is applied to nearly all bruises of the rear half of the horse's hoof. There is a rupture of the blood vessels from injury (pressure from an improperly fitted shoe, or permitting the shoe to remain on for more than five weeks). Corns are apparent to the eye as yellowish, reddish, or bluish-red discoloration of the horn of the sole and white line. The horn tubes are penetrated by blood from the ruptured blood vessel. the discoloration may be so slight that if the foot be improperly pared, the corn may be entirely overlooked. We have corns of the wall, sole and bars. Corns affect principally the inner half of the hoof, and the fore feet are almost exclusively the seat. There are two reasons for this:

First—Because the fore feet support the greater part of the body weight.

Secondly—Because the heel of the fore foot is first placed upon the ground during progress, thus receiving much more concussion than the heels of the hind feet.

THR DIFFERENT KINDS OF CORNS.

1. Dry Corns. This corn is dry and seldom causes lameness.
2. Suppurating Corns. Considerable pus is formed causing severe lameness.
3. Chronic Corns. This corn is either soft, moist or lardy and there is an intermittent lameness agravated by improper shoeing.

CAUSES OF CORNS.

Some feet are predisposed to corns, viz., narrow, deformed hoofs, deformity of the limbs, badly trimmed, wide, flat feet, excessively weakening the sole bars and frog, permitting the toe to grow too long, shortening one quarter too much, so that the foot is unbalanced, shoeing a heavy horse with too light a shoe, thus permitting the shoe to spring down on the heel. Permitting the feet to become too dry and brittle, thus reducing the elastic properties of the horn. Nailing the shoe too far back, thus preventing the natural spread of the hoof when placed upon the ground. Applying the shoe too hot while being fitted. Insufficient concavity of the shoe in flat feet. Horses which have never been shod rarely have corns, thus proving that corns are due to errors in shoeing.

TREATMENT.

First removal of the cause by paring the hoof to the proper angle; shorten the toe and cut down the quarters if too high. Put on a level shoe. If calks must be used, use both toe and heel caiks, never toe without heel, nor heel calks without toe, unless for a special purpose. A leather sole should always be used under the shoe and place a dressing over the sole of the following mixture:

Pine Tar, 8 ounces
Venice Turpentine, 1 ounce
Spirits Camphor, 1 ounce
Compound Tincture Benzoin, 2 ounces

Mix and smear plentiful over the sole, after which apply oakum and the leather pad.

When there is a suppurating corn, the shoe should be left over for several days and drainage for the pus established. Poultices of flaxseed should be applied in which has been placed about two ounces of creoline. When the lameness has been removed, the horse should be carefully shod, using a bar shoe with a leather sole, and the above dressing. The after-care of the hoof consists in keeping it cool, moderately moist and pliant.—San Francisco Veterinary College.

The Wear of Horses Legs and Feet.

The fact that horses' legs and feet are so susceptible to the adverse effects of the wear and tear which work entails upon them is the bane of horse owners, and forms the principal reason why horses generally depreciate more or less rapidly in value once they begin to age, if not sooner. This is expressively summed up in the old adage that "a horse is as old as its legs." The amount of wear which a horse's limbs are capable of standing of course varies greatly in different cases, just according to whether they are possessed of inherent stoutness or the reverse, and there is no direction in which horses differ more widely than in regard to this point. For the reasons advanced one of the most crucial considerations in choosing a horse for everyday work, and especially for road work, is to look for strong and tough legs and feet.

INDICATIONS OF STRENGTH AND STOUTNESS.

It may not be possible to judge conclusively as to whether they are really strong and possess good wearing capacity or not from their shape and appearance, but one can form a pretty shrewd opinion from the various outward indications. The foremost attributes to be sought for, as denoting strength and stoutness of leg, are a short cannon and flat bone allied with tense, clean tendons, running perfectly parallel with the can-

Horsemen Attention ! !

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevents the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for alland every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR :--I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

Hillsboro, N. S.

MESSRS. FRASIER THORNTON & CO., Cookshire, Que.

GENTLEMEN :—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

DEAR SIR :—I have used Dr. J Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

W. A. C. RANDALL, M. D.

FRASIER THORNTON & CO., Cookshire, Que.

DEAR SIRS :—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
March 28th, 1911.

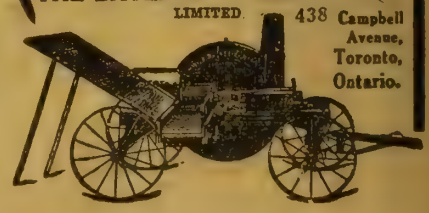
FOR SALE BY ALL DEALERS

Manufacturers: FRASIER THORNTON & CO. LIMITED, Cookshire Que.

TRADE MARK
Wilkinson
REGISTERED
PNEUMATIC
ENSILAGE
and STRAW CUTTERS

Our Climax "A" mounted is the only successful combination machine of this capacity on the market. It will cut and deliver green corn into the highest silo, or dry straw or hay into the mow. 13" mouth, rolls raise 8 inches and set close to knives, making solid compact cutting surface. Requires less power than any other of same capacity. No lost power. Direct pneumatic delivery, no worm gears or special blower attachment. Knife wheel also carries the fans. No lodging on wheel arms, everything cut, wheel always in balance. Steel fan-case. Supplied with pipe enough to reach any silo, also pipe rock, tools, etc. Ask your dealer about them and write for catalog. We also make a "B" machine unmounted.

THE BATEMAN-WILKINSON CO.
LIMITED 438 Campbell Avenue, Toronto, Ontario.



OUR Stallion Policies, covering against loss by **Death through Accident or Disease,** are more liberal and afford more protection to owners than any issued by Competing Company. They contain no vexatious clauses, having been drafted to cover **the special conditions** met with in this Country. They cover the horse no matter **where he might be** and not merely **in his own stable,** as certain Companies do. This is very important during the Breeding Season as the horse might die while being on the road. Do not **take any chances** by insuring with others, **insure with us;** The insurance premium represents only a small proportion of the service fees earned. Better risk the **loss of the premium** than the **purchase price** of your beast if it dies without insurance.

STALLION INSURANCE

Better have and not need than need and not have.

All kinds of live stock insurance transacted. *Write for particulars and address of nearest agent.*

THE GENERAL ANIMALS INSURANCE CO. OF CANADA, Head Office: 71a ST. JAMES STREET, MONTREAL, Que.

THE BEST LINIMENT
OR PAIN KILLER FOR THE HUMAN BODY
Gombault's
Caustic Balsam
IT HAS NO EQUAL
For the Human Body —It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils Corns and Bunions, CAUSTIC BALSAM has no equal as a Liniment.
A Perfectly Safe and Reliable Remedy for
Sore Throat
Chest Cold
Backache
Neuralgia
Sprains
Strains
Lumbago
Diphtheria
Sore Lungs
Rheumatism
and
all Stiff Joints
We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.
REMOVES THE SORENESS—STRENGTHENS MUSCLES
Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than $120.00 paid in doctor's bills." OTTO A. BEYER.
Price $1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet B.
The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

FLEET FOOT
THE PERFECT SHOE for SUMMER SPORTS
FOR EVERYBODY

Made In Smart Styles, Suitable For Every Outdoor Occasion
YOUR DEALER HAS THEM
You Might As Well Get THE BEST
CANADIAN CONSOLIDATED RUBBER CO., LIMITED, MONTREAL.
2

At the Yarmouth Y. M. C. A. Boys' Camp, held at Tusket Falls in August, I found MINARD'S LINIMENT most beneficial for sun burn, an immediate relief for colic and toothache.
ALFRED STOKES.
General Secretary.

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non bone, while when the bone is razor-like and flat the foot may also be usually assumed to possess a satisfactory degree of toughness, provided it is of a good shape. Flat-shaped, very low-heeled feet generally do not wear well. One of the principal features that indicate want of strength or actual weakness of the forelegs is when they are what is called tied in below the knee, consisting in the tendons being compressed, as it were, just underneath the knee-joint, so that the leg is narrower at this point that further down the cannon, while the back line of the tendons converges inwards towards the knee, instead of being quite straight and running parallel with the cannon bone. Such a tied-in condition below the knee is a grievous fault, and a horse affected therewith is only too likely to sprain its back sinews on slight provocation. An important factor tending materially to enhance the wearing-resisting capacity of the legs is a well-sloped pastern, for this renders the action springy and serves to break the force of the concussion to which the feet and legs are exposed. These will feel the harmful effects of such concussion much more severely if the pasterns are very upright, because the shock, when the foot is brought to the ground, is not broken at all in this case, but gets transmitted in its full force direct up the leg through the straight and rigid column of bones. In the action of straight-pasterned horses there is none of the spring or resiliency which is usually associated with nicely sloped pasterns and this entails a considerably increased wear and tear in the limbs. For these reasons the legs of horses with upright pasterns are generally found to wear badly.

LIGHT IN BONE.

It is usually held that the fact of a horse having plenty of bone below the knee is an indication of strength of limb, and that the legs are hard wearing, but it is very much open to question whether this view is really correct. No less an authority than Mr. Walter Winans has recently expressed his conviction in print that there is little in this theory, his belief, as the outcome of long and great practical experience, being that the legs of light-boned horses wear quite as well, other things being equal, as those of horses with much bone beneath the knee. A substantial proof in support of this contention is afforded by horses and ponies of Arab breed, which are noted for the great toughness and wear-resisting capacity of their limbs, yet which generally are on the light boned side, if not actually considerably deficient in bone. However, deep-rooted beliefs that have the weight of long-established tradition and well-nigh universal acceptance behind them are not easily shaken or discarded.

TOP-HEAVINESS.

Probably nothing speaks more badly for the wearing capacity of a horse's limbs than the fact of the animal being too heavily topped. The legs and feet of horses showing this most undesirable kind of conformation usually become the worse for wear at a comparatively early age, and are exceedingly liable to develop unsoundness, especially if they are subject to much stress and wear, simply because of the fact that they have to support a disproportionately heavy body. This imposes an added strain on them, and intensifies the evell effects accruing from concussion, so entailing an abnormally high degree of wear on them.

ATTEND TO THE SHOEING.

There is, as a rule, not much that can be done to counteract the results of the wear and tear to which the limbs of horses are exposed in the ordinary course of things. Something in this direction may, however, be done by careful shoeing, and in particular by encouraging the frog to expand as much as possible and allowing it to take a good bearing on the ground. A well-developed, prominent frog undoubtedly aids not inconsiderably in conserving the feet and legs, because it will act as an elastic cushion or buffer, which minimises and breaks the force of concussion, thus saving the limbs. The use of calkins and thick-heeled shoes is usually best avoided, for these tend to increase the wear and tear imposed on the foot and leg, because they throw the limb out of its true balance. In towns india-rubber and leather pads, inserted between the foot and shoe, are very often resorted to with the object of saving the legs from concussion (as well as to prevent slipping), and it is probable that this expedient is of some value in this direction, though the benefit derived may not be so great as it is thought to be by some. The most effectual way of preventing undue wear of the legs consists in avoiding fast work on hard roads, but this is, of course, a counsel of perfection which can only be followed, to a greater or less extent, in the case of horses used under the saddle. These should always be kept to soft going as far as possible. —Argus.

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Grease in Horses.

I bought a mare a few days ago, and find she has a little grease on one hind leg. What is the treatment for grease, and what causes grease?—E. M.

Taking your last question first; the exact causes of grease are clipping the heels, washing them and leaving them wet, exposure to dirt, neglect of grooming, and feeding moist or inferior food. As to the cure, in mild cases a useful lotion of ½ oz. each of sulphate of zinc and acetate of lead in 1½ pints of water, or 1 oz. of powdered alum and ½ oz. of pure carbolic acid in 1½ pints of water.

Worms or Bots in Horses.

Would "Vet." let me know what to give a four-year-old cob troubled with worms, or, I might say bots?

Bots leave the stomach of the horse naturally when mature. If animals is low in condition support with good food and give every morning a bran mash containing a handful of common salt, or try the following: — A dessertspoonful flowers of sulphur, a dessertspoonful common salt every night in food.—Vet. Surgeon.

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POULTRY.

How Many Eggs can a hen lay?

The egg as it appears on the table—the finished product is the result of a long and complicated series of physiological processes, claims Raymond Pearl, Ph. D., biologist of the Maine Agricultural Experiment Station, who has a wide experience in poultry-keeping.

It begins as a microscopic cell in the body of the embryo chick many days before hatching. Indeed, at the time when the poultryman makes the first test of the eggs in his incubator, all the eggs which will be laid by the pullet that will hatch from one of the fertile eggs which passes through his hands are already present in the embryo chick as definite and distinct bodies. As development proceeds, these embryonic eggs, or oocytes, are collected together in a definite organ of the body, the ovary or "egg-cluster." During the growth of the chick these oocytes develop. They increase in size, chiefly by the deposition of yolk within them. The surface of the ovary becomes studded with little spheres, first very small, but all the time growing. When the pullet reaches the age of about six months, if all has gone well with it physiologically, certain ones of the oocytes begin a very rapid growth—much more rapid than that which had preceded. A relatively thick layer of yolk is added each day, and presently an egg is laid.

When the oocyte has attained that respectability of size which entitles it to be called in common parlance a "yolk," the thin membranous funnel end of the oviduct, or "egg tube," slowly and carefully wraps around it, and encloses it within the cavity of the tube. Shortly the sac of membrane which has held the developing yolk ruptures along a definite line, and the completed yolk escapes from the bonds which have held it during the long months of its growth, and drops free into the egg-tube, which has been wrapped around to receive it.

The freed yolk now passes slowly down the egg-tube, and receives on its way its protecting layers of "white," or albumen, the shell membrane and the shell itself. At the end of the process, the finished product, an egg, as we know it in every-day life, passes outside of the body of the hen, to begin its checkered course to the breakfast table of the consumer.

Now, from the standpoint of the poultryman the most interesting point in this long chain of events is that at which the yolk or developed oocyte, is separated from the ovary. The frequency with which this event of separation (or, as it is technically called, ovulation) occurs within the lifetime of the bird measures its relative success as a market-egg producer. It is a matter of common observation that when the physiological machine which we call a hen is working at its topmost rate of speed only one egg per day is produced. Of course, a hen will occasionally lay two eggs in one day, but this is a rare occurrence, and only means that the timing of the machine was not perfectly regulated. The important and really distressing thing is that generally speaking, hens do not continue for any considerable period to lay even one egg apiece per day.

Why is this? What determines, biologically speaking, how many eggs a hen shall lay? Is the output anatomically restricted, or physiologically? Or, put it another way; does the hen that lays 125 eggs in the year do so because she has only about 125 eggs in her ovary, while the 200-egg hen has twice as many? Or, are both these birds equally endowed in respect to the number of eggs they carry in their bodies but different in their capability of fetching them forth into the world of breakfast-tables and egg buyers?

These are problems which the writer has been for some time studying, and the facts in the case appear to be somewhat as follows; all hens, the poorest as well as the best of layers, have an original endowment of eggs, very far in excess of any number which they actually lay. Roughly speaking, it may fairly be said that if actual egg production be measured in hundreds, egg endowment (that is the number of ooctyles in the ovary) is measured in thousands. Furthermore, the number of eggs actually laid bears no relation whatever to the number of oocytes present in the ovary and potentially capable of being laid.

In the writer's laboratory a number of counts have been made of the number of oocytes on the ovaries of laying hens. Only those oocytes which were large enough to be seen by the unaided eye could be thus counted, and it is certain that in every case there are many more, probably several times as many more, miscropic oocytes embedded in the ovarian tissue which are uncounted. But taking only those which are visible to the unaided eye, the results are sufficiently striking. A few examples may be cited. Thus a White Leghorn hen which had laid 198 eggs in its pullet year was killed at the end of that year, and an ovarian count revealed that there were then remaining on its ovary 2,452 oocytes large enough to be seen by the naked eye! Each one of these was potentially capable of becoming a perfect egg. Another White Leghorn hen of the same age as the first laid during its pullet year exactly 2 eggs. Its ovary, when subjected to the counting process, showed the presence of 2,145 oocytes visible to the unaided eye. This extremely poor layer possessed substantially the same anatomical endowment in respect to eggs as the first, yet what a difference there was in the actial laying! No more convincing evidence could be found that the number of eggs present in the ovary is no criterion as to the number which will actually be laid by a bird. Even the humble guinea-fowl, a bird not noted for egg-producing qualities, may have as many as 765 visible oocytes on its ovary.

Taking all the results of these counting studies together, it appears that the difference which the poultryman observes in respect to egg production amongst the members of his flock do not depend at all upon difference in original endowment of the birds in regard to eggs potentially capable of being laid. Every bird has a vast lot of eggs in reserve than it ever actually lays. It is in ability to ovulate—that is, to discharge oocytes from the ovary—that hens differ.

Does the number of eggs in the ovary change during the life of the individual? Can the number be increased in any way? From what has preceded, it is clear that this is not a question of any practical significance to the poultryman, since in any case the number present is so vastly greater than what any hen ever lays. It is an exceedingly difficult biological problem to determine whether new oocytes are ever formed after a bird is hatched. The weight of evidence, however, indicates that there is no increase; that on the contrary the chick is hatched with all the eggs in its body that it will ever have. But this number is so greatly in excess of both its needs and its physiological

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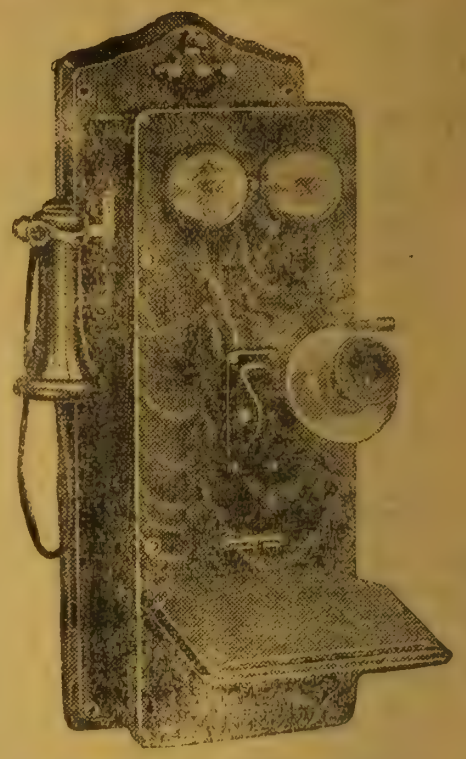

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Growing Exhibition Birds.

How can I treat my growing stock so that I shall secure the greatest possible number of exhibition specimens? Questions like this I am constantly receiving. Probably every ten years of my life as a poultryman I have answered this and similar questions in one issue of a poultry paper, but the demand for this information does not cease. Two generations have passed away since first I answered such a request for information. However, the young breeders are always with us and we veterans make the mistake of thinking that everyone must know the things that seem to us so commonplace, because we learned them by experience long ago.

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To fit birds for the exhibition is an entire season's work. It is legitimate to remove all defective feathers that nature may help you by a renewal of color true to the breed. For instance, stray black feathers may appear in a white specimen or appear in the white or parti-colored breeds, like Brahmas and Columbian Wyandottes. If these foul feathers are removed, nature often, in fact in a majority of cases, produces a feather that is true to the color of the bird.

Young cockerels often have their plumage marred by the cruelty of a domineering cock. Feathers thus damaged grow narrow and pointed beyond the balance of the wing. Perhaps the sickle feathers are injured and these defective feathers if removed will be replaced with good feathers of proper color. White sometimes appears in a black tail or wing when the bird is in full molt. Remove the white feather and in six weeks there will be a nice black feather in its place. If a specimen otherwise is perfect enough to insure its winning, you should not hesitate to help the specimen by the removal of these objectionable feathers and give it time to recupetate.

From the first of September to the show season, every day makes its demands upon the wide-awake breeder if he is to win. There were at least one thousand exhibitions of poultry in the States during 1911. It is a low estimate to say there were thirty exhibitors at a show, which means about 30,000 men were fitting birds for these exhibitions, so you see, breeder, you are up against great competition and it behooves you to do the most you can for your birds to bring them to the highest state of perfection if you are to win.

The only way we can keep our stock in a presentable condition is to remove all defects, all excrescences and to remove all broken plumage, otherwise the fowl must wear his damaged feathers until nature replaces them in the fall. A Light Brahma pullet may have a few black feathers that should be white, or white ones that should be black, but if removed two months before exhibition they will come in the proper color, the white ones will be white on the surface with an undercolor of white, bluish-white or slate-gray and will be uncut for color. If you do not attend to these things, the bird will stay at home as a disqualified specimen.

The first thing that nature does in case of a wound is to try to repair it. In single combs or pea combs sometimes the middle division grows too fast for the side divisions. If discovered in an early stage and the point is lanced with a sharp lance, the growth will be checked until the side divisions develop in keeping with the middle division. Sometimes single combs develop into a twist. I saw a magnificent Partridge Cochin pullet in a friend's yard. He remarked that it was a uity she was disqualified. He was called away and I picked her up and lanced the comb from the rear close to the head, let out the oil and blood with a thread of silk tied the comb back straight and then swore the helper to secrecy. Two weeks later I took out the stitches and when I called my friend's attention to it he could not believe it until I showed him the lance wound, the scab of which had not come off. Such helps are beneficial and they are legitimate.

I had a Barred Plymouth Rock cockerel whose ear-lobes were half white. I gave him chloroform and skinned the lobes. He never begot a chick with white ear-lobes. This led me to believe that many defects are not transmissible and if these things are not hereditary it is permissible to remove them.—I. K. Felch, Natick, Mass. in Reliable Poultry Journal.

Dry or Moistened Food.

About eighteen months ago, the Eew York Experiment Station conducted experiments during the period of a year in which it demonstrated that a flock of hens will cost less when fed on moistened food than when given food that is entirely dry. Also that eggs can be produced at a greater profit on moistened food than on dry. It was demonstrated, however, that a flock of fowls that was allowed exercise gave better results than one that was wholly confined. The two breeds used were Leghorns and Cochins, and the smaller breed (Leghorns) produced eggs at less cost than did the larger breeds; but considering the cost of raising, and the ultimate poultry value of the hens, the profits are more favorable for the larger hens. The Leghorns ate about two and one-fourth ounces of food (water free) per day for each hen, and the Cochins three and one-fourth ounces. The cost of the food for the whole year varied from seventy-two cents to one dollar, and the market value of the eggs varied from eighty-four cents to one dollar and twenty-four cents. Of course, where the hens were confined the cost of production would naturally be more than if they were on a range, and the production of eggs would also be smaller, but the experiment is a valuable one, however, and gives considerable light on feeding poultry.

Milk for Poultry.

When given with care, one of the best foods for young and growing chicks, and the laying hens too, is sweet milk. Of course, milk alone cannot take the place of other foods, as it is not sufficiently concentrated, being about 85 per cent water, thus making it impossible for a growing chick to drink enough for its support. But if milk is used for moistening the ground grain for chicks, it will assist in providing a complete ration. Milk should also be allowed for drinking purposes, both for the young birds and the old ones, but must be given in clean vessels that will prevent filth from getting into Filthy milk will usually induce bowel disease among the young chicks. If one of two old fowls are diseased they should not be allowed access to the vessel containing milk that is fed by the healthy fowls, for in this was the disease will be quickly spread—even more quickly than through drinking water. The young chicks should have fresh milk only, as sour milk is suitable only for the adults, being injurious to all kinds of young animals. Sour milk may, however, be given to the young chicks in the form of cottage cheese, if allowed in limited quantities. In whatever form the milk is given, the supply must be renewed daily, and all vessels kept thoroughly clean.

Every farmer should allow the poultry a share of milk, instead of feeding all to swine. It has been proven that when milk is added to the grain ration, young chicks gain nearly twice as fast in weight as when grain alone is used, and as skimmilk and buttermilk contain nearly all the elements of food, eggs are more easily produced by hens fed upon such than when they are not so provided.—W. F. Purdue.

Green Food for Poultry.

When fowls have free range, they eat a considerable amount of grass and other green foods. It would appear, therefore, to be desirable that where birds are confined either in small runs during the summer, or in houses when the ground is covered with snow in winter, that some effort should be made to supply this food.

Many foods are available, such as waste cabbage, mangels, turnips, rape clover hay, or clover leaves and green food grown especially for the purpose.

Early in the fall we use cabbage or rape; or at times where the runs have been sown to fall rye or wheat, the fowls are allowed to feed upon these. Where rape is extensively fed it frequently will cause the whites of the eggs to have a greenish cast, which renders them unmarketable. This food is relished by the fowls, but must be fed carefully. Cabbage at times will flavor the eggs slightly, and if frozen may cause serious digestive troubles. Both rape and cabbage make good green foods, but good judgment must be exercised in their use.

Mangels are a very succulent food and are relished by the birds during the winter. They can be fed either pulped or whole. When they are fed whole, we usually stick them on a projecting nail, at a convenient height upon the wall of the pen. When these are fed freely they frequently scour the fowls. For this reason during some seasons we are obliged to feed them not more than twice a week.

Turnips may flavor the eggs. They are not as palatable as mangels, in fact some birds will not eat them at all, but at the same time they have considerable food value.

Clover leaves, either steamed or dry, are relished very much, and upon the whole are the most reliable green food. One hundred hens will eat from a peck to a bushel of clover leaves daily. This food upon the farms is cheap and easily procured, and should be fed more than it is.

Oyster Shell for Furnishing Lime.

Some years ago a then well-known writer condemned the use of oyster shell as a food for furnishing lime so necessary in the construction of the egg shell. His contention was that the oyster shell did not contribute lime sufficient for that purpose. However, the New York Agricultural Experiment Station vetoed that by proving that a pound of oyster shell contains sufficient lime to manufacture about seven dozens of eggs. The proper way to feed oyster shell is to have a small box of it within reach so the fowls may help themselves at will. Mixing it in the morning mash is risky, as there is a likelihood that the hens will consume more than required, and in consequence the shells of the eggs would become too hard. The hens know best when their system demands more lime. It is a very rare case when a hen gets too much if constantly within reach.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue.)

"But I wouldn't so much as give it another thought," said Peggotty, cheerily, "if my Davy was anyway against it—not if I had been asked in church thirty-three times over, and was wearing out the ring in my pocket."

"Look at me, Peggotty," I replied; "and see if I am not really glad, and don't truly wish it!" As indeed I did, with all my heart.

"Well, my life," said Peggotty, giving me a squeeze, "I have thought of it night and day, every way I can, and I hope the right way; but I'll think af it again, and speak to my brother about it, and in the meantime we'll keep it to ourselves, Davy, you and me. Barkis is a good plain creetur'," said Peggotty, "and if I tried to do my duty by him, I think it would be my fault if I wasn't—if I wasn't pretty comfortable," said Peggotty, laughing heartily.

This quotation from Mr. Barkis was so appropriate, and tickled us both so much, that we laughed again and again, and were quite in a pleasant humor when we came within view of Peggotty's cottage.

It looked just the same, except that it may, perhaps, have shrunken a little in my eyes; and Mrs. Gummidge was waiting at the door as if she had stood there ever since. All within was the same, down to the seaweed in the blue mug in my bedroom. I went into the outhouse to look about me; and the very same lobsters, crabs, and crawfish possessed of the general, appeared to be in the same same desire to pinch the world in state of conglomeration in the same old corner.

But there was no little Em'ly to be seen, so I asked Mr. Peggotty where she was.

"She's at school, sir," said Mr. Peggotty, wiping the heat consequent on the porterage of Peggotty's box from his forehead; "she'll be home," looking at the Dutch clock, "in from twenty minutes to half-an-hour's time We all of us feel the loss of her, bless ye!"

Mrs. Gummidge moaned.

"Cheer up, Mawther!" cried Mr. Peggotty.

"I feel it more than anybody else," said Mrs. Gummidge: "I'm a lone lorn creetur', and she used to be almost the only thing that didn't go contrairy with me."

Mrs. Gummidge, whimpering and shaking her head, applied herself to blowing the fire. Mr. Peggotty, looking around upon us while she was so engaged, said in a low voice, which he shaded with his hand: ;"The old un!" From this I rightly conjectured that no improvement had taken place since my last visit in the state of Mrs. Gummidge's spirits.

No, the whole place was, or it should have been, quite as delightful a place as ever: and yet it did not impress me in the same way. Ifelt rather disappointed with it. Perhaps it was because little Em'ly was not at home. I knew the way by which she would come, and presently found myself strolling along the path to meet her.

A figure appeared in the distance before long, and I soon knew it to be Em'ly, who was a little creature still in stature, though she was grown But when she drew nearer, and I saw her blue eyes looking bluer, and her dimpled face looking brighter, and her whole self prettier and gayer, a curious feeling came over me that made me ptetend not to know her, and pass by as if I were looking at something a long way off. I have done such a thing in later life, or I am mistaken.

Little Em'ly didn't care a bit. She saw me well enough; but instead of turning round and calling after me, ran away laughing. This obliged me to run after her, and she ran so fast that we were very near the cottage before I caught her.

"Oh, it's you, is it?" said little Em'ly.

"Why, you knew who it was, Em'ly," said I.

"And didn't you know who it was?" said Em'ly. I was going to kiss her, but she covered her cherry lips with her hands, and said she wasn't a baby now, and ran away, laughing more than ever, into the house.

She seemed to delight in teasing me, which was a change in her I wondered at very much. The tea-table was ready, and our little locker was put out in its old place, but instead of coming to sit by me, she went and bestowed her company upon that grumbling Mrs. Gummidge: and on Mr. Peggotty's inquiring why, rumpled her hair all over her face to hide it, and would do nothing but laugh.

"A little puss it is!" said Mr. Peggotty, patting her with his great hand.

"So sh' is! so sh' is!" cried Ham. "Mas'r Davy bor, so sh' is!" and he sat and chuckled at her for some time, in a state of mingled admiration and delight, that made his face a burning red.

Little Em'ly was spoiled by them all, in fact; and by no one more than Mr. Peggotty himself, whom she could have coaxed into anything by only going and laying her cheek against his rough whisker. That was my opinion, at least, when I saw her do it: and I held Mr. Peggotty to be thoroughly in the right. But she was so affectionate and sweet-natured, and had such a pleasant manner of being both sly and shy at once, that she captivated me more than ever.

She was tender-hearted too; for when, as we sat around the fire after tea, an allusion was made by Mr. Peggotty over his pipe to the loss I had sustained, the tears stood in her eyes, and she looked at me so kindly across the table, that I felt quite thankful to her.

"Ah!" said Mr. Peggotty taking up her curls, and running them over his hand like water, "here's another orphan, you see, sir. And here," said Mr. Peggotty' giving Ham a backhanded knock in the chest, "is another of 'm, though he don't look much like it."

"If I had you for my guardian, Mr. Peggotty," said I, shaking my head, "I don't think I should feel much like it."

"Well said, Mas'r Davy, bor!" cried Ham in an ecstasy. "Hoorah? Well said! Nor more you wouldn't! Hor! Hor!"—Here he returned Mr. Peggotty's back-hander, and little Em'ly got up and kissed Mr. Peggotty.

"And how's your friend, sir?" said Mr. Peggotty to me.

"Steerforth?" said I.

"That's the name!" cried Mr. Peggotty, turning to Ham. "I knowed it was something in our way."

"You said it was Rudderford," observed Ham, laughing.

"Well retorted Mr. Peggotty. "And ye steer with a rudder, don't ye? It ain't fur off. How is he, sir?"

"He was very well indeed when I came away, Mr. Peggotty."

"There's a friend!" said Mr. Peggotty, stretching out his pipe. There's a friend, if you talk of friends! Why, Lord love my heart alive, if it ain't a treat to look at him!"

"He is very handsome, is he not?" said I, my heart warming with this praise

"Handsome!" cried Mr. Peggotty. "He stands up to you like—like a—why I don't know what he don't stand up to you like. He's so bold!"

"Yes! That's just his character," said I. "He's as brave as a lion, and you can't think how frank he is, Mr. Peggotty."

"And I do suppose, now," said Mr. Peggotty, looking at me through the smoke of his pipe, that in the way of book-lqrning he'd take the wind out of a'most anything."

"Yes," said I, delighted; "he knows everything. He is astonishingly clever."

"There's a friend," murmured Mr. Peggotty, with a grave toss of his head.

"Nothing seems to cost him any trouble," said I. "He knows a task if he only looks at it. He is the best cricketer you ever saw. He will give you almost as many men as you like at draughts, and beat you easily."

Mr. Peggotty gave his head another toss, as much as to say; "Of course he will."

"He is such a speaker," I pursued, "that he can win anybody over; and I don't know what you'd say if you were to hear him sing, Mr. Peggotty."

Mr. Peggotty gave his head another toss, as much as to say: "I have no doubt of it."

"Then he's such a generous, fine, noble fellow," said I, quite carried away by my favorite theme, "that it's hardly possible to give him as he deserves. I am sure I can never feel thankful enough for the generosity with which he has protected me, so much younger and lower in the school than himself."

I was running on, very fast indeed, when my eyes rested on little Em'ly's face, which was bent forward over the table, listening with the deepest attention, her breath held, her blue eyes sparkling like jewels, and the colour mantling in her cheeks. She looked so extraordinarily earnest and pretty, that I stopped in a sort of wonder; and they all observed her at the same time, for as I stopped, they laughed and looked at her.

"Em'ly is like me," said Peggotty, "and would like to see him."

"Em'ly was confused by our all observing her, and hung down her head, and her face was covered with blushes. Glancing up presently through her stray curls, and seeing that we were all looking at her still (I am sure I, for one, could have looked at her for hours), she ran away, and kept away until it was nearly bedtime.

I lay down in the little old bed in the stern of the boat, and the wind came moaning on across the flat as it had done before. But I could not help fancying now, that it moaned of those who were gone; and instead of thinking that the sea might rise in the night and float the boat away, I thought of the sea that had risen, since I last heard those sounds, and drowned my happy home. I recollect, as the wind and water began to sound fainter in my ears, putting a short clause into my prayers, petitioning that I might grow up to marry little Em'ly, and so dropping lovingly asleep.

The days passed pretty much as they had passed before, except—it was a great exception—that little Em'ly and I seldom wandered on the beach now. She had tasks to learn, and needlework to do; and was absent during a great part of each day. But I felt that we should not have had these old wanderings, even if it had been otherwise. Wild and full of childish whims as Em'ly was, she was more of a little woman than I had supposed. She seemed to have got a distance away from me, in a little more than a year. She liked me, but she laughed at me, and tormented me; and when I went to meet her, stole home another way, and was laughing at the door when I came

A Windsor Lady's Appeal

To all women' I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Uterine and Ovarian Tumors or growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write teday. Address Mrs. M. Summers, Box H. 309 Windsor, Ont.

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Swarthmore, Penn. — "For fifteen years I suffered untold agony, and for one period of nearly two years I had hemorrhages and the doctors told me I would have to undergo an operation, but I began taking Lydia E. Pinkham's Vegetable Compound and am in good health now. I am all over the Change of Life and cannot praise your Vegetable Compound too highly. Everywoman should take it at that time. I recommend it to both old and young for female troubles."—Mrs. EMILY SUMMERSGILL, Swarthmore, Pa.

Canadian Woman's Experience:

Fort William , Ont.—"I feel as if I could not tell others enough about the good Lydia E. Pinkham's Vegetable Compound has done for me. I was weak and tired and I could not rest nights. A friend recommended your Compound and I soon gained health and strength and could not wish to sleep better. I know other women who have taken it for the same purpose and they join me in praising it."—Mrs. WM. A. BUFFY, 631 South Vickar Street, Fort Williams, Ontario.

Since we guarantee that all testimonials which we publish are genuine, is it not fair to suppose that if Lydia E. Pinkham's Vegetable Compound has the virtue to help these women it will help any other woman who is suffering in a like manner?

If you want special advice write to Lydia E. Pinkham Medicine Co. (confidential) Lynn, Mass. Your letter will be opened, read and answered by a woman and held in strict confidence.

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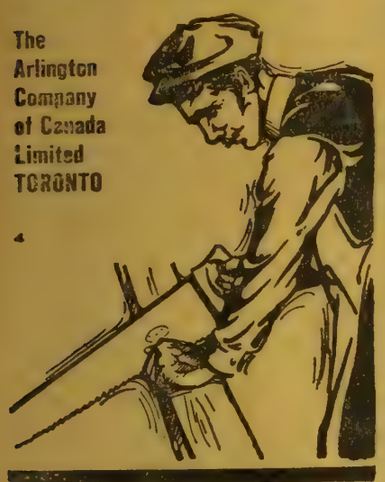
The Arlington Company of Canada Limited TORONTO



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Summer Excursion Fares via the I.C.R.

Facts and figures regarding summer vacation tours are always interesting to those who are on travel bent; and these are to be found in the booklet "Summer Excursion Fares" just issued by the Intercolonial Railway. The details of special round trips through Quebec and the Maritime Provinces are given, routes are defined and rates quoted in a systematic and comprehensive manner. The booklet will be mailed free to those who write the General Passenger Dept., Moncton, N. B.

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

There is no real need of anyone being troubled with constipation. Tablets will cause an agreeable movement of the bowels without any unpleasant effect. Give them a trial. For sale by all dealers.

back, disappointed. The best times were when she sat quietly at work in the doorway, and I sat on the wooden steps at her feet, reading to her. It seems to me at this hour, that I have never seen such sunlight as on those bright April afternoons; that I have never seen such a sunny little figure as I used to see, sitting in the doorway of the old boat; that I have never seen such sky, such water, such glorified ships sailing away into golden air.

On the very first evening after our arrival, Mr. Barkis appeared in an exceedingly vacant and awkward condition, and with a bundle of oranges tied up in a handkerchief. As he made no allusion of any kind to this property, he was supposed to have left it behind him by accident when he went away; until Ham, running after him to restore it, came back with the information that it was intended for Peggotty. After that occasion he appeared every evening at exactly the same hour, and always with a little bundle, to which he never alluded, and which he regularly put behind the door and left there. These offerings of affection were of a most varied and eccentric description. Among them I remember a double set of pigs' trotters, a huge pin-cushion, half a bushel or so of apples, a pair of jet earrings, some Spanish onions, a box of dominoes, a canary bird and cage and a leg of pickled pork.

Mr. Barkis's wooing, as I remember it, was altogether of a peculiar kind. He very seldom said anything; but would sit by the fire in much the same attitude as he sat in his cart, and stare heavily at Peggotty, who was opposite. One night, being, as I supposed, inspired by love, he made a dart at the bit of wax candle she kept for her thread, and put ei in his waist-coat pocket and carried it off. After that, his great delight was to produce it when it was wanted, sticking to the lining of his pocket, in a partially melted state, and pocket it again when it was done with. He seemed to enjoy himself very much, and not to feel at all called upon to talk. Even when he took Peggotty out for a walk on the flats, he had no uneasiness on that head, I believe; contenting himself with now and then asking her if she was pretty comfortable; and I remember that sometimes, after he was gone, Peggotty would throw her apron over her face, and laugh for half-an-hour. Indeed, we were all more or less amused, except that miserable Mrs. Gummidge, whose courtship would appear to have been of an exactly parallel nature, she was so continually reminded by these transactions of the old one.

At length, when the term of my visit was nearly expired, it was given out that Peggotty and Mr. Barkis were going to make a day's holiday together, and that little Em'ly and I were to accompany them. I had a broken sleep the night before, in anticipation of the pleasure of a whole day with Em'ly. We were all astir betimes in the morning; and while we were yet at breakfast, Mr. Barkis appeared in the distance, driving a chaise-cart towards the object of his affections.

Peggotty was dressed as usual, in her neat and quiet mourning; but Mr. Barkis bloomed in a new blue coat, of which the tailor had given him such good measure, that the cuffs would have rendered gloves unnecessary in the coldest weather, while the collar was so high that it pushed his hair up on end on the top of his head. His bright buttons, too, were of the largest size. Rendered complete by drab pantaloons and a buff waistcoat, I thought Mr. Barkis a phenomenon of respectability.

When we were all in a bustle outside the door, I found that Mr. Peggotty was prepared with an old shoe, which was to be thrown after us for luck, and which he offered to Mrs. Gummidge for that purpose.

"No. It had better be done by somebody else, Dan'l," said Mrs. Gummidge. "I'm a lone lorn creatur' myself, and everythink that reminds me of creeturs that ain't lone and lorn, goes contrairy with me."

"Come, old gal!" cried Mr. Peggotty. "Take and heave it."

"If I feld less, I could do more. You don't feel like me, Dan'l; things don't go contrairy with you, nor you with them; you had better do it yourself."

But here Peggotty, who had been going about from one to the other in a hurried way, kissing everybody, called out from the cart, in which we were all by this time (Em'ly and I on two little chairs, side by side), that Mrs. Gummidge must do it. So Mrs. Gummidge did it; and, I am sorry to relate, cast a damp upon the festive character of our departure, by immediately bursting into tears, and sinking subdued into the arms of Ham, with the declaration that she knowed she was a burden, and had better be carried to the House at once. Which I really thought was a sensible idea, that Ham might have acted on.

Away we went, however, on our holiday excursion; and the first thing we did was to stop at a church, where Mr. Barkis tied the horse to some rails, and went in with Peggotty, leaving little Em'ly and me alone in the chaise. I took the occasion to put my arm around Em'ly's waist, and propose that as I was going away so very soon now, we should determine to be very affectionate to one another, and very happy all day. Little Em'ly consenting, and allowing me to kiss her, I became desperate; informing her, I recollect, that I never could love another, and that I was prepared to shed the blood of anybody who should aspire to her affections.

How merry little Em'ly made herself about it! With what a demure assumption of being immensely older and wiser than I, the fairy little woman said I was a silly boy;" and then laughed so charmingly that I forgot the pain of being called by that disparaging name, in the pleasure of looking at her.

Mr. Barkis and Peggotty were a great while in the church, but came out at last and then we drove away into the country. As we were going along, Mr. Barkis turned to me and said, with a wink—by-the-bye, I should hardly have thought before, that he could wink:

"What name was it as I wrote up in the cart?"

"Clara Peggotty," I answered.

"What name would it be as I should write up now, if there was a tilt here?"

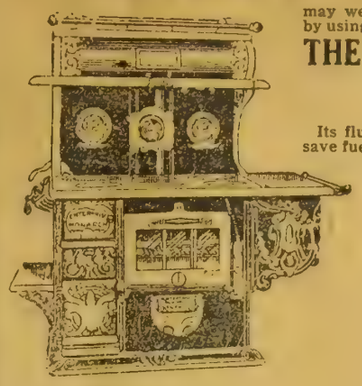
"Clara Peggotty, again?" I suggested.

"Clara Peggotty Barkis!" he returned, and burst into a roar of laughter that shook the chaise.

In a word, they were married, and had gone into the church for no other purpose. Peggotty was resolved that it should be quietly done; and the clerk had given her away, and there had been no witnesses of the ceremony. She was a little confused when Mr. Barkis made this abrupt announcement of their union, and could not hug me enough in token of her unimpaired affection; but she soon became herself again, and said she was very glad it was over.

(Continued in next issue)

If You Have No Money To Burn



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THE ENTERPRISE MONARCH STEEL RANGE

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Its flue construction and perfect damper control, save fuel—therefore Money.

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Its modern equipment and unique devices, save time and toil—therefore Money

The Oven Thermometer, Chart, Daylight Oven and Economizer save food—therefore Money.

Thus if you do not save in these ways you are burning Money, and it will pay you to purchase a Monarch *at once.*

Ask your neighbor who has one, if the moderate price paid for hers has not been a good investment in many ways.

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FOUNDRY CO. SACKVILLE, N.B.

Feeding Infants.

Many precious little lives are sacrificed because mothers do not understand infant feeding, or are too careless or overburdened with work to give it proper consideration. Why is it that the second summer is the child's most critical one? First, the little one is robbed of its accustomed diet, and it is too often experimented with until other foods are found which will agree with it. I have often wondered if it would not be just as well for a mother to nurse her baby through this period as to bear the suspense, and make the baby bear the effect of her experiments at this time. Of course we know what a strain that means to a mother's constitution (it is one either way) but the question is, is she strong enough?

It should be said here that too many mothers, especially farmers' wives, are overburdened with household duties and need assistance all the time the first two years of baby's existence. Their constitutions are not only greatly weakened from the strain through which they have passed, but there is an added strain until baby is weaned and a correct diet found. The second summer is the worst part of the dentition period, and as a babe's system is in a most irritible condition at teething time, and indigestible food will easily upset it. Did you ever

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These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
Box D.
Sussex, New Brunswick.

think of baby's toothaches as being as serious as your own? Do you deny it cold water to cool its feverish gums? With the second summer comes the difficulty of cutting the larger teeth. However, I think we are apt to lay too many ill to teething when in fact they are due to improper diet. For instance, notice the treatment that the physician gives his tiny patient. All the indigestible and poisonous material it has eaten is physicked out of its system the first thing, and a very simple diet advised.

Indigestion is the principle ailment that mother and babes have to battle with, outside of the contagious diseases, and the one the careless mother needs to be warned against. Should she get him through a first attack, she should vow never to allow a second one, for indigestion paves the way for serious diseases and convulsions sometimes result. Often an apparently healthy child is snatched from life suddenly by a frightful convulsion. All mothers should not only know what to do in such a circumstance but they would do much better to know how to prevent such a calamity.

The child begins to walk the second summer, and often helps itself to indigestible food in spite of all your careful attention. I think mothers do wrong in giving the pretty ripe fruit to children as playthings, especially after the baby begins to get teeth. And it also seems to me inadvisable to have fruit planted in the yard where babies or children must get out in the sun and fresh air to exercise. This fruit is very apt to produce troible. The busy mother who does her own work can not keep her mind continually on her little ones, if she is a farmer's wife and has a big family and hired hands to make so much work, but she should aim to keep mischief for the little stomachs out of their reach. This means that they must be near her a great deal of the time. A childless lady once said to a busy mother, "I don't see how you do anything with the children hanging around you all the time." The astonished mother replied, "Why, they are what I do!"

When I see a mother whom some people call "fussy over her children," I think of this, and that she is only doing her duty. There is nothing so important as our children, and no part of their care more important than the diet.

Washing Blankets, Quilts and Comforters.

To wash blankets, quilts and comforters, choose a warm sunny dav so that they will dry as quickly as possible. Use soft water if it can be obtained.

Blankets.—Woolen blankets should be washed in luke warm water, never in hot or cold water as it shrinks them. Use a good white soap or some reliable woolen soap. Put the blankets to soak for fifteen minutes in warm water, soaping the blankets as it is put in the tub, putting on a little extra soap where the blanket is most soiled. After allowing to soak, work the blanket around in the tub, rubbing between the hands and applying more soap where needed. Souse the blanket several times and wring into another warm water, going over the blanket to see if any soiled places have been missed. Rinse a second time, wringing the blanket as free from water as possible. Shake well before hanging up to dry. Roll each corner a trifle and pin with a small safety pin to prevent the corners from whipping out. When dry they will be fluffy and soft, ready to fold away for another winter. Another way is to stretch the blankets on curtain stretchers, putting them on double.

Comforters.—Never rinse comforters in cold water as it tends to harden the cotton batting. Comforters are washed in the same way as blankets only the water should be fairly hot and they should soak a couple of hours in a good hot soapy water to loosen up the dirt. The end or any parts may be rubbed on a washboard or washed in the washing machine. After the comforters are dry, roll and beat with a smooth round stick. This will loosen up the cotton and make the comforters more fluffy.

Quilts.—Wash same as the comforters except that where the colors will not run they should be scalded to make them more clear and fresh.

Tempting Dishes.

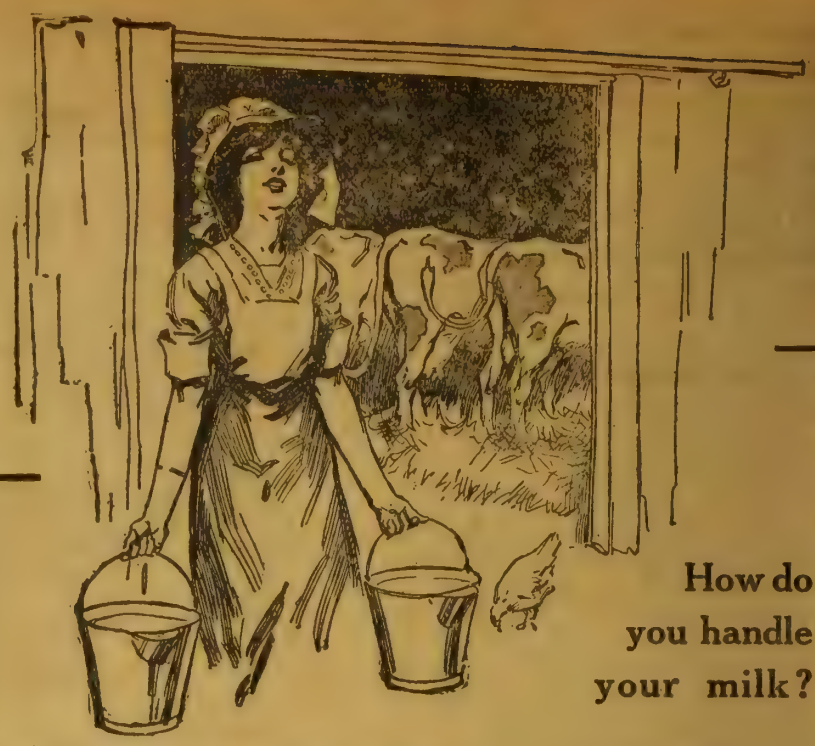
Dandelions. — Gather only fresh plants and wash thoroughly, boil until tender, chop and season with salt, vinegar and butter. If too bitter to suit the taste, use half spinach or young beets—tops and all. If cooked with spinach, do not add that plant until dandelions are half cooked.

Spinach — Thoroughly wash and trim the spinach; place in boiling water; let it remain uncovered and cook about ten minutes; remove from fire, drain away every bit of the water; chop fine; season with salt, cream and butter. Heat well and serve at once.

Asparagus—Cut the pieces in bits and boil till tender; drain, and to two bunches add one-half cup of cream and one-quarter teaspoonful of salt. Simmer and serve like green peas.

Baked Rhubarb—Wash and cut in half-inch pieces. If young and tender it needs no peeling. Place in earthen baking dish with an equal amount of sugar, by weight, as of rhubarb. There will be jucie enough without adding water. Bake until tender.

Egg Salad—Cut a slice from the small end of as many hard boiled eggs as needed; cut the edge of whites in points and then remove the yolks. A tiny slice cut from the other end to stand upright. Rub the yolks fine. Season with salt and prepared mustard, or with any good salad dressing. Refill the whites with this mixture. Arrange upon lettuce leaves and garnish with small white radishes.



How do you handle your milk?

ARE you getting every cent, per quart, out of your daily milking? It's all a matter of method. When you know you are disposing of your dairy products in the most profitable way—only then can you take the interest in your dairy that will make it a complete success. Make a comparison by actual figures of your present dairy earnings and what they would be with a

SHARPLES
TUBULAR CREAM SEPARATOR

This is easy to do. There is a Sharples agent near you who can quickly bring the facts down to a basis of dollars and cents. Have a talk with him.

He will demonstrate the Sharples to you—the unequaled skimming power of its wonderful tubular bowl—the bowl that has only 3 simple parts, which naturally makes the washing and cleaning a very simple matter.

To buy a Sharples is not an expense. You simply apply your money to a most profitable investment so that you make it over and over again, year after year.

And the Sharples name is your bond—as it has been for hundreds of thousands of farmers and dairymen for 32 years.

Write for our Separator literature. And if you do not know our nearest agent, mention the fact in your request.

THE SHARPLES SEPARATOR CO.
West Chester, Pa.
Branch Offices: Chicago, Ill. San Francisco, Cal. Portland, Ore. Dallas, Tex. Toronto Winnipeg
Agencies Everywhere

If you milk twenty or more cows, the Sharples Mechanical Milker holds out wonderful new prospects for you. Write for catalogue.

Care of Baby's Flannels

The baby's underwear should be of flannel, as soft and fine as the mother can afford, and kept in the best condition by washing it properly. A careless laundress can ruin the best woolen garments in a few washings, making them so shrunken and rough that they irritate the flesh. The following method has been used for years with success, the little garments retaining their soft, fleeecy look until worn out:—Use water that is as hot as you can bear your hand in comfortably, for flannel cannot be boiled, and hot water cleanses and purifies it. Dissolve a little borax in it (the amount depending upon the kind of water you use), and add enough soap to make a strong suds. Wash the flannel through two waters prepared in this way, plunging them up and down and rubbing gently between the hands until they are clean. Soap should never be rubbed directly on the flannel; borax softens the water, making very little soap or rubbing necessary. Rinse through clear water of the same temperature as that used for washing, and pass them through a rubber wringer. Then just before hanging them out, pull and stretch every piece in shape, for if this is neglected the tiny fibres run into each other, causing it to become hard and shrunken. Place them smoothly on a line in the sunshine, where a gentle breeze will blow through them, pinning securely When it is necessary to dry them indoors, hang them on a line above the stove where the hot air will circulate through them. Little garments which have shrunk and become hard and stiff should never be used again—babies' bones are so soft that any constriction is injurious.

Healthful Perfumes

The art of perfuming in all ite refinement comes to us from the Italians, and it has remained for an Italian to discover also that perfumes are actually healthful. He confines his theorizing largely to the domain of the vegetable kingdom, including the old-fashioned sweet-smelling herbs that our grandmothers loved to have about them. Among these are

cherry, laurel, cloves, lavendar, mint, juniper, lemons, feonel, and bergamot. These exercise a healthy influence upon humanity by converting the oxygen into ozone. In the perfumes just mentioned there is a large quantity of ozone. Among those of aid in this manner, but in a less degree, are anise, nutmeg, and thyme. Among flowers that are medicinally qualified are the hyacinth, mignonette, heliotrope, and lily of the valley, all of which have ozone enclosed vessels.

Value of Oatmeal in Youth

It is a thousand pities that oatmeal porridge is not used more frequently for the children's breakfast, for it is such an excellent bone and muscle former. If you want your children to become strong men and women, remember oatmeal, combined with fresh milk, is the foundation stone of the diet of the day. Never let a child have tea or coffee, bacon, sausages, marmalade, etc., for his breakfast. A bowl of porridge with milk and bread and butter (brown bread for preference) is all he requires. This is the first step to keep him fit, and, if necessary, ready to fight any illness which may attack him. Care must be taken to have fresh, good oatmeal, and much better to take the porridge without adding sugar.

Mental Degeneracy

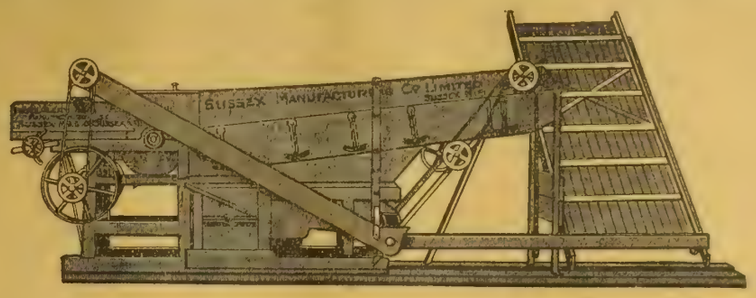
Dr. Forbes Winslow, the mental specialist, says that "No disease is more liable to transmission by heredity than mental disease. Fully 66 per cent of the lunatics in London asylums have hereditary connections with the disease. More than 700 of them are closely related to one another—parents and children, brothers and sisters, and so on. But those in asylums are not so dangerous to the community as the feeble-minded who are at liberty to have children. This is why degeneracy is increasing so alarmingly. In 1859 there was one lunatic for every 586 sane persons; to-day the ratio is one in 275, and in less than 300 years, unless drastic steps are taken, there will be more lunatics and degenerates than sane people amongst the Western nations"

Shingles or Herpes

The direct cause of the appearance of shingles is some affection of the nervous system. Both sexes suffer from it, and young persons most frequently. Cold appears sometimes to be the cause, though shingles rarely shows itself in those who are in robust health. Symptoms: The first symptoms are much like those of an ordinary feverish attack. The person feels seedy for some days, has a slight rise of temperature, vague pain in the side or other parts. This pain finally settles in the side, and after two or three days the rash appears. Minute yellow blebs are seen on the skin of the back, side, and chest. These blebs increase for some days, until there is often a complete half girdle on one side of the chest. The pain at this stage is severe, though it varies with different people according to age. After aweek or so most of the vesicles dry up and form scabs, which fall off, leaving the skin much as it was before. A peculiarity about the pain is that it may go on for several weeks; especially is this the case with old people. Treatment: If any cause for an attack of shingles be known it should be removed. Thus, if the affected person is in poor health tonics are necessary. In the early stages before the blebs have formed an ointment, prescribed by a doctor, well rubbed into the side, will ease the pain and prevent to a certain degree the eruption. Later, when the blebs have formed and are discharging, a fine dusting powder of stout zinc oxide and bismuth subnitrate does most good, and the whole part kept warm by a layer of cotton-wool or gamgee.

The Best Judge of a Thresher is the man who has used it

It is not the purpose of this advertisement to tell in detail the merits of the Little Giant Thresher. This is simply an expression of the opinion of a man who has used it, which is, perhaps, better evidence of its superiority than anything we can say. Any reader who is thinking of purchasing a Thresher will get our descriptive catalogue on application.



Four Horse Thresher

Description of Four Horse Size

Dimensions of Cylinder -	17 x 30
Size of cylinder shaft -	1½ inch
Speed of Cylinder,	900 to 1000 Rev.
Size of Sieve -	31 x 36
Weight not mounted -	1700 lbs.
Weight, with wheels, etc.	2200 lbs.

Woodstock, Dec. 12th, 1911

THE SUSSEX MANUFACTURING CO. LTD.
Sussex, N. B.

Dear Sirs:—I can say in regard to your Four Horse Threshing Machines, that I have used many makes of machines, but will say that the Sussex Little Giant is the best I ever used, it runs easy and cleans good and without any waste of grain.

Yours truly,
F. D. BURPEE.

This is just one of hundreds of similar testimonials we have.

We make the Little Giant Thresher in four different sizes; one horse, two horse, four horse and ten horse power.

Threshers can be supplied with or without tailings elevator and bagger. Every machine is guaranteed for one year against all defects in workmanship and material. We carry a large stock of Thresher Teeth and other repairs.

All enquiries will receive prompt attention.

THE SUSSEX MANUFACTURING CO., LIMITED

SUSSEX, New Brunswick.

Brantford Roofing

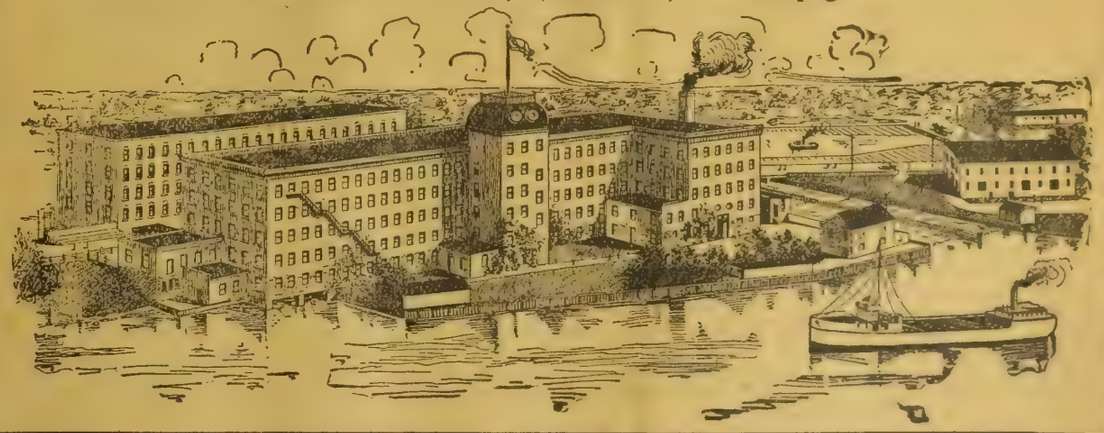
was the choice of the ***Maple Leaf Rubber Co.*** for the big plant shown below. It must be the ultimate choice of every ***serious*** investigator of the roofing question for the simple reason that ***Brantford Roofing is known to be practically imperishable.***

Cover that building of yours with ***Brantford Roofing*** and you'll have ***no*** regrets,

Send for our Big FREE Book. It will post you on the roofing question.

Brantford Roofing Co., Limited, Brantford, Canada

Warehouses: Toronto, Montreal, Winnipeg.



Was Subject to Hot Flushes,

PALPITATION OF THE HEART, SHORTNESS OF BREATH.

MRS. J. CARROL, Mount View, Ont., writes:—"I am an elderly woman now, and about two years ago I became faint, was subject to hot flushes, palpitation of the heart and shortness of breath. I went to a doctor but seemed to remain the same, until one of my neighbors recommended MILBURN'S HEART AND NERVE PILLS. I gladly followed the advice, and am to-day a strong, robust woman, and I thank MILBURN'S HEART AND NERVE PILLS for my present state of health, and have recommended them to all who I have learned of suffering from heart trouble."

Price 50 cents per box or 3 boxes for $1.25 at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

ALEXANDRA HOSPITAL, MONTREAL

For Contagious Diseases

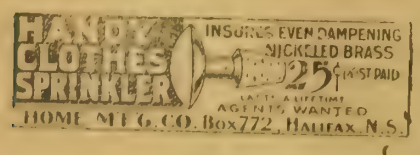
APPLICANTS for Nurses' Training School.

Probationers (of the age of 19 to 25 years) wanted for a period of one year; lectures given and certificates granted. Intimate arrangements exist with the Montreal General, Royal Victoria, and Western Hospitals, and the Toronto General Hospital, Toronto, by which our Nurses properly accredited are received at those Hospitals under favourable conditions. The strictest references are required. For forms of application and particulars apply to,

Miss Grace M. Fairley,
Lady Superintendent.

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**



Preserving Life of Young Trees.

A man can not stick a tree into the ground and give no attention to it and gather fruit from its branches in after years, writes W. D. Neale. The life of the young tree must be guarded zealously. The careful orchardist is the man who realizes profit from his fruit trees.

In the summer time as well as in the fall the young trees need special care. They must be protected from the ravages of animals and from the drouth. The orchard should not be turned into a pasture where stock may roam at will. I have seen hogs, horses and cows running in the orchard, and the young trees would be broken and stripped of their leaves. This meant disaster to their future growth. Then, too, the ground was so firmly trodden about the young trees that many of them perished before the summer was gone. Better to keep stock from an orchard at all times than to allow any injury to the trees.

The hot weather of July and August is very trying to the young orchard. If the hot sun does not blast the trees, the moisture about the roots is sometimes so exhausted that the trees suffer and die. I have found it a good plan to mulch the trees to preserve their moisture about the roots. For this purpose straw, grass or weeds may be used. If this is spread over the depth of 2 or 3 inches about the trunk of the tree, the moisture will rise beneath it and the sun will not evaporate it very rapidly. The ground should be loose when the mulch is spread.

Picking Strawberries.

Strawberries keep much longer if picked with their stems left on. The old-fashioned method was to pull the berries, but it has been found that one can pick them as quickly by pinching the stems with the thumb nail. There has been considerable talk about precooking berries before sending them to market. We cannot see that this would pay in the case of our local markets, but doubtless it would be of immense value were we shipping to any great distance.

At what stage of ripening should we pick strawberries? is the next question. We cannot set any hard and fast rule. We believe in allowing the fruit to mature as much as possible. However, we cater more or less to market requirements. Some demand fully matured berries. Toronto will not accept berries unless red all over. Montrealers are not so particular as to draw the line at partially green berries. At all events the patch should be picked over so often that no fruit becomes soft.

Use of Kerosene.

It is largely a matter of trial whether any particular carburetor will enable kerosene to be used. The general experience is that a specially-designed carburetor must be used to obtain proper vaporization of the kerosene and, therefore complete combustion. Some gasoline carburetors, if mounted close to the engine and kept at a comparatively high temperature, will give some measure of success with kerosene, but not full power or a smokeless exhaust as with gasoline.

CORNS IN MARE—I have a mare that is troubled with corns which often fester. I should be glad of advice how to treat them.—Troubled.

Give the animal a rest until the foot is somewhat restored and then try the effect of a three-quarter shoe. In the case of festering apply a poultice to the foot and protect the place from injury. In the case of a dry corn much harm is often done by excessive paring out.

DICKESON'S TEA

THE BEVERAGE of the OLD COUNTRY.

PURE FRAGRANT & DELICIOUS.

RICHARD DICKESON & COMPY., LIMITED. LONDON, ENGLAND.

THE FINEST TEA YOU EVER TASTED

DICKESON'S TEA

For Breakfast, Dinner and Supper Pure—Rich Flavor—Fragrant

Try a package of this and make the best cup of tea you ever served

25c., 30c., 35c., 40c., 50c. the pound

In either 1-2 pound or 1 pound Packages or Bulk

AT ANY GOOD GROCERY STORE

Distributors: L. C. PRIME CO., Ltd., ST. JOHN, N. B.

SPECIAL ADVICE FOR MEN

Strength Restored By New Method

The little book described below (which I gladly send free, sealed, by mail, to any young or elderly man anywhere) contains in its 85 beautifully illustrated pages everything a man need know with regard to certain strictly personal subjects, and as a guide through his entire life, from the delicate period of youth, when wholesome advice is most needed, on through early manhood to a ripe, vigorous, healthy old age. Over a million of these books have been thus distributed by me all over the world. Therefore, please use coupon below and get YOUR free copy by return mail. SANDEN CO., DISTRIBUTORS.

Do you know, my friend, that there is a wonderful new way to apply a certain, great, natural FORCE to your body, and by which you may, without effort, trouble or inconvenience, treat your own self in the privacy of your home for debility and lost vitality, without using a single drug or medicine? This great FORCE, as a restorer of vitality and as a means to overcome those weaknesses which result from indiscretion and unnatural practices, is to-day being used all over the civilized world, and I give it as my honest opinion, based upon a vast observation and study, that any man anywhere, who leads a decent, manly life and who applies this marvellous FORCE in a scientific and rational way, can, without employing a single drug, be restored again to a state of perfect, rugged health and vigor, without a remaining ache, pain or weakness.

MANLY MEN ARE THE WORLD'S POWER TO-DAY

As we all know, these debilitating weaknesses handicap a man in every condition of life, while, on the other hand, a perfect specimen of vigorous, robust, lusty manhood is ever admired by both women and men alike, while, of course, it is certainly only such a man who can attain the really great success of life. Therefore, I say to you, no matter what your size, whether you are small or large, no matter what your occupation, no matter whether you are a college graduate or working on the farm or in the factory, no matter whether you are young or elderly, it is all a question of your vigor and your vitality, and if I can give you a good, abundant supply of this same great power of VITAL FORCE, then it is easy to believe that I can completely restore your vigorous health, can overcome the evil of past indiscretions so you will be exactly the same in your influence over people, exactly the same in your manly bearing as other manly, strong-nerved, warm-blooded fellows of your acquaintance.

With an idea of attaining this all for you, I recommend you to investigate a simple little VITALIZING APPLIANCE of my invention, which I am now sending out in great numbers for use by men everywhere who need new manly strength. This little VITALIZER is very light, weighing only several ounces, and can be worn without any one suspecting that you are wearing it. You buckle it on your body upon going to bed and take it off mornings. Thus while you sleep it sends its wonderful power, which I call VITALITY or VITAL FORCE, into your blood, nerves and organs. Users say it takes pain and weakness out of the back from one application, and further say 60 to 90 days' time is sufficient to restore a state of health, strength and vigor. I am not offering this VITALIZER here for sale, but want you first to send for my book, that you may learn all about the whole wonderful subject, and why I get such quantities of testimonials from users everywhere telling of results after drugs completely and utterly fail.

NOTE:—With special attachments VITALIZER is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, nervousness and general ill health. Please write for book to-day, or, if near by, I should like you to call. Hours—9 to 6.

Use Coupon; Get Free Book

Remember, the little illustrated book which I send free, sealed, by mail, as per coupon below, not only fully describes my VITALIZER, telling of a special offer by which you may get one on special terms for use in your own case, but contains a great fund of private advice for men, some good, wholesome cautions, and a lot of general information that might be of value to you to the end of your days. Therefore, please write or call.

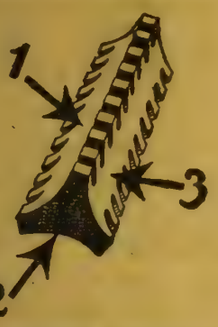
DR. M. F. SANDEN CO.,
140 Yonge St., Toronto, Ont.

Dear Sirs:—Please forward me your book, as advertised, free, sealed.

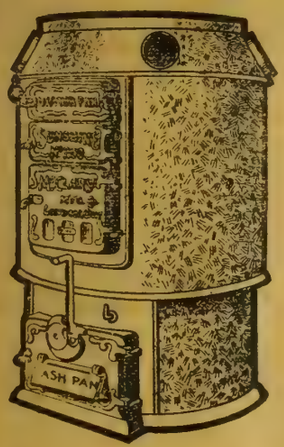
NAME .....

ADDRESS .....

The Two-piece Firepot



Three-sided Grate Bars



Install A Modern Furnace

One With Latest Features, And Built To Last

CONSIDERING its extra weight, the superior quality of the materials, the skill and experience put into it, McClary's Sunshine furnace is the cheapest furnace on the market. You get more value for every dollar you invest in the Sunshine than you do in any other furnace.

McClary's Sunshine Furnace is the product of the largest stove and furnace makers in the British Empire. It has labor-saving, health-producing and fuel-economizing features—the result of long experience—that no other furnace has.

It has, for instance, the "rocking-down" system which eliminates the old-time back-breaking, dirty shaking. It has a conveniently located water-pan over the fuel door. It has a sure-acting dust-flue to prevent dust from falling ashes getting into the house. It has an almost straight-sided fire-pot to prevent ashes forming "pockets" and deadening the fire. And some coal-economizing features our agent will be glad to tell you about.

But, too important to overlook, is the fact that the Sunshine furnace is built to last. The materials are the best, and every piece of metal is tested. Every operation in the making is inspected, too. Nothing is left to chance.

As an example of the quality of materials used, take the fire-pot. This is of semi-steel—not gray iron as are other fire-pots. Semi-steel is not affected by sulphur fumes from burning coal. In addition, a semi-steel fire-pot weighs twenty per cent. more than the same size and pattern in gray iron.

But that's not all. The fire-pot is in two pieces to prevent it cracking from extreme expansion or contraction. One-piece fire-pots are continually cracking, having to be replaced.

Then take the grate bars. Those on the Sunshine are very heavy and have three sides—three lives. By exposing a different side to the fire every few days, the life of the grates is greatly prolonged.

Examine the dome, too. It is of heavy steel, as is also the radiator. The frame of the ash-pit, the doors on the furnace, the casing—every part of the furnace is of the most durable material. All joints are accurately fitted together, and rendered dust-tight by a special cement originated by McClary's.

Last, but not least, the McClary Company place the services of their corps of experienced installation men at your disposal. These men will assist you and the McClary agent in your locality to plan the arrangement of your heating system. They will also co-operate with you in other ways to insure the proper installation of your furnace.

Furthermore, the Sunshine furnace is guaranteed to heat your house to your satisfaction, if installed according to the directions of the McClary experts. You therefore run absolutely no risk in having one installed.

Send your name and address to our nearest office, with particulars about the size of your house, and we will tell you about how much it will cost to install a McClary's Sunshine in your home. The latest Sunshine booklet is also free on request.

McClary's Sunshine Furnace

LONDON ST. JOHN, N.B. TORONTO HAMILTON MONTREAL CALGARY WINNIPEG SASKATOON VANCOUVER EDMONTON

396

A Whitewash For Stables.

For the brightening and improving of the appearance of stables, as well as rendering them more sweet and sanitary, there is nothing more effective than whitewash. It is inexpensive, easy to prepare and can be applied to any surface, smooth or rough.

Old buildings, timbers, stone or plaster may quickly be covered with a coat of bright, clean whitewash, a fresh appearance given to dark rooms where it would be very difficult to apply a coat of paint. The cleansing effect of lime is also far ahead of paint. Various tints can be had by the use of Prussian blue or other materials added to the wash, but the white effect secured by the lime alone can hardly be improved by any addition of other colors.

A whitewash recommended by the Government Experiment Station has been given before, but as dairymen are always interested in whitewashing stables we give it again. This is slightly different from the regular government whitwash in the addition of sweet milk to the mixture. The use of the spray pump is growing in popularity, as it saves much time and enables one to do a much better and more satisfactory job.

For the making of each gallon of whitewash, stir in a pint of glue which has dissolved in water until it is of the thickness of mucilage. Also, for every gallon af the wash use a pint of well boiled starch or flour paste clear of lumps. For every gallon of the wash, stir in a quart of boiled sweet milk from which all cream has been separated. Boil a pound of rice in two gallons of water strain, and use the rice water for sizing.

The spraying of stables with a good coating of whitewash will have a good effect for two or three months, after which another coat may be as easily applied. Regulation government whitewash is made as follows: Slake ~ half bushel of unslaked lime with boiling water and cover to keep through a fine sieve and add a peck of salt dissolved in warm water, three pounds of ground rice boiled to a thin paste and stirred in while hot, half a pound of Spanish whiting, and one pound of clear glue previously and then heated over a slow fire in a small pot hung in a larger kettle of water. Add five gallons of hot water to the whole mixture, stir well and let stand a few days. It should be applied hot.

Scouring Lambs.

Shall be much obliged for an answer by post to the following as early as possible. Some of my lambs are taken, when a day or two old, with scour. A very pale yellow runs from them like water. After a few hours they go dull and sleepy, lose the use of their limbs and die. I have had infectious scour among the calves and wondered if lambs could catch it. The fields they run in are rather wet, but some are lambed inside. Shall be glad if you can tell me the cause and remedy.—T. M.

We advise you to make a post-mortem examination of one of the dead lambs, examining the stomach and bowels for worms and for wool acting as foreign bodies. Also change their pasture if possible, and get them on to drier surroundings. It may be that the ewe's milk is too strong from artificial feeding, and if you are giving cake or turnips I would lessen the quantity or stop it altogether.—Vet. Surgeon.

Send your Raw
FURS to
John Hallam

Sixty Thousand trappers now send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada.

FREE Our "Up to the minute" Fur quotations and the last Edition of HALLAM'S TRAPPERS GUIDE, a book of 96 pages, mailed FREE.

Write to-day to John Hallam, Mail Dept 18 TORONTO, 111 Front St. E.

Summer Management of Flock.

The flock should be shorn and dipped before turned out to the summer parture, because if relieved of the heavy fleeces and free from ticks they will summer far better than those that are compelled to carry the long shaggy wool during the summer and in addition suffer from the torturous ticks which are found in large numbers on individuals that are not dipped. It is economy to shear in the springtime because if the shearing is not done at this time much of the wool is apt to be shed during the hot summer months and of course lost.

There are a number of different kinds of dipping preparations on the market and most all of them serve their purpose. The coal tar preparations are extensively used as tick eradicators and generally give satisfaction. The dipping should take place shortly after shearing as the wool is then short and comparatively clean and the work can be accomplished with a much cleaner solution than if the operation is postponed until some weeks later.

If your flock is known to be infested with worms the best thing for you to do is to get on a pasture that was not pastured by sheep during the previous summer. If the pasture can be partitioned off into several separate inclosures without involving too much extra expense it should be done by all means, the object being to change the sheep to a fresh pasture several times during the summer so as to lessen the danger of the lambs becoming infested with the young worms hatched from the eggs voided with the droppings from the mature sheep.

The Fall Term
—AT—
FREDERICTON
The Business COLLEGE
W. J. OSBORNE PRINCIPAL.
OPENS ON
TUESDAY, Sept. 2nd

If you have not already had a catalog send for one at once. Address

W. J. OSBORNE, Principal,
Fredericton, N. B.

Each age of our lives has its joys. Old people should be happy, and they will be if Chamberlain's Tablets are taken to strengthen the digestion and keep the bowels regular. These tablets are mild and gentle in their action and especially suitable for people of middle age and older. For sale by all dealers.

If you expect your lambs to make the fastest possible growth, allow them access to a rape patch adjoining the pasture, a creep being provided so that they can readily squeeze through the opening, while their mothers will be held in check.

The dwarf Essex variety of rape is very popular and widely cultivated. It requires a rich, moist, loamy soil and does not grow well on light, sandy or heavy clay soils. If you have a soil that produces good turnips or rutabagas you can be practically assured of a good stand of rape from the same soil.

Rape may be either sown broadcast or in drills from 24 to 30 inches apart. When sown in drills the sheep tend to walk between the rows when grazing and do not trample an the leaves as much as when it has been sown broadcast. It depends largely upon climatic conditions as to the length of time required until the rape will be ready to be pastured. Usually rape should have from 12 to 18 inches growth before the sheep are allowed to graze it.

It is generally rather difficult to put the sheep on to a rape field without part of the flock becoming afflict- with bloat. Following are a few valuable suggestions for the amateur.

1. Never turn the sheep into the rape patch for the first time while there is moisture on the leaves. Wait until some hot, dry afternoon.

2. Give them a liberal feed before turning them in and they will not eat enough rape the first afternoon to cause any injurious effect.

3. After they have had access to the rape for about two hours drive them out and do not let them return to the rape field until the next afternoon, and then preferably under the same conditions as on the previous day. After this has been repeated for three consecutive days there should be no further difficulty experienced in safely accustoming the sheep to the new feed and they can be left permanently on the rape.

After weaning time, which should occur when the lambs are about five months of age, the ewes as well as the lambs should be given acress to a good rape field. By putting the breeding flock on rape they are rapidly brought into a good, healthy condition and the breeder will be practically assured of a large lamb crop for next year, because strong healthy sheep are more prolific breeders than those in a run-down or weakened condition.

Rape is an indispensable forage crop for the sheep grower, and is the best green feed for fattening and finishing lambs and mutton for the market.—J. M. Jones in N. E. H.

Good Rich Milk.

The critical consumer of milk may give a snap verdict on the glass of good rich milk given him in the restaurant or at home, and may vagely wonder what percentage of fat the milk is supposed to contain. Certain standards of richness are fixed by various countries and by municipalities, while some purchasing companies and dealers also set a standard low which the milk must not fall. The knowledge of the average test the herd, interesting as it is, is not valuable to the progressive dairyman as a knowledge of what each cow's milk tests. Whether it is 2.9, 3.4, 4.5, or 5.6 per cent. of fat depend on various factors and can only be ascertained after systematic sampling and testing. Such testing sometimes reveal curious facts. A pet cow whose "good rich milk" was reserved for table use was recently discarded by a farmer when cow-testing proved to his dismay that her milk was nearly the poorest in the herd.

The average test of the herd is a vital matter to every dairyman whose milk is paid for at the cheese factory by the test; it is of decided importance to both creamery manager and patron when considering the by-product of skim-milk for feeding and the loaded wagon for the cream-hauler. For two lots each of 16,500 pounds of normal milk may contain either 500 or 900 pounds of fat; one lot is scarcely the best for cheese-making while the other would be "good rich milk."—C. F. Whitley.

"EASTLAKE" METALLIC SHINGLES FOR YOUR HOME ROOF

A Leaky Roof
is the despair of every householder.
It costs money to repair and frequently causes extensive damage.
You can avoid this by the use of "EASTLAKE" METALLIC SHINGLES.
Absolutely water-tight—more durable than wood or slate and look better—last a life-time with no repairs.
Write us to-day for free booklet. 896

THE METALLIC ROOFING CO. LIMITED
MANUFACTURERS - TORONTO & WINNIPEG

FARMERS—You save time, labor and money when you buy STANDARD FENCE and POSTS

You don't have to employ labor to dig post holes. One man and a boy can set up more Standard Fence in one day than could three men and a boy working the old way.

SEND FOR OUR CATALOGUE.

Don't order fence until you have seen it.

It tells how to judge fence, how to measure up the amount you require and how best to order. Get it. Write for it to-day. Address

Standard Tube & Fence Co. Limited
Dept. E WOODSTOCK, Ont.

Live agents wanted for Standard Fence, Posts and Gates. Write for special terms to-day.

STANDARD FENCE

"Cheap" Matches are an Extravagance

They are made of poor materials. In getting a light, the waste is invariably excessive.

As a result, they cost you more—ultimately—than if you used the best:

38 Brands
For all Demands

Eddy's Matches

Causes of Bitter Milk.

Bitter milk may be due to turnips, a weed in the pasture, or to the use of other foods capable of imparting bitter or disagreeable flavors to the milk. In other cases bitter flavor is due to certain germ affections which bring about chemical changes in the milk producing the bitter flavor. This usually occurs in the case of milk that is sweet when drawn but in the course of several hours, even days, a bitter taste develops due to certain bacteria.

There is a less common and less important form of bitterness which develops in milk that has been heated and has stood for several days. In this case it may not sour or curdle but may become quite bitter, because of the presence of certain spore-bearing heating.

Correct the fault in feeding in the first case or disinfect the cow's teats and udder thoroughly before milking. Scald thoroughly the milk pails and all milk utensils. Do not leave milk standing uncovered in the stable; and especially do not rinse out any milk strainers with unboiled water, after they have been carefully sterlized by washing.—M. H. Reynolds, Veterinary, University of Minn.

A Time Saver.

The favorable weather of June is bringing some good records of milk produced by cows trained to the business by far-sighted owners. Grade cows yielding as much as 2,300 pounds of milk and 65 pounds of fat in thirty days are well worth keeping as many factory patrons can testify.

On the other hand some poor records were made during May in several districts, not only in yields of milk but in many instances in peculiarly low percentage of fat; even less than two per cent. That is one good reason why it pays farmers to take up cow testing, for with the tests ranging, as they frequently do in the same herd from 2.1 to 4.3 with common grade cows giving almost the same weight of milk and handled under similar conditions, there is evidently plenty of room for considerable difference in returns.

As a matter of fact, cow testing was never more needed than at the present time when farmers are complaining that it is hard to get good hired help. The time saved in taking a few weights and samples is saved over and over again, a hundred times over, when it proves to a man that he saves time by milking profitable cows only. Why waste precious time month after month, year after year, on cows that test only two per cent. of fat?

Encouraging the Breeding of Standard Breds.

To encourage the breeding of Standard Bred horses, the Canadian Standard Bred Horse Society, is this year donating $50.00 to each of the following Shows for the best Standard Bred Brood Mare with Foal by her side:—Canadian National Exhibition, Toronto; Canadian Industrial Exhibition, Winnipeg; Central Canada Exhibition, Ottawa; Edmonton Exhibition Association, Edmonton; Great Eastern Exhibition, Sherbrooke; Nova Scotia Provincial Exhibition, Halifax; Regina Exhibition Association, Regina; Western Fair Association, London; Saskatoon Industrial Exhibition, Saskatoon.

All animals of course, entered in the different classes at these Exhibitions, must be recorded in our Stud Book.

TheCanadian Standard Bred Stud Book was not opened until the fall of 1910, but already we have accepted for registration over 1100 horses, and Volume I will be published this year. All owners should have their horses appear. It is therefore desirable that application for registration be sent to the Accountant, Canadian National Live Stock Records, Ottawa, at once. The cost for registration is $1.50 to members, and $3.00 to non-members. Annual membership fee is $2.00.

Yours truly,
Jno. W. Brant
Secretary.

The Fredericton Exhibition.

$15,000.00 in premiums is the handsome trophy set up by the Fredericton Exhibition which is open to Canada and State of Maine. W. S. Hooper, the genial and though young in years veteran manager is in charge and exhibitors and the general public may rest assured of the usual courteous treatment accorded them in the celestial city. Tempting prizes are offered in each and every section and farmers and stock breeders throughout the Maritime Provinces will find it to their best advantage to plan to make exhibits in as many sections as possible. If you do not make an exhibit plan a holiday for September 15 th to 20th and visit the exhibition to see the progress that is being made agriculturally in eastern Canada. Entries close on September 1st.

Compressed Air Spraying

It was in Ohio, in the year 1911, that the legislature passed a compulsory spraying act. It has not been repealed, nor is it likely to be. The result has been better fruit and the careful fruit growers are prevented from suffering from the carelessness of the careless ones. If we had a compulsory spraying act in the Maritime Provinces, it would (provided it was honored in the observance more than the dog tax) be a grand thing. But we haven't such an act and it's up to the individual fruit raiser to do his part willingly.

Spraying costs money, takes valuable time, but it pays. The problem is how to get the most and best work done for the least expense. Trucking a heavy gasoline engine around a big orchard is a nuisance. Only those with very small orchards can think of hand spraying. The compressed air sprayer is the solution.

Compressed air sprayers, of course, need power to compress the air, but the engine does not have to be hauled back and forth among the trees. Two tanks are used, one for the spraying mixture and the other for compressea air. There is a mechanical agitator to keep the solution well mixed and the pressure is abundant for the most effective work.

Better than reading a description of these modern sprayers is a visit to the orchard of Rev. G. P. Raymond, at Rockland N. S. Mr. Raymond has been the first to bring one of these outfits to Nova Scotia and he is enthusiastic in its praise. He conclusively has proven that compressed air spraying means a saving of time, of labor. of money, and such a saving is essential to the progress of a fruit grower in these keenly competitive days. He welcomes all visitors cordially.

Work-Horse Parade Figures

The statistics of the recent Work-HORSE Parade in Boston disclose some interesting facts. There were 1231 entries, and of these only 89 failed to appear, a much smaller percentage of absentees than is usual. There were 1516 horses actually present. In the Boston Parade every entry that deserves a ribbon receives one, and the ribbons were awarded as follows: 1st (blue) 765; 2 (red) 35; 3rd (yellow) 51.

No horse that was lame, thin, or badly groomed received a ribbon, but the number thus disqualified was astonishingly small, being as follows: 17 for lameness, 16 for bing thin, 6 for being badly groomed. These results show how much the horses in Boston have improved in quality and condition since the first annual Parade ten years ago.

Owners of horses everywhere might, by a little encouragement, by awakening the pride of their drivers, and perhaps by offering them occasional slight rewards greatly improve the condition and treatment of their horses and save thousands of dollars a year in the wear and tear of horseflesh.

Slow Feed Manger

I have a horse which when fed in an open manger eats his feed so rapidly that it is not properly chewed, and therefore does him little good. I have made a device which I employ to make him eat slowly. A box made of four boards 16 in. long and 8 in. wide, nailed together to form a chute, having no top or bottom. The chute is 16 in. high and 6 in. by 8 in. inside.

It is set upright in the corner of the manger farthest from the horse, and nailed securely in place after being lifted one to three inches from the bottom. The feed is poured into it, and works down into the manger as the horse eats it away from below. What feed the horse cannot reach should be scraped out before the next feed is poured in, otherwise it would become sour and mouldy.

Big Fruit Farm
$3050 Income Last Year

220 Acres, borders water offering best of salt water advantages; good 8-room house with running water; 40-ft. barn; near P. O., boat landing, store, etc.; apple orchard producing 600 bbls. in season; variety small fruits; good chance to develop large commercial orchard; cuts 30 tons hay; wood and timber valued at $1000; owner an old man must sell; if taken immediately price only $3200, part cash; for all details and traveling instructions to see this and many other farm bargains throughout N. S. and the States, see page 67, our "New Mammoth 75-Page Farm Catalogue No. 36;" beautifully illustrated and filled with a wonderful assortment of money-making farms; send today for your free copy, it will save you lots of time and money. Box No. D, Sussex, N. B.

Concrete is the best building material

A BROAD statement—Yet literally true. The aim of man from the beginning has been to make his building materials as nearly like natural stone as possible. The great labor required to quarry stone led him to seek various manufactured substitutes. The only reason he ever used wood was that it was easiest to get and most convenient to use.
Wood is no longer easy to get. Like most building material, its cost is increasing at an alarming rate.
The cost of concrete is decreasing. So, from the standpoint of either service or economy, Concrete is the best building material.
Canada's farmers are using more concrete, in proportion to their numbers, than the farmers of any other country. Why?
Because they are being supplied with

Canada Cement —

a cement of the highest possible quality, which insures the success of their concrete work.
The secret of concrete's popularity in Canada lies in the fact that while we have been advertising the use of concrete, we have also been producing, by scientific methods, a cement so uniformly high in quality that the concrete made with it gives the complete satisfaction our advertisements promised.
Concrete would not have been in such universal use today, had an inferior grade of cement been supplied. Insist upon getting Canada Cement. It is your best assurance of thoroughly satisfactory results from your concrete work. There is a Canada Cement dealer in your neighborhood.

Without this label it is not "Canada" Cement.

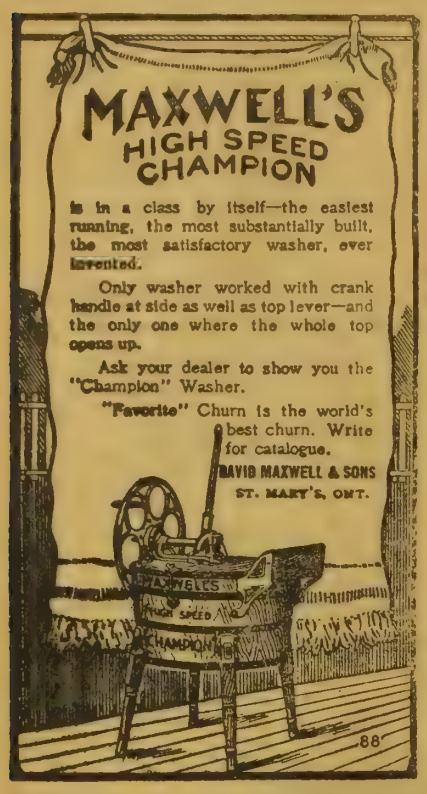
Write for our Free 160-page book "What The Farmer Can Do With Concrete" —No farmer can afford to be without a copy.

Canada Cement Company Limited • Montreal

Constipation

is an enemy within the camp. It will undermine the strongest constitution and ruin the most vigorous health. It leads to indigestion, biliousness, impure blood, bad complexion, sick headaches, and is one of the most frequent causes of appendicitis. To neglect it is slow suicide. Dr. Morse's Indian Root Pills positively cure Constipation. They are entirely vegetable in composition and do not sicken, weaken or gripe. Preserve your health by taking

Dr. Morse's Indian Root Pills 48



Butter Parchment

Write us about our co-operative scheme.

We can save you just half of the money you pay now and remember we sell nothing but Pure Parchment.

The Maritime Pub. Co., Ltd.
Direct Parchment Importers, Sussex, N. B.

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

It is now well known that not more than one case of rheumatism in ten requires any internal treatment whatever. All that is needed is a free application of Chamberlain's Liniment and massaging the parts at each application. Try it and see how quickly it will relieve the pain and soreness. Sold by all dealers.

P. E. I. Crop Report.

The weather during the month of May was unsettled, cold and backward, with much light rain and mist, but scant precipitation. Light frosts were frequent through the month, and on the 19th a heavy thunder storm swept over the western part of the province. Growth was very slow.

Hoar frost occurred on the first of June; very heavy rain on the 2nd, 4th and 6th, and light showers on the 7th, 8th and 9th. Since the first of June conditions for rapid growth have been very favorable.

HAY—The present prospect for the hay crop in King's County is above average, in general the clover has come through the winter in good condition; in Queen's good; a few correspondents report excellent and three very poor; in Prince only fair, particularly west of Summerside, where the clover has been badly killed.

GRAIN—There is nothing unusual in seeding conditions except the cold and backward weather. In a few sections very little wheat has been sown on account of the depredations of the Joint Worm in former years. There is also a slight increase reported in the acreage sown for summer feeding.

HOED CROPS—The acreage sown to turnips is about the same as in former years. Corn and mangels are not popular crops, but a lot of the farmers seem to be planting larger fields of potatoes.

BALED HAY of good quality is scarce; Oats is fairly plentiful and there is an abundance of potatoes still for sale, although they are being fed liberally to all classes of live stock.

CATTLE have gone on the grass in about the usual condition, although a large number of correspondents report that they have been turned out early and very thin, and attribute their lack of condition to the poor quality of hay, which was more or less spoiled in the making by the heavy rains of July and August.

There has been some irregularity in the lamb crop. Some have had excellent results, and others the opposite. One correspondent writes: "We have saved 100 per cent. of our lambs for the first time in thirteen years, all on account of giving the sheep good care during the winter." Another says: "The sheep in this district have averaged nearly a lamb and a half each, and all large and strong." Still another reports lambs as being very scarce.

The milk supply is about the same as last year, but nearly all the correspondents report an increase in egg production.

Correspondents report considerable interest being taken in, and quite a lot of preparations being made for the Live Stock Judging Classes to be held in June and July. They also state that there will be a large number of entries in the Fields of Standing Grain Competitions this year.

Ringing a Bull.

J. H. D.—I have a Holstein bull calf seven months old. When should I put a ring in his nose and how shall I proceed and what kind of a ring is best to use?

Would you advise using calf for service before he is 12 months old?

A bull calf seven months old should have a ring put in his nose, and taught to lead with it. The opening in the nose is made by the use of a trocar which may be purchased at a hardware store. Copper is the common substance used in making rings but some are made of iron covered with tin.

A calf may be used for light service when he is 10 or 11 months old, but it is better to wait until he is at least a year old.

BACK of EVERY LOAF

You put in the oven, must be good flour or your bread will be a failure.

REGAL FLOUR

is your best guarantee of success in bread making, and if you see to it that every barrel of flour you buy bears the *REGAL* brand, you can be sure you have the *one* flour that excels in every good quality.

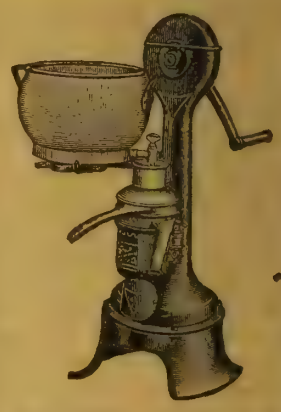
Buy a barrel today. try it, and if it isn't satisfactory we'll give you your money back.

The St. Lawrence Flour Mills Co., Ltd.
Montreal

Cut Your Work in Two

By starting in to use a large capacity

Waterloo Boy Cream Separator



The favorite everywhere it goes. Note the heavy compact construction, with low down handy supply can.

The 900 lb. size Waterloo when at speed and skimming takes no more power than the ordinary 500 lb. size separator of other makes.

The large capacity Waterloo hand separator will save you time, labor and expense, because it will cut the labor of skimming the milk more than in two, not only because it turns easier than most other hand separators, regardless of capacity, but because it does the work in half the time.

In these busy days, when labor is so scarce and so expensive and so unsatisfactory, a saving in time is a great direct saving in money to you.

Please write us a post card to-day asking for Free book describing this cream separator.

The Sussex Motor Co., Ltd.,
SUSSEX, N. B.

We have for sale a few second hand machines of other makes that we have taken in exchange for our Waterloo Boy. Come in and see them.

Advertise in The Maritime Farmer.

FLORICULTURE.

Correspondents from St. John, Chatham, Marysville and Yarmouth will find answers to their enquiries below:

The little insects on the Heliotrope leaf is the Aphis, or green-louse. It is not common on this plant and you will have to use fir tree oil or kerosene emulsion as you cannot fumigate plants of this species without loss of foliage.

Yes, Calecolarias may be fumigated with tobacco, if care is used that the tobbacco is thoroughly wet.

I do not think that there is any danger of aphis spreading to your Geraniums, except the Kenet Geranium, which is often infested with those pests.

I cannot imagine what kind of Lily the Autumn Glory is. You had better send a leaf and bloom if possible and I will endeavour to give what advice is asked.

The leaf of Carnation is badly diseased with rust, a fungous disease that is rather difficult to subdue. Bordeaux mixture is the best remedy for this but judging by the condition of sample I think you had better burn the plants and in the future buy plants that are grown in New Brunswick. Many states of the union and most of the Upper Provinces of Canada all have this disease but so far New Brunswick is free from it, except in cases of imported plants, which a reliable florist will not sell until thoroughly cleaned. Don't buy rusty Carnations. The disease is mostly all stamped out.

The little white worms in soil may be destroyed by the use of lime water made as follows:—Take a piece of quick lime about the size of a hen's egg, dissolve it in a pint of water and thoroughly soak the ball of roots with it in water two or three mornings. The worms will be expelled into the saucer and can be destroyed. After the worms are all driven out throughly water with clean water.

The white flourlike substance on the rose leaf is mildew caused by a sudden chill or exposure to a cold fog or the lowering of the vitality caused by want of repotting. A powdering of fine sulphur on the foliage will prevent and destroy this disease but you will probably lose the foliage effect, especially in the instance mentioned. Try and keep an even, moist temperature and have the soil moist.

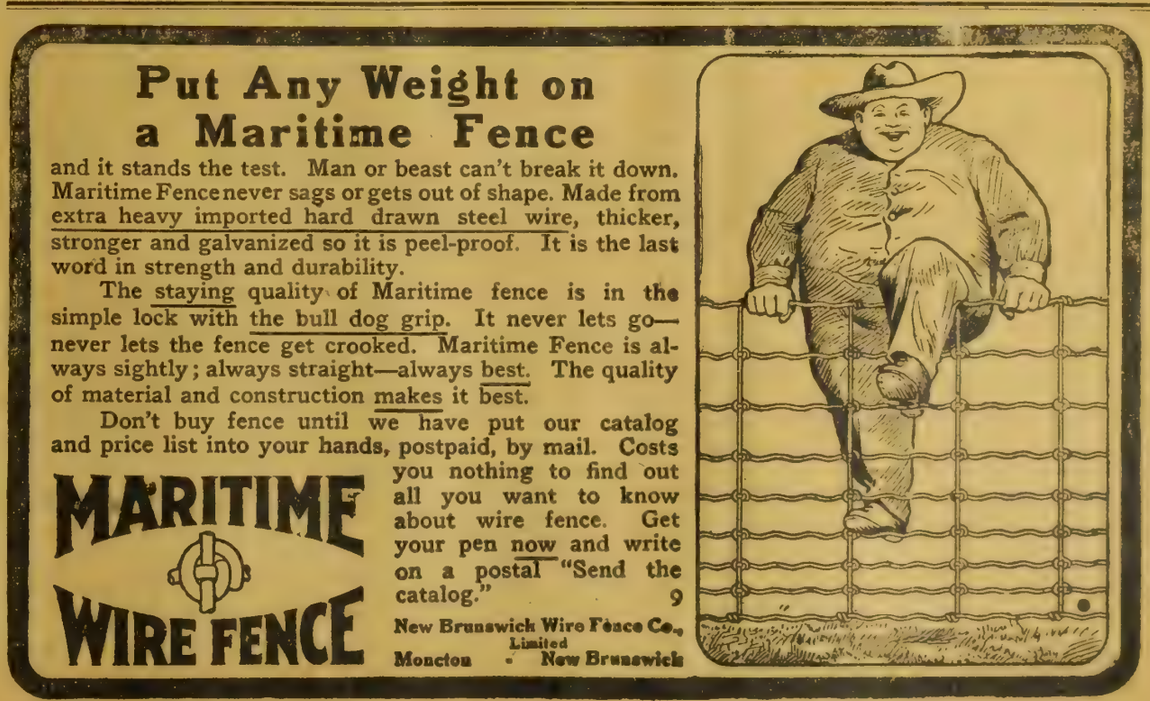
For your garden annuals get Drummond Phlox, Verbenas, Asters, Stocks and Mignonette. These are inexpensive, hardy and the more flowers cut the more profusely will they bloom.

Lubrication of Farm Machinery.

One of the little things that is lacking on a majority of farm implements is a good and convenient system of lubrication. The common oil cup with open top or loose cap is sure to get filled with dirt and grit which cut out the bearings, largely increasing the power required to operate the machine and greatly reducing its period of usefulness.

The hard oil cup, which holds enough oil to last a week or more, is always tight and can be screwed down a little each day, thus insuring a clean bearing and a regular supply of grease. Many of the common implements could be vastly improved by replacing the common oil holes with hard oil cups.

The oil holes can be easily reamed out and threaded to the proper standard and the hard oil cups screwed into them. The amount of work and expense required with be returned many fold in the saving of horse flesh and in the increased life of the machinery.—Jerome B. Frisbee.



One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE.—Two pure bred Holstein Bull Calves. Right milking stock. Apply to A. W. MORROW, North Lake, P. E. I.

VALLEY FARM HOLSTEINS FOR SALE—All sold out of bulls except one calf dropped in March, 1913. W. G. CAMPBELL Salisbury, N.B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE.—One pure bred Shorthorn bull, eighteen months old, color red, good size. Apply to C. H. RIPLEY, Rossendale, Cum. Co., N S.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R. J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

ENTRIES—Kings County Crop Growing Competitions—Oats, Barley, Wheat, Turnips—close on July 15th. Members of Agricultural Societies make your entry today. If interested send for circular. M. A. MACLEOD, Sussex, N. B.

FOR SALE—One acre—Two story house, wood shed, barn, &c. attached. Water in house. Near churches, school, store, boating, bathing and fishing. Also 60 acre wood lot, 3-4 mile from village. GEORGE WELLING, Baie Verte, N. B.

WANTED—The name and addrees of the party who mailed Postal Note No. H. 998512 at Moncton, N. B., on March 15th, so we may give proper credit for same.—THE MARITIME FARMER, Sussex, N. B.

LADIES WANTED TO DO PLAIN and light sewing at home, whole or spare time; good pay; work sent any distance; charges paid. Send stamp for full particulars. National Manufacturing Company, Montreal.

FOR SALE—Farm at Silver Falls. 2 miles from St. John, 140 acres, large house, fifteen rooms; bath room with hot and cold water; large cellar; carriage house; 2 hen houses; large piggeries; cattle barn, 90x35 and power windmill; also hay barn; milk route, milk 10c. a quart and cream 40c. JOSSELYN & YOUNG, St. John, N. B.

Reduced Prices of Eggs

For the months of June, July and August only we will sell White Wyandotte, Columbian Wyandotte and S. C. White Leghorn eggs at $1.25 per 15; $3 for 50; $5 for 100. For Light Brahma eggs $2 for 15; $3 for 30. Address,

Michael K. Boyer, Box 27,
Atlantic Co., New Jersey.

Breeding Season 1913

The fashionably bred, prize-winning Clydesdale stallion, "Dunure Crag" will stand at stud and meet mares by appointment.

"Dunure Crag" is bred on the right lines, and will prove a very popular breeder, he is sired by the renowned "Baron of Buchlyvie."

For further particulars and terms apply to

J. MEIKLEJOHN, Cossar Farm,
Lower Gagetown, N. B

WANTED

About 40 good brood sows, also a number of young pigs. Apply with full particulars to

A. C. Corfield, 71 Dock St., St. John, N.B.

Holstein Bulls For Sale

We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow; three months after freshning.

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
Loch Lomond West Nova Scotia

Schedule of Sheep Extension Car.

For a number of years the Maritime Province Departments of Agriculture as well as the Dominion Department have been trying to stimulate an interest in the sheep raising industry by holding auction sales of pure bred stock. Institute meetings have also been held at which some of the best Canadian authorities on sheep husbandry were the speakers.

In this way a great deal of interest was aroused. The scrub sire has been eliminated in many sections and the use of pure bred sires has been substituted instead, much to the improvement of the various flocks.

There is, however, much room for improvement. Alive to this fact, the Dominion Department appointed Mr. J. A. Telfer, a noted authority on sheep husbandry, to take charge of the extension of the sheep industry in the Maritime Provinces. During the winter months he made himself useful to the local sheep breeders by attending the Winter Fairs and Short Courses where he conducted sheep and wool judging classes and by giving timely advice at meetings held throughout the length and breadth of the land.

During the last month or so Mr. Telfer has been in charge of a sheep extension car and he has been touring the provinces going over the various lines of railway. Stops were made at the mast important farming centres where the car was open for inspection and where Mr. Telfer gave talks and demonstrations along sheep husbandry lines. Several sheep of the representative breeds are carried, as are also a modern sheep dipping vat, samples of the various kinds of wool, a model sheep barn and many other articles of interest to sheep breeders.

Following is a schedule of dates for the next few weeks. It will pay each and every one of our readers to take a day off and visit the car when it is in their vicinity:—

*Tuesday, June 24th, ar. Chatham, 14.30

Wednesday, June 25th, lv. Chatham 5.20.

*Wednesday, June 25th, ar. Doaktown, 10:07.

Thursday, June 26th, Lv. Doaktown, 10:07.

*Thursday, June 26th, Ar. Fredericton, 16.00.

Saturday, June 28th, Lv. Fredericton, 7:30 a. m.

*Saturday, June 28th, Ar. Woodstock, 10:45 a. m.

Monday, June 30th, Lv. Woodstock, 11:01 a. m.

*Monday, June 30th, Ar. Florenceville, 12:21 m.

Tuesday, July 1st, Lv. Florenceville, 12:21 m.

*Tuesday, July 1st, Ar. Andover, 1:30 p. m.

Wednesday, 2nd, Lv. Andover, 2:30 p. m.

*Wednesday, July 2nd, Ar. St. Stephen, 9:00 p. m.

Friday, July 4th, Lv. St. Stephen, 6:45 a. m.

Friday, July 4th, Ar. St. John, 11:00 a. m.

Car open only at points marked by *.

The Pictou Exhibition.

The Pictou Agricultural Society, of Pictou, N. S., will hold their annual exhibition on their spacious grounds in the town of Pictou on September 29th, 30th and October 1st. Competition open to the county of Pictou. We have received a copy of their attractive prize list. Substantial cash prizes are offered in the various departments and each and every farmer in the good old county of Pictou should send for a copy and plan to make an exhibit in one or more departments. Entries close on September 23rd.

Dates to be Remembered

Nova Scotia Provincial Exhibition, Halifax, N. S., September 3 to 11, 1913.

Miramichi Exhibition, Chatham, N. B., September 8 to 13, 1913.

Fredericton Exhibition, Fredericton, N. B., September 15 to 20, 1913.

P. E. I. Provincial Exhibition, Charlottetown, P. E. I., September 23 to 26, 1913.

Canada Eastern Exhibition, Sherbrooke, Que., August 30 to September 6, 1913.

Canada National Exhibition, Toronto, Ont., August 23 to September 8, 1913.

Central Canada Exhibition, Ottawa, Ont., September 5 to 13, 1913.

Maritime Winter Fair, Amherst, N. S., December 8 to 11, 1913.

Fredericton Poultry Show, Fredericton, N. B., February 17 to 19, 1914.

Dominion Exhibition, Brandon, Man., July 15 to 25, 1913.

Homeseekers Excursion to Western Canada.

Every Wednesday until the 9th of October the Intercolonial Railway will sell second class, round trip tickets to Winnipeg, Brandon, Regina, Edmonton,, Saskatoon, and Calgary. These are good to return two months from date of issue and are a special inducement to those wishing a cheap trip to the West. The nearest I. C. R. ticket agent will furnish all particulars. In that ticket read via Intercolonial Railway, the only all Canadian route from the Maritime Provinces.

1870 1913

Mumford Bros.

PRODUCE COMMISSION MERCHANTS

141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

Annapolis Valley Fruit Farm
115 Acres, Only $2700

A quick buyer will get a big bargain; near store, school, neighbors and only 2 miles to depot; 20 acres rich tillage; 50 acres valuable wood and timber; all good orchard land, 100 trees now in full bearing; brook pasture for 12 cows; splendid 9-room house with 28-ft. piazza; 40 x 50-ft. barn with cellar, shingle and painted; piggery and carriage house; another set bldgs. consisting of 9-room house with barn and shed; view is of water and other good farms; long list household equipment will be thrown in; part cash, easy terms; for traveling instructions to see this and a 220-acre farm for only $3200 from which year's income was $3050, see page 67, our "New Mammoth 75-page Farm Catalogue No. 36"; beautifully illustrated and filled with a wonderful assortment of money-making farms; send today for your free copy, it will save you lots of time and money. Address Box D, Sussex, N. B.

$10,000 Apple Farm, $6500
Last Year's Income, $2322

115 acres; one of the finest farm homes in the Annapolis Valley, overlooking Minas Basin; 1 mile to depot and village advantages; 85 broad acres in rich machine-worked fields; brook-watered pasture for 14 head; splendid 9-room house; barn ties up 18 head stock; stable and piggery; aged owner cannot wait to secure full price for this property; his affairs must be settled immediately; if taken now price is only $6500, part cash; for traveling instructions for this and a 220-acre farm for only $3200, see page 67, "Strout's Mammoth 75-Page Farm Catalogue No. 36"; beautifully illustrated and filled with a wonderful assortment of money-making farms; send today for your free copy, it will save you lots of time and money. Box D, Sussex, N. B

FARM FOR SALE

Small farm of 20 acres fronting 30 rods on St. John River one mile from Brown's Flats with fair house, barn and poultry house. A small orchard and large numbers of native apple trees suitable for grafting.

A cheap farm that with a little fixing up will increase in value 100 per cent. A bargain for quick sale.

F. W. Short, Brown's Flats, N.B.

Get a Start Cheap!

Six Sicilian Buttercups eggs, four Turkeys eggs, (Bronze), five of my best Single Comb Rhode Red eggs, $2.00 for the fifteen.

Four handsome pairs of Sicilian Buttercups $5.00 A pair

Sicilian Buttercups generally agreed among those who breed them to be the best layers known $3.00 for 15 eggs.

Bronze Turkeys eggs $3.00 for eleven.

Single Comb Rhode Island Reds good birds in every way, and splendid to hatch and rear turkeys $2.00 for 15 eggs.

I have plenty of all these eggs I can supply any number. Order straight from this adv. and save time.

Terms, Cash with order.

SARAH E. MOSES SMITH,
Woodward's Cove, N. B.
A pen of Indian Runner Ducks three females, one male $5.00

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

C. C. H. EATON,
Canard, N. S.

Raspberry Plants!

Wishing to remove all Raspberry stock from ground they now occupy, we are making the following low prices for April: King (early), $1.25 per 100. The celebrated "Herbert," $2.00 per 100. Hiram, $1.00 per 100. Cuthbert, $1.25 per 100. Eaton (new), $1.50 per 100. Any variety mailed, postpaid, 50c per doz.

Orchard Hill Farm,
Brown's Flats, N. B

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.B.

Elmshade Jerseys

Bulls from six to twenty mos. Sired by College Fox whose dam made a record of 678 lbs. butter in one year.

Horse 7 yrs. old, weight 1200 lbs., good driver and good worker, would make a good express horse.

J. R. SEMPLE, Brule. N. S.

OCULUM

For Roup, Canker, Cholera and White Diarrhoea.

Greatest Poultry Tonic on Earth Sent prepaid for $1.00 per bottle.

GEO. H. SEAMAN, Moncton, N. B.,
Sales Agent for Oculum

HEREFORD STOCK FARM

Let us know how much money you want to invest in Hereford bulls, heifers, or cows with calf by her side or bred to "Prime Lad".

Buff Orpingtons and White Wyandottes, good laying and Utility strains, eggs $1.50 per 13.

R. R. BLACK, Amherst, N. S

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N. B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire attle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

J. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

Stewart Bros., Alliston, P. E. I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
E. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

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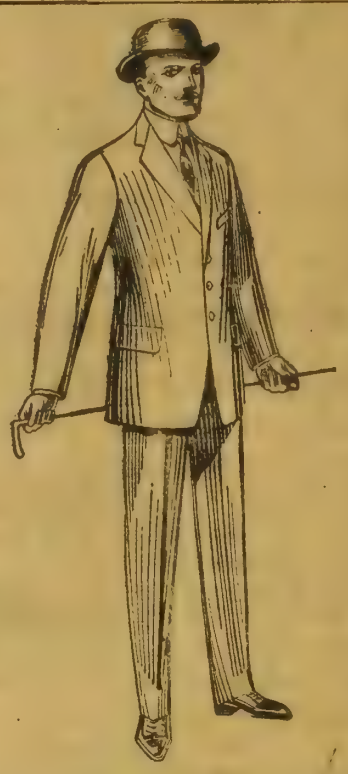

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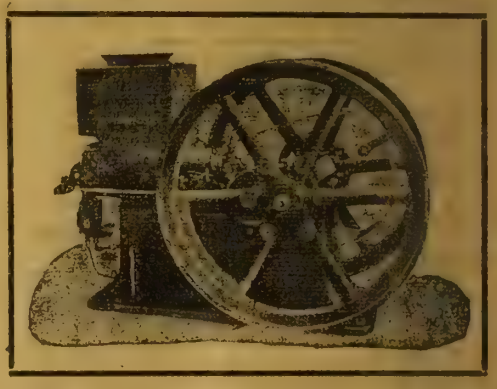

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Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 18. SUSSEX, N. B., JULY 8, 1913 No. 19

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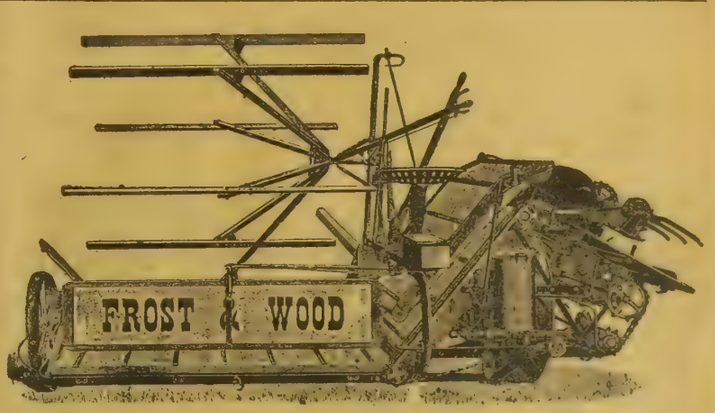

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Great for Pie Crust — top and bottom.
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Close-grained — melting — even textured.
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Put into *your* bake things the rare nutlike sweetness of *Manitoba* wheat kernels.
All soppy with the rich red juice of the cherry—or lemon pie—or apple—or healthy custard—meat, may be, or mince—
Put the FIVE ROSES "crust and" about 'em.
See the hungry *wedges* fade behind busy milk teeth.
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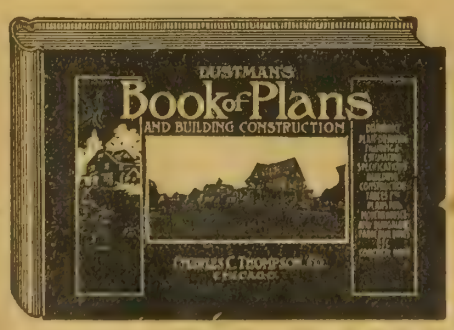

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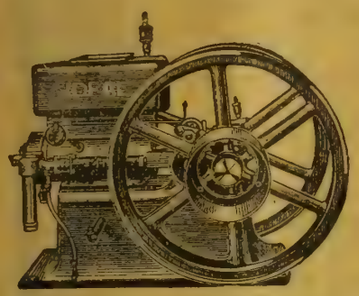

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Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

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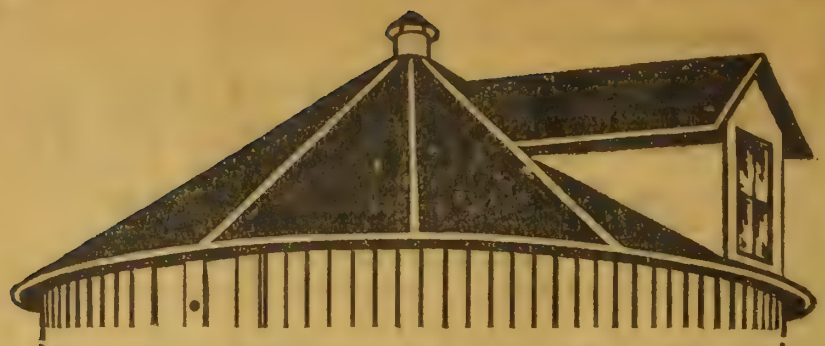
Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. S nd to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer
SUSSEX, N. B.

We do not sell these burners but each subscriber may get two beside one we furnish free by sending 35 cents for each additional one wanted.



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The "lucky" dairyman is the man who takes advantage of every opportunity to increase his milk or cream production without increasing his feeding cost, and who leaves no stone unturned to make every cow he owns produce the last cent of possible profit.

That's the kind of "lucky" cow owners you'll find with Ideal Green Feed Silos on their farms. They know that a good silo pays for itself the first year and after that it is all clear profit.

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Let the De Laval start saving your cream right now, this spring. It will soon pay for itself.

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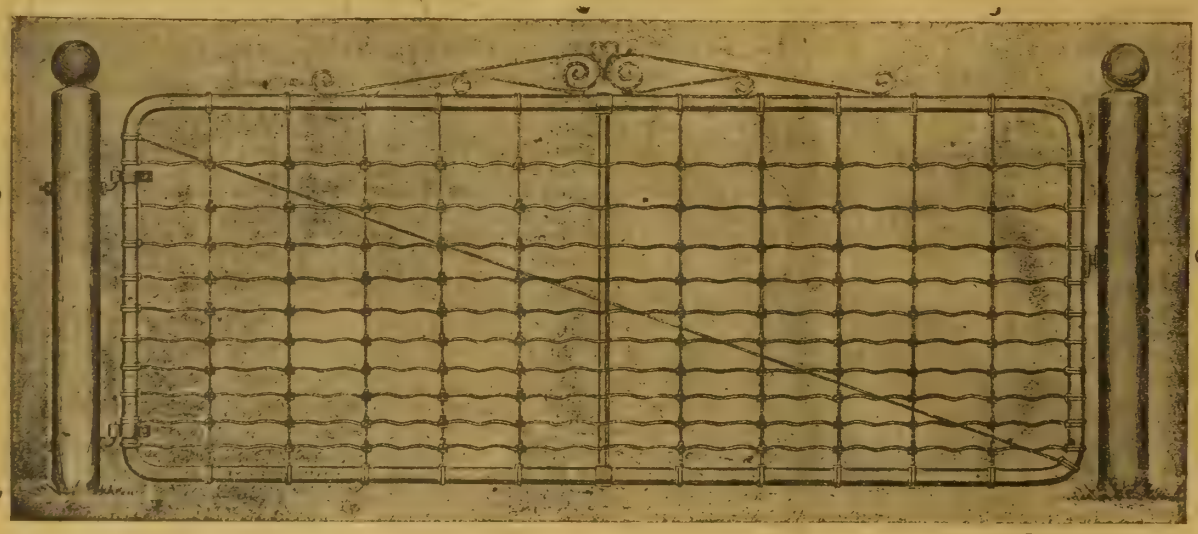

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Volume 18. SUSSEX, NEW BRUNSWICK, JULY 8, 1913. Number 19.

Selecting a Show Herd of Beef Cattle

By W. A. McHenry, in Breeder's Gazette

A SHOWMAN'S success depends primarily upon the type of his cattle. No amount of skill in fitting and showing will compensate for marked deficiencis in conformation or breed type. Necessarily one must know just the sort of cattle which the most experienced and respected judges prefer. Although individual judges have little preferences of their own, there is a general pattern for each breed which is very closely followed by all of them. This pattern shapes itself gradually as time goes on, according to commercial market demands for beef cattle, as breeders aim constantly to produce such cattle as will most economically and surely fulfill market requirements.

It is something of an art to pick out thin cattle which will develop into the correct show type when fitted. One must know by experience about how an animal fills out with the addition of fat. It is most essential to have cattle of good lines, straight and level in the back and also in the underline, standing on short legs that are wide apart. The general build should be blocky and wide. It is especially necessary to have great depth of chest and flank and width between fore legs. There must also be full thighs, extending well downward toward the gambrels, and a low twist. The shoulders, back and hips, even in thin animals, should carry an appreciable covering of flesh, indicating a wealth of lean meat which is a necessary foundation on which to build a show carcass. To go with this general conformation there should be a fine wide intelligent-looking head set on a short neck, which should taper gradually from the head into a smooth junction with the shoulder.

One should especially avoid cattle that are long-necked and narrow in build, having a long slender head and neck. This kind of conformation is not associated with thick beef or great feeding capacity. Although any thin bull or cow gains an appearance of being lower set as it fattens, no amount of feed will bring the leggy, long-necked, slabsided animal into a low-set, wide shape. The long narrow head is especially undesirable as indicating a poor and restless feeder.

Some important indications of show calibre may be mentioned. Of course, the straight top lines and the general outlines prevailing in the breed are very necessary, and in beef cattle there should be the closest possible approach to the best commercial standard in the high-priced cuts of beef. There must be a vigorous constitution, and a disposition to be ready always for feed, as a thick, smooth finish cannot be put on an animal devoid of these qualifications. A soft pliable skin is another special essential. It is generally associated with good feeding capacity, and the ability to turn the feed into the right sort of meat. Animals with pliable skins will commonly put on considerably more finish. With all these fundamental characteristics the style of the prospective show animal must be given due consideration. A bull or cow which stands squarely on its feet with head up and eye and ear calm but alert attracts instant attention. A graceful prompt steady way of walking is also advantageous. Those little things do much to attract the attention of a judge, and convey the impression of the vitality and vigor which are essential in breeding animals.

The chief consideration in selecting a show herd is the bull. The one bull is necessarily considered against the four females that are shown with him. He must first of all be masculine and vigorous, and he should bear distinctly the characteristics which are peculiar to the breed. The female should be compactly built and low-set, and posses the good lines which are inseparable from show shape. She must also be breedy in character. Her most distinguished feature must be a pronounced freedom from coarseness of any kind. There should be no suggestion about her shoulder, neck or head of the stronger outlines which characterize the bull. While the bull may look aggressive, the cow should look peaceful and gentle.

Throughout the show herd there must be the greatest possible degree of uniformity in breed type and in general beef conformation. It is folly to put cattle of different shapes into a show herd, even though individually they may be very excellent animals. Slight variations in conformation which would be scarcely noticeable when the animals are inspected separately may look very pronounced when they stand side by side in the show ring.

Selections for the show herd should be made as early as possible. It has been my custom to breed the cows so that the calves would be dropped at as early a date as permissible, so that they would have the benefit of age. When bred in this manner one has the advantage of age in the calf, yearling and two-year-old, and the extra months contribute to thickness of flesh and size. Early calving allows more time for fitting the aged animals in the herd. After the calves are dropped as early as possible one should carry them along rapidly from the time they are born until the end of the show season. The same is true of the cows. They should be pushed right along so as to keep gaining in flesh, and one must be very careful not to let them down in that particular or to cut down their feed. If they go down in flesh at any time in the season it is impossible to make up the time that is lost.

The longer the time that may be taken in putting on the desired flesh the thicker and smoother it will be at the end. Very heavy feeding for a short period to make up for lost time is apt to derange the animal's digestion and also to put on rough flesh. As to the time required for fitting the same rule applies to the young herd as to the aged herd. The youngsters should be carried along from the time of calving to the end of the show season without allowing them to go backward in flesh or condition. The calves also must be pushed right from the start. They require all the time that one can give them from the day they are born until the time they are shown. Each week and each month makes it possible to have them carrying more flesh andbloom, and to show more plainly their evidences of correct beef form.

Roots and green feed can be used to great advantage to keep the animal's stomach in good condition on heavy feed. The feed of show animals must be a mixed one, covering the different ingredients. These should be mixed in separate proportions, so that the cattle will not put on too much flesh, but will be carried along with a steady growth, giving plenty of bone, especially in the young animals, and at the same time putting on flesh evenly. Bone-making and muscle-making feeds must be used in abundance. A common mixture of grain feeds which gives good results is made of equal parts by measure of ground corn, crushed oats and bran, with the addition of a small amount of oilmeal toward the last of the season. Clover and alfalfa hay are the best kinds of roughage, and the run of the pasture at night in the summer is a great advantage both for the green feed supplied and for the exercise.

An effort must be made to keep the members of the herd gaining uniformly and developing alike in their degree of flesh and finish. A great deal depends upon the feeder. If he has been educated to a nicety he will know just what his animals will take, and will not give them more than they will clean up. Regularity in feeding is an essential. Feeders should be given plenty of time if they are expected to get their animals in high flesh and pleasing form for the show ring. Some exhibitors seem to think that a few weeks' preparation, or a few months, will suffice to fit animals that can win, but they find their mistake. It takes time to get a first-class show heard ready,, and it requires skill on the part of the herdsman to carry over animals from year to year and yet preserve fecundity and bloom, but it can be done. It is possible to injure breeding cattle by long-continued high feeding, and it is the real "artist" among herdsmen who carries them on without injury.

Editor's Note:—There was a time when a great number of fat cattle were grown in and exported from the Maritime Provinces. The rapid increase in the population of our cities and towns furnishes a ready market for all the beef that is produced locally and thousands of dollars are annually sent to Ontario and other Western packers for meats of various kinds to fill the demand. Stall feeding is not carried on so extensively in the Maritime Provinces as in years gone by. The older generation of farmers have nearly all passed away and their sons have not followed in their footsteps in the matter of beef raising as mush as they might. In sections where there is abundant pasturage and where large quantities of hay, roots and grain are grown, instead of selling the raw material a remunerative business can be conducted in the growing of beef cattle and thus capturing a portion of the money that would otherwise go to build up the industry in another province. Our exhibitions are doing a good work in demonstrating the correct types for our farmers to raise. We would also advise our young readers to further study beef type by taking a course at the N. S. A. C. and then instead of leaving the farms to work in the cities remain at home and share in the wave of prosperity that comes to the farmer who grows the commodities that our markets demand.

Nova Scotia Farmers Visit the N.S.A.C.

VALLEY FARMERS.

On Friday, June 27th, the farming hamlets bordering on the Dominion Atlantic Railway, in the counties of Annapolis, Kings and Hants were early astir. The sturdy farmers of the far famed valley were wending their way, despite the unpleasant elements to the railway stations where they entrained to the tune of thirteen carloads for a visit to the Nova Scotia Agricultural College at Truro, an institution to which a great many of them have learned to look for guidance in solving the perplexing problems with which they are daily confronted.

By the time the excursionists had arrived in Truro the weather man had changed his mood and was dealing out a pleasant brand of weather.

At the Agricultural College, they were heartily welcomed by Principal Cumming and his staff and invited to thoroughly inspect every portion of the vast establishment. With its many buildings and three hundred acres the farm is in splendid shape and in its present condition suggests an estate that any nobleman might be proud to look over. Its broad fields are tilled to the best advantage and in appearance its stock certainly does not betray any indication of the fuss that was made over their health during the past winter.

WELCOMED THE VISITORS.

Soon after the legion of excursionists had found their bearings and been served with tea or coffee to go with their lunches, for it was, in a sense, a basket picnic, the pleasing strains of music from the town Citizens' Band gathered them into the large pavilion where was carried out the only formal programme of the day.

Principal Cumming welcomed his guests in a pleasing speech touching on subjects of public importanre. Naturally the subject of cattle tuberculosis was ventilated to some extent. The Principal, invited the visitors' inspection of every head on the farm. The farm people were not a bit sensitive, he said, on this point and courted the fullest investigation. He challenged any, on general appearance, to separate the animals that had reacted to the tuberculin test, from those that showed absolute freedom from the disease when tested. He outlined the practice of segregation in vogue at the farm and pointed out its results in the offspring of animals that had reacted being entirely free of tuberculosis when submitted to several tests. That subject was a much discussed one was apparent from the many questions that followed the Principal's address.

Mayor George W. Stuart was present and tendered the visitors an address on behalf of the citizens of Truro. The speech of his Worship was heartily applauded by the immense throng and their thanks was returned by Prof. Saxby Blair, of Kentville, who made a very interesting speech urging the farmers of the Province to greater co-operation in their work and the adoption of a system whereby they could reach out with more definite ideas that would increase the productiveness of their fields, enable them to maintain larger stock and tend to greater development along general lines. He paid an exceptionally high compliment to the College and its farm in the good work it was doing.

Other addresses were made by Mr. C. P. Blanchard and Prof. Landels. Then followed the parade of live stock consisting of Holsteins, Ayr shire and Shorthorn cattle and Clydesdale Hackney and Thoroughbred horses. About the only animal on the farm not in the show was Achille 2.15¼, the trotting stallion, and he is recuperating from a temporary lay-up following an attempt to wreck his vengeance on Royal Baron, the huge Clydesdale stallion, for being larger than he was. This encounter took place over a nine foot board fence, so neither horse is badly injured notwithstanding.

The display was a fine one and as one Hants County farmer, who has all the Provincial Exhibitions and a Truro exhibition held as far back as 1876 said he "never saw a better one." Many of the visitors found time to visit the dairy department, where Mr. Mackay dispensed not only buttermilk, but information as to the finer art in butter and cheese making; also Prof. Matheson in the Horticultural building who talked on insect pests and fungus growths of trees which was of particular interest to the orchard men, and over on the Hill, Prof. Landry was "at home" at his well equipped poultry department where innumerable chicks and other splendid poultry are housed.

Others visited the fields and were pleased with the well advanced crops. The train for home left at six o'clock making the afternoon all too short and the excursionists started for home regretting that time did not permit them staying longer at this interesting public institution.

PICTOU COUNTY FARMERS.

Under more favorable weather conditions than the Kings county farmers experienced on Friday, a large party of Pictou county farmers took an outing at the provincial farm on Saturday, June 28th.

In the absence of Mayor Stuart, his deputy, T. Starr Pattillo, welcomed the visitors on behalf of the town of Truro and took occasion to comment upon the good work being done by the agricultural college and the appearance of the farm on behalf of the visitors. The reply was made by Howard Kennedy, of Alma, who also endorsed the laudatory remarks of the deputy mayor as respecting the institution and farm and thanked Truro, and the college officials for the splendid reception given them. Principal Cumming was indefatigable in his efforts to have the visit a pleasant one and wished that the closest scrutiny be made of the farm, its stock and equipment. The fine day gave the visitors the fullest opportunity to do this, and many good words were heard as a result. The crowd was too large to be accomodated in the pavilion, so the parade of animals was made in an outdoor ring. In addition to the college stock, some from C. P. Blanchard's famous Purebred Ayrshire herd was also shown and pleased the crowd. It was a most successful picnic throughout. The ten cars of people left for their homes at five o'clock, well satisfied with the day's enjoyment, and much benefited by what they had seen.

First Annual Meeting of the United Fruit Co's. Ltd

The first annual meeting of United Fruit companies of Nova Scotia opened at Berwick, N. S. on July 2nd and 3rd. One hundred and twenty delegates were present. President John Donaldson, of Port Williams, gave the opening address. His opening sentences were:—"This is the first time we have met together since we have been legally incorporated as the United Fruit companies. It is also the first year that the subsidiary companies, throwing aside their prejudice, giving up their own individual ambitions and sinking all minor differences, voluntarily agreed to unite together, work together under one management, and pool all products in common fund. To have done this so quietly and thus to have achieved so quickly the results of real co-operation, has not only astonished the world, but also ourselves, for we can scarcely understand what a power and what an influence we can now exert in the business and commercial world. What it has taken other countries and other organizations years of work and thought to accomplish has been done by the fruit growers of the Annapolis Valley in one year.

The president claimed that the chief objects of the organization were first, more money for apples; second, cheaper supplies. At the same time he pointed out that true business was based on mutual advantage. A pleased customer was the best advertisement and it was necessary for fruit growers to keep high their standard pack. Mr. Donaldson said he was proud of the results of the management during the past season of 1912-1913, and was not afraid to compare prices with any individual outside the co-operative associations.

He submitted the following problems:—First the necessity of the more rapid packing and shipping of early varieties, cold storage; secondly, the advisability of box packing; thirdly, the need for more expert knowledge in the barrel packing and the imposing of a penalty for careless packing; fourthly, is it advisable to raise the standard for number threes and thus pack less; fifthly, disposition of culls, establishment of evaporators and vinegar factories; sixthly, the best mode of managing subsidiary companies.

The report was given into the hands of a committee.

A. E. Adams, executive secretary, read the annual report and presented the financial statement. Much discussion arose over the report. There were criticisms of salaries paid officials, but discussion brought out satisfactory details, and the report was finally adopted with an enthusiastic and unanimous vote.

The evening session was given up to addresses on co-operative centralization by A. McNeil, chief of the division, Ottawa, and Professor Cumming, principal of the agricultural college, Truro. Mr. Blair paid a glowing tribute to the success attained by the co-operative fruit growers of Nova Scotia.

The annual report was presented by A. E. Adams, executive secretary. It was a lengthy and exhaustive document worthy of what is classed in bulletin 38 of the department of agriculture as "the best example we have in Canada of a central selling association."

The report called attention to the difficulties of the initial year of the central association and said: "While much good work has been accomplished and very large savings have been affected, yet the critical eye of your management has detected that certain parts of the machine could give even better results and accomplish much larger savings, and it is their intention before the second year's business commences to have the machine perfected in those parts."

There are thirty-two companies holding stock in the United Fruit companies of Nova Scotia, and the total expenses of the central have only amounted to $12,000, or three cents per barrel on the fruit handled. The report claimed that there is absolutely no comparison between the expenses of your central and that of any other, similar but smaller, institutions throughout the North American continent."

AVERAGE PRICES PAID FOR STANDARD VARIETIES.

A detailed statement of the average prices obtained for standard varieties was given and the low prices obtained during the past year was accounted for "by the fact that throughout North America there was a tremendous crop, every apple producing section with one exception claiming a rerord crop of good, clean fruit. The one exception was Nova Scotia, which was not only an exception because it had only an average crop, but was also an exception because even that was dirty."

The management had realized at the outset that it had encountered the "very worst year possible in which to make a start. The word going on to the world's markets that Nova Scotia had spotted fruit and every other country a bountiful supply of good, clean fruit, was sufficient to discount Nova Scotia's prices for the entire season."

The report called the large quantities of No. 3's a most deplorable feature. Instances were given of the keen competition and the necessity there was of keeping the closest watch on all the markets.

Brief reference was made to the work of S. B. Chute, general manager; A. E. McMahon, inspector; J. N. Chute, European representative, and Captain C. O. Allen, shipping inspector.

OPPOSITION AGAINST CO-OPERATIVES.

The Canadian Northwest trade was referred to as an important factor in the prices of Gravensteins, and in this connection an instance is given of the fight being made against the co-operatives:

"T. H. Morse had sold some 16,000 barrels of Gravensteins in Winnipeg and beyond at $2.25 per barrel, 1's and 2's. They were selling readily and he could have easily disposed of our entire crop at these figures. Certain firms of speculators, however, started to quote Gravensteins at $1.50 and $1.60 per barrel, and an absolute panic in the western market ensued. In order to retain what orders were not cancelled we had to reduce our price to $2.00 and it effectually stopped the sale of any more. The only thing that made it possible for the speculator to do this work was the fact that there were so many farmers outside the companies who, not having the benefits of co-operative organization, were glad to sell their Gravensteins to those speculators packed at $1.25 per barrel for No. 1's and 2's. These unorganized farmers

cost the United Fruit companies at least $5,000,00 on Gravensteins alone."

The work of Mr. Morse in the west was highly spoken of:—"In addition to having some splendid sales he established business relatings for us which form a most valuable asset, and on which we are relying to do a very large business during the coming season."

The successful extension of the home markets by the companies' representative, M. K. Ells, was dealt with at length, and one instance is given:

"A large firm in New Brunswick who bought 8,000 barrels from us last year have contracted to take their entire supplies, estimated at about 30,000 barrels, next season from the United Fruit companies, guaranteeing a minimum of 16,000 barrels and agreeing to handle no others. That is just one demonstration of what can be done by putting up a good, reliable, honest, uniform pack of apples."

THE LONDON OFFICE.

The work accomplished by the London office was left for a special report by the European representative, J. N. Chute. There were shipped to Europe last season by the United Fruit companies 303,442 barrels, and the annual report gives details of the savings effected and the improvements that had been obtained in shipping facilities.

The subsidiary companies were urged to take fuller advantage of the information obtained by the central, and it was shown that when the instructions of the central were followed in regard to shipping the average price was invariably and substantially increased.

Regarding purchases the report said in part:

"The purchase and distribution of supplies forms a large part of the work of the central association, and in this connection not only the members of the associated companies, but farmers generally, are indebted to the central for very large savings.

We have handled 5,975 tons of fertilizer this season, or 307 carloads, and have saved our members on an average of $3.00 per ton on wholesale price, or in round figures $18,000.00."

The list of supplies purchased was given in detail and makes up a total of $153,000.00 "all of which has been paid, spot cash."

The re-election of practically all of those in charge of the affairs of the United Fruit Companies was the tribute given to the administration by the assembled delegates. John Donaldson, of Port Williams, was re-elected president and M. B. Davis, of Bridgetown, re-elected recording secretary. The directors elected by each company, and from whom the board of management was chosen, is now made up as follows:

Middleton Fruit Company—A. P. Dodge.

S. B. Chute Fruit Company, Berwick—S. B. Chute.

Central Fruit Company, Clarence—A. P. Ramsey.

Granville Fruit Company—G. I. Salter.

Aylesford Fruit Company—A. E. McMahon.

Port Williams Fruit Company— J. Elliott Smith.

Kingsport Fruit Company— H. R. Kinsman.

Round Hill Fruit Company— F. E. Mason.

Bridgetown Fruit Company—Geo. Chute. 7

Blomidon Fruit Company—J. D. Beqnett.

New Minas Fruit Company— E. H. Johnson.

Star Fruit Company, Paradise—Arthur T. Morse. K

Banner Fruit Company, Bridgetown—F. H. Johnson.

Falmouth Fruit Company— B. S. Davison.

Kentville Fruit Company—Captain C. O. Allen.

Sheffield Fruit Company— J. E. Taylor.

Canard Fruit Company—Captain Haliburton.

Kingston Fruit Company—F. W. Foster.

Berwick Fruit Company— B. W. White.

Rockland Fruit Company—G. P. Raymond.

Pleasant Valley Fruit Company—T. H. Morse.

Cornwallis Fruit Company— A. S. Banks.

Maple Leaf Fruit Company, Canning—C. W. McKeen.

Tupperville Fruit Company— Howard E. Bent.

Enterprise Fruit Company, Clarence, —H. Messenger.

Clarence Fruit Company— C. C. Barteaux.

Paradise Fruit Company— F. W. Bishop.

South Farmington Fruit Company —J. M. Palmer.

Waterville Fruit Company—F. M. Chute.

Mayflower Fruit Company, Kingsport—R. S. Kinsman.

Grand Pre Fruit Company— A. H. Westcott.

Board of Management—John Donaldson, Port Williams; Fred Johnson, Bridgetown; A. E McMahon, Aylesford; B. W. White, Berwick.

THE WORK OF THE AGENT IN LONDON.

John N. Chute presented the report of his work in London. He gave in detail the work done. He had apples consigned direct to the London office, had secured the best commission men to handle the fruit, had arranged to have all United Fruit Company apples sold at one rostrum in Floral hall, had arranged for the carting at a lower rate than before, had overseen the discharging of practically every steamer and showed that the commission men had been kept up to the highest prices possible.

Mr. Chute explained the workings of the three organizations, the brokers, the importers and the buyers, all of which have been exacting tribute from the Nova Scatia fruit growerns. These three organizations have control in Liverpool and do not look with favor upon the co-operative movement which is already seriously interfering with their profits, and which will make a still further inroad on these profits the coming season. He summed up what was essential to be accomplished on this side in order to help out the marketing of apples in England:

1. Good clean apples. Our people must use greater effort to produce clean fruit. The man who neglects to spray must not expect to put the results of his bad management on the shoulders of other people. No system of marketing, either co-operative, or otherwise, can make up for a lack of common sense in growing fruit.

2. Better system of packing.

3. Fruit free from bruises.

4. We need to complete our organization by uniting all the fruit growers of Nova Scotia, and under no consideration should individual companies market their own fruit, because the best results can only be obtained by keeping our interests entirely united.

A. E. McMahon, inspector, told in his report of the difficulties of a season when there was so much bad fruit. He said he had had the hearty co-operation of the various managers in the effort to produce a specific United Fruit Companies pack that was superior to the government standard. The result was that now there was a growing demand for United Fruit Companies apples. His report was enthusiastically received.

At the afternoon session Captain C. O. Allen, who has charge of the shipments from Halifax, reported calling attention to the increased speed made by steamers by steamers from Halifax since the United Fruit Companies had been active in insisting on better service.

¶ See the Nova Scotia Agricultural College ad. in this issue. Young man now is the time to plan to take advantage of the opportunity offered by the college. We will have something to tell you about it in our next issue

Director of Elementary Agricultural Education for New Brunswick.

The New Brunswick Departments of Education and Agriculture have appointed Mr. R. P. Steeves, Inspector of Schools for Kings County, as Director of Elementary Agricultural Education. Mr. Steeves has always taken a deep interest in the question of agricultural education in the school. He is the author of a curriculum to use in this respect and is a firm believer in making any work carried on along these lines as practical as possible. Mr. Steeves went in harness in his new position on July 1st.

Beginning with school gardens the new director hopes to institute a series of farm competitions along the lines of the corn clubs of the south with the object of increasing the efficiency of different kinds of crops.

If a certain kind of corn produces several bushels more to the acre as a result of the competition it can easily be seen how much the province will benefit.

The new director met Dr. W. S. Carter, chief superintendent of education, and Rev. J. B. Daggett, secretary for agriculture recently and one of the chief matters considered was the training of teachers for agricultural work in the schools.

To provide for this, Mr. Steeves is sending a limited number of teachers to the Rural Science School at the Nova Scotia Agricultural College, which opens on July 8 and continues until August 10. The teachers who are chosen from the applicants will have their transportation expenses paid and will also get a grant of $15 towards their other expenses in case they take the full course, devote their whole time to the work, pass the examinations and take up the practical school gardening and agricultural work during the first term.

Boards of trustees which introduce school gardening as a portion of the school work will receive encouragement in the way of financial assistance to a certain extent under regulations to be framed and the intention is to have the work done practically with the school garden as a piece of apparatus used in the general educational work of the schools.

Competition in plots, first at school and then extending to the children's own farm homes will be instituted and prizes offered for the best results. These will be awarded according to counties and regulations will be framed with the object of extending as far as possible the line of study besides the importance from an economic standpoint of improving farm crops.

Assistance will be given for the maintenance and equipment of school gardens so that the teaching may be the most practical form. Teachers who have taken a full or partial course in school gardening or nature study work who wish to take up the work in the schools next term or trustees wishing to obtain such teachers would do well to apply to the directors at once.

The department is also very desirous that Arbor Day and its object of improving the condition of school grounds should become a more satisfactory element in country school life and competitions will be instituted with this end in view.

Encouragement is also to be given to the elementary domestic science in the schools of the province and it is hoped that many country schools will avail themselves of the opportunities in this respect.

The director is available either by letter or personally at Sussex, where his office is located at present, and will be glad to give teachers, trustees and others interested every assistance.

A Farm Scene Photo Competition.

The department of Agriculture is preparing a fine line of literature, to be published in pamphlet form, describing New Brunswick's opportunities. This literature is being mailed to almost every part of the world, in answer to the many enquiries which they are receiving for prospective settlers.

They are desirous of obtaining for these publications a number of photographs, and are offering the following generous prizes for the best twelve (12) photographs of farm or country scenes in New Brunswick:—

1st prize, ... $20.00
2nd prize, ... $10.00
3rd prize, ... $5.00

This is a splendid opportunity for those who are interested in photography to make a little easy money.

The Department should have a very generous response.

The Competition will close August 1st. For further particulars, write Mr. J. B. Daggett, Secretary for Agriculture, Fredericton, N. B.

SPECIAL PRIZE.

In the event of a competitor sending in less than one dozen scenes, which may be of exceptional value and acceptable to the Department, the sum of $1.00 will be paid for each such photograph.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

JULY 8, 1913.

DATES OF ISSUE.

July 8-22
August 5-26

WRONG FIGURING.

Not long since, in conversation with a prosperous farmer, he told us that the past year had not been a very prosperous one for him. After figuring up all his expenses he said he was only about $500 ahead, which left him with just a hired man's wages as manager of the property. He thought that was not enpugh and we agreed with him. But on inquiry we found that he had spent for machinery, fencing, tiling, and buildings about $2,000. All these items should have been charged to permanent improvements and added to the capital invested and not reckoned as running expenses.

He had just so much more invested in the farm, all of which the farm had earned as a surplus. He had it in property if not in clean cash, but it must have been in clean cash at some time during the year, else he could not have spent it that way.

We saw his face brighten up as we talked and then he said: "I wish that when I was young I had made a good study of keeping accounts. If I had, I would have seen that I was ahead of the game all that I had put into these permanent improvements." It looks simple enough when you see it, but we have known merchants as well as farmers do some wrong figuring.

We think the mistake comes from a lack of clear definition in the mind. If a farmer increases his property holding, by adding to the value of the farm, he has increased his wealth, either in the selling value of the farm or by increasing its ability to bring additional revenue. A farmer buys a valuable bull and secures from him a lot of heifers that can earn, say, 30 to 50 per cent more in milk than their mothers. In addition, they inherit from their sire valuable qualities which, when they are bred to another good sire, bring still better cows. All this dates back to the original investment in the first sire as a permanent improvement, an insrease in the working capital of the farm. And yet we have seen farmers who looked upon such an outlay as so much money spent for nothing.

Our friend, in his wish that he had studied bookkeeping, was right, for that study would have shown him how to define property and where to place it; how to correctly estimate it. To have the right thought about farm matters is the first step towards doing the right thing. We ought all of us to be more willing to lend money to the old farm for its improvement in money earning power. In doing so we add to our wealth just as certainly, and indeed more so than as if we deposited the same money in a bank or bought a mortgage with it. Money is well invested that increases the efficiency of the farm as a business proposition.

A farmer once saw us spreading phosphate on a clover field. "How long do you have to wait belore you get anything back from that stuff?" he asked. "Well, in two or three years," was our reply. "That's too long for me," was his answer. Then we asked him how long he had to wait for returns when he planted an apple tree, raised a colt or calf? "Oh, that's another thing" he remarked. Yes, it was another thing, another place to exercise the same old place which says: "Except ye sow, ye shall not reap."

THE BULL CALF.

On many dairy farms the bull calf is not the most welcome accessory. He is too often looked upon as a poor asset because of the difficulty a small dairy farmer has in finding a ready market for him. Where there are only one or two individuals of this kind to sell, the breeder does not realize the possibilities that are immediately at his door. He does not appreciate the fact that whether he has one or 100 there is someone waiting for his surplus stock, someone who is willing to buy at his price if he really has the goods for sale.

The question naturally arises how to find the buyer. One may take his stock to market and there he may sell to the highest bidder or he may make his own market by advising the reading public of what he wishes to dispose. This can be done most economically and conveniently through advertising. There is no better, no more logical or economical system of bringing the buyer and seller together than through the printed advertisement. It matters not how far apart the two may be, the dairy paper carries the message from one to the other at a figure that is remarkably conservative when the full measure of the service is borne in mind.

The advertisement makes a valuable asset of that which would otherwise be a drug on the market; it turns to dollars, stock and commodities that find poor sales elsewhere; it is a help to the extensive breeder or to the man who is just starting on his career and to whom small obstacles seem difficult and forbidding.

The advertisement is the life of all types of trade and it is just as adaptable; just as suitable to the farmer as to any other business man.

PASTURE INSRANCE AGAINST DROUTH.

May and June is the time to guard against shortage of feed in pastures later in the season. The chanres are there may be no call for this extra feed but it is always best and safest to be prepared so that in case the demand does come the cattle need not suffer for lack of grass or its equivalent.

Experience is a dear teacher and if one is to profit by the misfortunes of previous seasons he will have plenty of corn, oats, peas or other feeds suitable for use in tiding over the barren pastures. It is surprising to see how much can be grown on a small tract of land where soiling crops are raised. A succession of plantings makes it possible to keep an abundance of feed on hand for any emergency. Some dairymen who are limited in the amount of land available have undertaken, successfully, the system of raising all their feed and depending upon the soiling crops to the exclusion of pasture. A few acres used right will be sufficient for a small siled herd.

Naturally the most economical and most popular form of summer feed is found in silage. Many farmers are putting in small silos for use during the summer. They are giving silage to their cows regardless of the condition of feed in the pasture. A small silo is preferable to the large one in this connection because it is easier to keep the silage in good condition where the surface is not so large. The entire top of the pile of silage should be fed off each day and unless the building is a small one there will be difficulty in preventing loss or decay. This is the reason that so many farmers are building small silos at the side of the large ones. The popularity of the silo has grown rapidly during the past few years and perhaps no one thing has been more instrumental in bringing this about than its adaptability to dry weather conditions in the summer time.

Soiling crops are excellent but silage is easier to feed and more convenient and economical to handle.

THE BEGINNING OF HAY MAKING.

"Farmer James has begun mowin'!" "Has he, though? When did he begin?" "Oh, he's been goin' at it. Got the best part of his big meadow down, and a rare crop, so they say." This is a specimen of the remarks we will soon hear, and we have heard them, by the way, every year, as long as we can remember—sometimes a bit earlier, sometimes rather later, but always when the farmer in the district who is the first to start haymaking begins his mowing. The novelty of the situation does not last long, of course, for the man who leads the way is quickly followed by his neighbors, and soon the rattle of one mowing machine is re-echoed by that of another, until the whole country-side is ding-dong at haymaking when the sun shines. The beginning of haymaking is one thing, the finish is another, and some farmers who made a start about a year ago saw the shorter days of the autumn drawing in before the last load was on the stack. We hope there is not going to be a repitition of this in the haytime soon commencing, and at the beginning there is not infrequently a halting between cutting the herbage when it is young and succulent, and while settled weather prevails, or waiting on while the grass continues to grow. We know also the farmer who begins by rule and never commences mowing until a certain date, no matter what the condition of crop and climate may be. Some seasons he comes out all right, but in others he does not, and we favour no hard and fast rules where the beginning of haymaking is concerned. Rather we would let two circumstances settle it—i. e., the condition of the herbage, for too early cutting may mean a lot of shrinkage under a broiling sunshine, and the climatic conditions, for we like to begin haymaking on a rising barometer.

MACHINERY IN THE HAYFIELD.

Agriculturists are said to be a conservative set of men, and they may be in some respects, but show a farmer a device by which he can save labour and reduce his expenses, and you may feel sure that if he has the necessary means he will not be slow in acquiring it. On the labour farms many years ago there were men who prided themselves on their pitching, and were proud when evening came, if by loading one more wagon of hay than usual they had created a record. The idea of a machine to take the place of these brawny-armed fellows would have been laughed to scorn, but now it is an everyday sight to see a pitching machine being drawn quickly along the rows loading the wagons at a pace that would have knocked the sturdiest pitchers out of time altogether. It is surprising how quickly hay can be loadged by means of one of these appliancess if the ground be fairly level and even, but on hilly and banky fields they are a great strain on the horses, and it is under these circumstances that the human pitcher still rules triumphant. Doubtless it is the man who has a lot of hay to get in who benefits most by machinery, and by the use of mechanical appliances he is able to dispense with a good deal of hand labour Two or three hundred acres of hay takes a lot ol harvesting, particularly if it has all to be done by hand, but as things are, the commodity most eagerly desired is suitable weather. We may get all sorts of mechanical appliances for haymaking, but sunshine and breeze are still indispensable for the making of good hay, and unless we are favored in this respect machines are uselesss, and we are as helpless as in the days prior to their introduction.

Fifty farmers, representing all sections of the province, formed a Farmers' Co-Operative Society in Saskatoon last week. The society's purpose is the purchase of binder twine and other agricultural supplies at the lowest possible cost, and to eliminate as far as possible, the profits of the middleman. Hon. W. C. Sutherland was elected president. The society speedily got into action, and accepted a manufacturer's tender for a large supply of binder-twine, of which there was a shortage last season. Tenders have also been called for coal, flour, barbed wire and other farm necessities. A word to the wise is sufficient.

Cleanliness and low temperatures are the two greatest essentials in the production of fine flavored and good keeping butter.

The man who feeds what he has raised on his own place, carefully husbands the manure and puts it back on to the land is the man who will buy his neighbor's farm in the future, while the man who hauls all he raises to the town is the man who, sonner or later, will sell his farm.

The use of Fertilizers.

In view of the fact that our population is increasing rapidly and out of all proportion to our farm production, it is very gratifying to note the interest and attention which the farmers are devoting to the problems of crop production. With our high land values and wages it must be apparent that intensive farming is essential. For example, there can be no doubt that fifteen tons of potatoes from one acre is more profitable than twenty tons from two acres. There is only half the land in use, plowing and harrowing can be done in half the time, half the seed is saved, and a large yield requires comparatively little more labor to harvest them than a small yield. To produce maxium crops the vital points for consideration are good drainage and thorough cultivation and liberal application of available plant foods. Lord Palmerston once said that the wealth of any nation might safely be estimated by the number of ships which are engaged in the fertilizer trade, but it must be remembered that the best returns from money invested in fertilizers can only be obtained by thorough cultivation, for while a high degree of intelligence is essential to the greatest success in farming, yet brain can never entirely take the place of brawn.

It is a significant fact that in general the farms of North America, although comparatively new, are decreasing in productiveness, while in Europe during the past century, the farms have not only maintained their yield, but their fruitfulness has been increased, it is estimated, by 100 per cent. In speaking of this increase the Minister of Agriculture for France writes: "As nearly as I can determine the relative importance of the different factors which caused this increase are as follows:

In intensive agriculture:
Increased use of manures and fertilizers, ... 50 per cent.
Better preparation of land 30 per cent
Seed selection ....20 per cent.

In extensive agriculture:
Effect of chemical fertilizers .... 70 per cent.
Better preparation of land 20 per cent
Seed selection .... 10 per cent.

No great measure of reform has ever been accomplished without having to overcome opposition, caused by unreasoning prejudice, and the use of chemical fertilizers has been no exception. It is still quite common to hear surh remarks as "Chemical Fertilicers are only stimulants and art like a whip to a tired horse," or "Chemical Fertilizers destroy the humus in the soi,," or "If you begin the use of these things you must continue it," etc., etc. Nitrogen, Potash and Phosphoric Acid, in ater soluble forms are always plant foods, and if applied intelligently can never fail to give a substantial benefit. One man in British Columbia applied Nitrate of Soda for potatoes on a swamp soil which already contained an abundance of Nitrogen and because no beneficial results were obtained, he says that after trying Chemical Fertilizers he is in a position to show that they are of no value. Many other farmers are using Muriate or Sulphur of Potash and Superphosphate or Basic Slag on their swamp and peat soils, with results that are truly marvellous. An analogy would be represented if the farmer were to try for himself a diet of water only, and then, when he failed to increase in weight, to declare that water is useless to the human system. As for humus, this will be greatly increased by the use of Chemical fertilizers where rotation is practised, as the abundant and vigorous crops produced will leave in the soil valuable residues which form the principal source of the humus of cultivated soils. The experienre of Sir John Lawes at the famous Rothamstead Experimental Farm in England, where Chemical Fertilizers alone have been used on certain plots for nearly fifty years prove conclusively that there is no danger of exhausting the humic matter of the soil. Prof. K. van Vriers of Gronigen, Holland, has also made careful tests for many years with the same result. In fact, the soils of Holland are very rich in humus, although three times as much Chemical Fertilizer is used per acre as in England, and many times as much as in America.

Another advantage in the use of these plant foods is the vast improvement in quality in vegetable and fruits, and the greatly enhanced feeding value in hay, grain a nd roots. Every farmer has seen hay which has very little feeding value. As illustrations, one or two cases may be cited. Mr. Brice, of North Saanich, found that his cows gave more milk of higher test when fed on hay grown with fertilizer. Mr. Rey, of Keatings, found that his mangels from the fertilized plot would keep in good condition till spring, while the others spoiled before the end of December. Mr. Northcate of Mission found that, not only was his yield of strawberries greatly increased, but he lost not a single crate from the fertilized plot, while a heavy percentage of his other berries was lost by spoiling in the Hundreds of similar instances might crates during the time of shipment. be given.

Many of the troubles with fruit trees may be overcome by feeding the trees. For example, "Baldwin Spot," which many people think is a fungus, is really a physiological trouble, and may be corsected by soil treatment. Several growers in B. C. have tried this and found that not a single tree so treated showed a trace of "Baldwin Spot" while the other trees were badly affected. Prof. Voorhees says: "In hundreds of orchards the lack of vigor in trees, and the poor, misshapen and tasteless fruit are almost entirely due to lack of available plant food. Trees must be well grown, for good fruit cannot be grown from poor trees, and when the trees are well grown they cannot produce large and continuous crops of fruit without an abundance of food, even on the best soil."

"But," you ask, "How am I to know what elements of plant food are deficient in my soil?" The answer is not difficult. Almost all the soil in British Columbia is deficient in potash and in the majority of cases there is a shortage of Phosphoric Acid also. As for Nitrogen, if there is a strong leaf and foliage growth, if clover sod has been ploughed under, if heavy applications of stable manure have been made, or if the land is rich in decayed vegetable matter, it is probable that sufficient available Nitrogen is present. Light sandy loam, red loam and clay soils will usually respond to applied Nitrogen. In case of doubt simple experiments will settle the question, and are far more satisfactory than a soil analysis which is very often misleading.

As for the best materials, the farmer can make no mistake if he buys from a reputable firm, Nitrate of Soda, Muriate of Potash, Sulphate of Potash, Superphosphate of Lime, and Thomas Phosphate Powder (Basic Slag) as these commodities are uniform and true to analysis, and in fact are just as staple in the markets of the world as flour or sugar. It will be well to buy mixed fertilizers, provided these can be obtained from a firm who use no "make-weight" or "filler." It is very difficult to give even an outline of this subject within the space of a magazine article, bue it is hoped that the foregoing will serve as a basis of investigation and experimental work by the growers, and if this is accomplished the writer will feel that his poor effort has been amply rewarded.—Fruit Magazine.

The Threshing of Clover. How to Choose a Clover Huller.

In the earlier years of clover seed growing one of the principal difficulties was the threshing. There was no method known that would hull all the seed without leaving a large proportion of it in the heads and in the chaff. This has been the difficulty for years, and is still where the modern clover huller has not made its appearance.

The traveller will be quite astonished to find only a few clover hullers widely scattered over the Province of Quebec, where the climatic and agricultural conditions are so favorable to the production of clover seed that we could compete in this branch of agricultural production with any other part of the Dominion and even with the United States.

The farmer knows that a clover crop has no equal for maintaining and increasing the fertility of his land. He knows that in order to obtain a large crop he must sow a liberal quantity of seed, 8, 10, 12 lb. to the acre. He knows that the ensuing crop will almost every year yield a large quantity of seed of better quality than the one he generally buys from the trader. He knows that this home-grown clover seed doesn't cost him anything or very little. He knows all these things, but he usually neglects to save his clover seed crop; in most cases because HE DOESN'T KNOW HOW TO THRESH IT.

ORIGIN OF THE AMERICAN CLOVER HULLER.

Up to the years 1840 to 1850 the only means of threshing clover was flailing, which was long drudgery and a very incomplete method of securing but a small proportion of the seed. The heads then had to be separated from the straw by a second operation. Then by means of a third one the seed would be hulled by different methods of rubbing, each one slower than the other. Then the seed had finally to be cleaned with the fanning mill. No wonder that the price of clover seed was very high at that time, reaching about $28.00 a bushel. That is about double the price it is worth nowadays.

This deplorable state of afairs induced an intelligent and industrious farmer of New York State to study this question casefully, with the result that in the year 1855 he constructed and patented the first clover huller. This machine, while a decided improvement upon the methods then in use, was far from perfection and years of patient and intelligent work has been necessary to transform it into a modern clover huller.

It is quite logical that a farmer should first try to thresh his clover with a common grain thresher. But he will soon realize that the work is incompletely done and that the loss of seed does not warrant the use of such a machine, because of the small amount of hulled seed obtained; though special devices are adopted to increase the number of teeth on the cylinder and concave, or the blocking of the outlet of the drum, to force the clover to remain a longer time in the machine.

WHAT WILL A GOOD CLOVER HULLER PERFORM?

A good, modern clover should at the same time:—thresh the clover, separate the heads from the straw, hull the seed, clean the seed and sack it, ready for market.

HOW TO CHOOSE A CLOVER HULLER.

Therefore, the different parts of a clover huller must consist of:

First: A good, well built THRESHER, with cylinder and concave adjustable, and so constructed that the number of teeth can easily be changed, also bars put in instead of teeth, to suit the varying conditions of the clover, the bars to be used when the clover is exceedingly dry and brittle.

Second: A PICKER and SEPARATING TABLE OR TABLES, to separate the clover heads, loaded with seed, from the straw.

Third: A HULLER, which is the most important part of the machine. This huller should be of a "RASP" type, which experience has shown to be much superior to any other types, especially the teeth or the nail types.

The hulling cylinder and concave should be so finely adjustable as to hull the seed perfectly, without splitting any, and to permit the threshing of the different sizes of seed, such as red clover, with the same efficiency.

Fourth: A complete SYSTEM OF CLEANING AND RECLEANING THE SEED fitted with sieves of an appropriate motion and the meshes of which should be of appropriate shape and size.

Fifth: A complete system of smooth running ELEVATORS and CONVEYORS, to distribute the different parts of the clover, straw, heads, seed, chaff, tailings, etc., to the parts of the machine where they have to be worked upon, without loss or mixing.

ATTACHMENTS: While an AUTOMATIC or SELF-FEEDER is not an absolute necessity, all threshermen will agree that it is a great advantage to have it put on the huller, which it saves and preserves, prevent- THE THRESHING OF CLOVER etc. ing clogging of the cylinder and allowing the machine to run smoothly and regularly. Better work is also obtained from the machine. Anyone who knows the compact, bunchy nature of clover hay will understand that the construction of the self-feeder of a clover huller should materially differ from that of the self-feeder of a grain thresher. A fork system, tearing the bunches to pieces, will be more efficient than any other.

The AUTOMATIC CHAFF-BLOWER or WINDSTACKER also will be considered by threshermen a great time-saver and convenience. Here, again, it should materially differ in its construction, and especially in its position relative to the sieves of the recleaning apparatus, from the windstacker of the grain threshers. The clover seed being so small and light, the fan of the blower should be shielded in such a way as to prevent the seed being carried off the sieves with the chaff.

As far as general construction is concerned, in a clover huller solidity and rigidity of the frame should be combined with accurate finish, smooth running, easy and fine adjustment of the different parts, especially of the hulling cylinder and concave, and the cleaning apparatus.

TESTING DIFFERENT MAKES OF CLOVER HULLERS.

When the farmer who wants to buy a clover huller is not well acquainted with the different makes, or when the reputation of a good machine is not enough to guide him in his choice, he might resort to comparative testing of different machines.

In such cases he will remember that any grain threshing machine, even the poorest one, will thresh some seed out of clover hay, if there is any in it. But the merit and efficiency of a clover huller are to be judged; NOT FROM THE SEED OBTAINED BUT FROM THE CHAFF, which should be a negligible quantity, if any at all.

When testing different makes of clover hullers, care should be taken to

(Continued on page 720)

HORTICULTURE.

Apple Season.

By Berton Braley.

Getting near to apple-time,
Season best of all the year!
So I think at least, for I'm
One who holds that fruit most dear;
Weather's snappy, keen and clear,
Full of vim and glow and zest,
Makes you want to shout and cheer
Makes you feel a mortal blest,
That's the weather—apple-time.
And the apples—juicy, prime,
With their cheeks the rosiest, —
They'd stir anyone to rhyme!

Where's your other fruit can claim
Any such deserving fame?
Such a smack and such a tange,
Such a gastronomic thrill?
Let the other fruits go hang,
Only so I have my fill
Of the Pippin and the Snow
And the Baldwin and the Sweet
And the hundred sorts we know
Are the finest kind to eat;
Then, when autumn grows more chill,
Lead me to the cider-mill,
Where the juice that sparkles through
Has a zest and flavor, too,
High Olympus never knew.

Then it does me good to think
How this royal food and drink
Brings return none can compute
To the grower of the fruit;
Brings unto the farmer's hand
Streams of gold from every land;
Wherefore let the joy-bells chime,
As I give my thanks that I'm
Getting close to apple-time!

Fruit Growing in P. E. Island.

You have requested me to write you something concerning the fruit industry of P. E. Island. For some two years I have been a resident of P. E. Island and have made a somewhat careful observation of the fruit situation and am confident that there is a great future to this industry on P. E. Island. The unusual conditions for mixed farming which this Island affords has resulted in retarding the development of the fruit industry and not until the farmers of P. E. Island awake to their opportunities as intensive, rather than as extensive farmers, will there be much attention paid to fruit raising? At present, the average P. E. Island farm of about 120 acres is worked by about two men and wonders are derived from the soil considering the amount of cultivation bestowed upon it. When the P. E. Island farm of the future is reduced to from 20 to 40 acres and intensive methods of a farming pursued this million acre farm will become the wonder of the world for productiveness.

The past season witnessed a great crop of cherries throughout P. E. Island. The leading variety is what I knew in my boyhood days in the Annapolis Valley as the Old French Red cherry. The market being so limited, and the crop so enormous, a great many of these cherries perished on the trees. A canning factory, say at Summerside, would have utilized these cherries and made them a source of considerable income.

The strawberry crop promised to be good and was developing finely until, in the height of the season, the long continued rains came, and destroyed thousands of dollars worth of these luscious berries.

Little yet has been done in the cultivation of the raspberry and the blackberry, or other of the small fruits which may be grown in great abundance here.

There was an enormous crop of plums in sections of P. E. Island during the past season. Many varieties of plums are successfully cultivated here. I saw some trees loaded with plums as I never saw them elsewhere. Worthy of special note were a number of trees in the garden of Mrs. Alex. Laird, of North Bedeque, and a number more in the orchard of Albert Schurman, Esq., of Central Bedeque. The farm of Mr. Schurman had been chosen as a demonstration farm by the Federal Government, and if the conditions of plum culture can be maintained on this farm as shown during last season, it will give a great impetus to the culture of plums throughout the island province. The plums ripened well and were of excellent flavor.

Coming to the matter of apples I have to report a very chaotic condition of the industry. It is very evident that P. E. Island has been a favorite ground for the exploiting of the fag ends of nursery stock. Almost every farm has a small orchard of the most chaotic varieties. Very few of the trees imported have proved true to name. The great majority of the apples grown on P. E. Island are of the earlier varieties with poor keeping qualities and hence largely unmarketable. It remains to be demonstrated what are the varieties suitable for P. E. Island. Conditions of soil, atmosphere, and of prevailing wind in their relation to the growth of apples have yet to be studied here. Among the early varieties which I have noticed successfully grown here are the crimson Beauty, and judging from specimens of this apple that I have seen here, this apple is properly named, and the Yellow Transparent.

I have found a few trees of Gravensteins. These apples are, as grown here undersized. They were well colored and superior in keeping qualities to the Gravenstein of the Annapolis Valley. Probably more fertilizer and more cultivation would help out the size of this apple.

I have had Ribston Pippins grown by Mr. Albert Schurman of Central Bedeque, which for size, flavor, and keeping quality, surpass any of the same variety that I ever saw in Nova Scotia. The complaint against these apples is that so few of them mature.

I have Kings in my cellar at the present moment that will compare favorably with the run of Kings as I have known them in the Annapolis Valley. I am convinced that better cultivation will do wonders for this noble apple in P. E. Island.

I have also seen excellent Spys. Indeed, judging from the specimens of this variety that I have seen both on the tree and otherwise, I should say that it is a variety admirably adapted to the peculiar conditions of this province. I think the largest and finest looking specimens of this variety that I ever saw, I saw on a tree about three miles from Summerside.

I have been unable to determine, satisfactorily to myself, as to whether or not any of the Russet varieties are grown successfully in this province. The few specimens of them that I have seen have varied greatly as to the stage of maturity reached by them before they were taken from the tree. I am inclined to think that only under exceptional conditions will they mature to their best in the province.

When the varieties suited to cultivation in P. E. Island are determined and when proper methods of apple culture are introduced, I am of opinion that great things will be done in fruit culture in The Garden of the Gulf. Meantime this province imports many apples which might well be grown here—R. Osgood Morse, in The Maritime Apple.

Combining Poultry Raising and Fruit Growing.

Like a fairy tale reads the inscription "Make a small fortune in a few months raising fruit and poultry," but the exact nature of the case seldom comes to mind until an actual experiment has been tried. Many have the impression that all you have to do is to let your stock run at random through the orchards and that they will protect your fruit and in turn gain a livelihood without the proprietor's attention.

No doubt fruit and poultry do go well together, but existing circumstances have some control over the actual practice. There are few things that so appeal to any lover of nature as the sight of a fine old orchard sheltering and providing forage for numerous fowls, but special attention in selecting a fruit farm with the view of combining the raising of poultry thereto, is necessary if one is to realize the dreams of future success, and one of the first items of interest will be the nature of the orchard. An orchard of either young or old trees, it matters not materially which, will do alright so long as there are no other smaller fruits attached to the tract. Apples, pears, plums, peaches, quinces, etc., may be combined with poultry raising and success be naturally looked for; but when berries, currants and such small fruits are also numbered with the fruit inventory, there is going to be trouble sometime, and poultry raising and fruit-growing certainly will not harmonize for the benefit of the proprietor, although, of course, the chickens don't mind the situation in the least.

Nearly all so-called fruit farms are run on the mixed scale; a little of this and that and perhaps a specialty of some other kind of fruit, with the result that very seldom will one find a desirable location for poultry an agreeable spot in other ways.

For a man to say, as numbers continually do, "I intend to go into fruit and poultry," most usually signifies that he has very little idea of the actual necessities of either. It would be simply a waste of time and trouble for a man to plant an orchard and erect poultry houses with the idea that he is going to enjoy the situation in a year or so. Where the gradeur of poultry raising comes in is not out in the open at the mercy of the elements nor in the midst of a young orchard, but rather in the shelter of some grand old plantation that some one else has seen grow for years. There is where the true poultryman is content and finds enthusiasm running high.

THE BREED FOR THE FRUIT FARM.

Many will never question this phase of the subject at all; but, when you find Leghorns, Minorcas, Games, etc., climbing to the top of your peach trees after something nice and juicy as a change of diet, although perhaps they may have any quantity of fruit on the ground at their disposal, you will realize what it really means to consider the qualities of your fowl besides merely those in connection with eggs and meat.

Wyandottes, Rocks, Reds, Orpingtons, Houdans, Dorkings; these are the breeds for the fruit men to handle. A farm that is mostly in small fruits is no place for chickens and the runs of the Mediterraneans is no place for fruit of any sort; but take a flock of decently behaved fowls out under the spreading boughs of a good old apple tree, and what more could be desired.

SYSTEM A MOST NECESSARY ATTRIBUTE.

Without system the poultryman and fruit grower alike will not meet with the best results, and we may easily illustrate this in mentioning the methods necessary to keep pasture always before fowls. Many large poultry plants have adopted the habit of excluding a portion of the runs from the birds while some forage crop has time and chance to develop. Then turn the flocks in the orchard with this crop and the poultry have something besides a contaminated orchard ground to live on.

UTILIZING SHRUBBERY AND BRUSHES NOT BEARING FRUIT.

As much value may be derived from an orchard or vineyard of any kind for the young and growing chicks as for the regular pens. Place the hovers and colony coops out among the berry and currant bushes that are not bearing or are not in such a condition that the fruit may be attacked, and you have provided practically the

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Remington Arms-Union Metallic Cartridge Co., Windsor, Ontario

best place imaginable for developing chicks. Worms and insects will attack the bushes, and no better playground for young chicks or mature fowls could be desired than such a place that gives green food and meat, shade and scratching ground all through the season. A grapery is also a splendid place for little chicks, but it is too much of a paradise for older fowls.

In conclusion we wish to state to the contemplating fruit-poultry man that, to realize one's fine dreams of a homelike poultry and fruit farm, it is necessary to start with an orchard of fair sized trees having no smaller fruits growing between the rows. If you can't do that, you will wait ten years before having what you really desire and, as we all know, many things may happen in that length of time.—By R. Ballantyne, Grimsby, Ont.

Instructions for Canning.

The most important things in the preservation of foods are the sterilization of the foods and all the utensils and the sealing of the food to exclude all the bacteria. Everywhere on the earth and floating in the air are germs. These bacteria are the cause of the spoiling of our fruits and vegetables. When we can anything we simply kill the bacteria in it and let no more get in. Heat is applied to kill all the bacteria present and the sealing prevents more from coming in. To sterilize the utensils, put the spoons, jars, covers and such other articles as are to be used over the fire in cold water, heat gradually to the boiling point, and then boil 10 or 15 minutes.

When your garden is planted you should begin to think about the method of canning. If you expect to can for the market, or even for home use, you should engage the cans now and not wait until your crop is ready. In using glass jars it is recommended that you use jars of uniform size. Any device for heating and sealing will constitute a canning outfit. Two large pans and a kitchen stove, together with a tipper and capper, make a good small outfit. A larger outfit may consist of a wash boiler or zinc tub placed over a furnace used for heating. This boiler should have some wooden slats in the bottom. An open earthen vessel and charcoal make a good heater for the canning steel and tipper. Hot water canners are cheaper than steam pressure canners. The steam pressure canner will sterilize more quickly and easily, as a higher degree of heat can be obtained.

Fruit for canning should be fresh, ripe and of good quality. Blanching or dipping means immersing the vegetables or fruit to be canned in boiling water. This is done for the purpose of eliminating certain acids and bitter substances which, if they are allowed to remain in the vegetables, will spoil the flavor. Blanching should never be omitted when specified in the formula. To remove the skins from tomatoes, place in a wire basket or flour sack and suspend in boiling water until the skins loosen. Take from the water and remove skins. Peaches may be peeled by using concentrated lye. In using this method peaches must be firm. To every four and one-half gallons of water add one-half pound of lye and one-half tablespoonful of alum. Heat water until it begins to boil. Put the peaches in a wire basket or sack and let them down into the water, raising and lowering the basket rapidly until the peeling will slip. Wash skins off in clear, cool water. Do not cook in open pans, but put raw fruit in cans or jars. Add syrup if necessary and coak as follows:

To exhaust means to heat the cans after they have been filled, but before they have been canned. This is done to allow for expansion or shrinkage.

To process means to cook and sterilize in the cans after they have been filled, capped and tipped. The time required for processing varies with the kind of fruits and vegetables used. Some bacteria are easily killed and others are not. Those on most fruits and tomatoes are easily destroyed, while those on vegetables containing starch, such as beans, peas and corn are hard to kill. For berries, peaches and tomatoes, process from 15 to 25 minutes in boiling water; for peas and corn, process for three hours each day for three consecutive days. Under 10 pounds of steam pressure about half the time is required for processing. If glass jars are used, screw the lids on airtight as soon as jars are taken from the canner. Great care should be taken in storing canned goods. Putting the same kind of goods to themselves and labelling is a matter that should not be overlooked.

Tent Caterpillars.

Tent-caterpillars are very numerous this season, as the bracket-like egg-masses laid by the female moths last July on the twigs of orchard and shade trees were much in evidence in the districts which suffered from their attacks last year. It was hoped that many of these eggs would be killed by minute parasitic flies, but examination shows that but few parasites are present.

As each bracelet contains between 200 and 300 eggs there will issue in May a colony of from 200 to 300 caterpillars from every bracelet of eggs. Each colony constructs a silken-webbed tent at a crotch formed by two branches, and continues feeding on the leaves for 3 or 4 weeks. Then each caterpillar makes a yellowish white oval cocoon within which it changes to a pupa. Two or three weeks later the moths emerge to lay their eggs. These eggs remain on the twigs all winter for there is but one brood in a season.

There are two kinds of tent-caterpillars—the "Orchard tent-caterpillars" which form the tents described above, and the "forest tent-caterpillars" which do not form a tent, but collect on the trunks of trees in large clusters. These may also be distinguished from the former by the broken white line along the middle of the back.

HOW THEY MAY BE CONTROLLED

1. In early May before the eggs hatch the bracelet-like egg-masses may be readily taken off the twigs and destroyed. In the case of orchard trees this task is not a heavy one With a ladder and a pair of sharp eyes hundreds of the egg-masses can be removed. In my opinion this is the cheapest and most effective method of control for orchards.

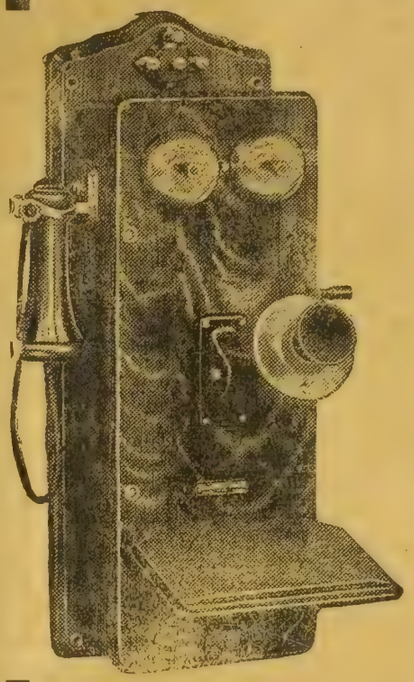
2. As soon as the tents appear on the twigs they may be removed by means of poles with swabs attached to their ends, and the caterpillars killed either by burning them in place or bringing them to the ground.

3. If caterpillars become very numerous it may be necessary to spray the trees with a strong arsenical poison such as Paris Green, or preferably Arsenate of Lead. (2-3 lbs. to 40 gallons of water). The smaller the caterpillars the more susceptible they are to the poison. Full grown caterpillars are very difficult to kill in this way.

When the forest caterpillars collect in masses on the trunks they may be brought down by means of a hoe, collected in a bucket and destroyed.

4. Trees free from caterpillars may be kept free from migrating caterpillars by applying bands of tangle-foot to the trunks.

Independent Systems Constantly Growing



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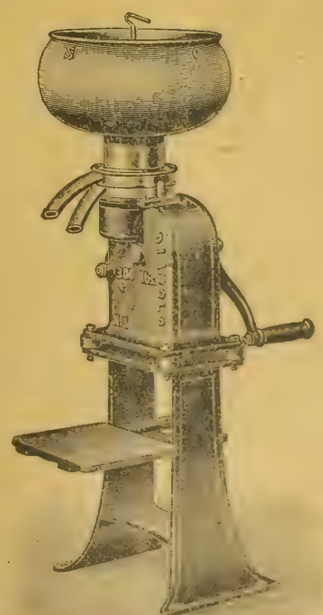

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DAIRYING.

Pointers in Purchasing Dairy Cattle.

Under the above heading Prof. W. B. Richards of the North Dakota Agricultural College, gives advice to the farmers of his state, which is generally applicable to farmers of other sections.

If one desires to buy pure bred dairy cattle, or good grade cows, and is not familiar with the characteristics or points of the breed of what constitutes a good milking type, it would be advisable and profitable for him to secure the services of some one who knows to help select the stock. If this is possible, try and buy only from breeders of good repute. There are all degrees of merit among the individuals of the different breeds. Make careful inquiries as to the reputation of the breeders from whom you buy pure bred cattle. Buy from a breeder rather than a dealer. There are a large number of dealers in the business of vending pure breds, who can not be relied upon as generally as the breeders.

DISEASES TO AVOID.

Tuberculosis is quite prevalent in all dairy cattle sections, and great care should be exercised not to buy cattle infected with the disease. A good method to follow to make sure that the cattle are clear is to have them removed immediately to some central point where you can test them yourself, or have a competent veterinarian of your own selection do it for you. Purchase them on the condition of acceptance if they pass the tuberculin test. Removing them from the premises of the seller at once will help obviate the seller from injecting tuberculin into them, which interferes with the reliability of the regular test. Do not accept a certificate covering the test for any animal even though it is made within thirty days unless it is accompanied with a guarantee, or unless you know the veterinarian who issued the certificate to be absolutely reliable.

Contagious abortion is also very prevalent in most of the dairy districts of this country; consequently cows that are infected or have been exposed to the diseases should be avoided. There is no practical test for this trouble, so one is largely at the mercy of the seller as to whether he gets cattle clean or not. One way to avoid it is to find out how many heifers the seller has in his herd; demand to see them. If there are but few on hand in proportion to the number of cows in the herd, it is wise not been able to raise any because of contagious abortion. Few good breeders of dairy cattle sell their heifers before they test them out for production.

My advice to the farmers of North Dakota, under present conditions, is not to buy any more cows than necessary to make a legitimate start, but make the best use of the cows that are on hand. Keep every cow that is capable of raising a calf. Rather inferior cows bred to a good, pure dairy sire will produce some heifers that will make as good a grade of cows as can be bought at the present time in the dairy districts unless an exorbitant price is paid for them.

Starting a Creamery.

In a recent bulletin published by the dairy department of the University of Nebraska, the question of how to raise money to start a creamery is discussed as follows:

"The most satisfactory way of raising the money is for each member to sign an agreement and to be jointly responsible for the amount borrowed. When such an agreement is signed by a goodly number of responsible farmers, the money can generally be secured at a reasonable rate of interest, and with this money a creamery can be erected and equipped. As soon as the creamery begins operation, arrangements can be made for the deduction of one or two cents per pound of butter to go into a "sinking fund" out of which the debt is paid. The payment is so gradual that the farmer hardly notices it. This plan has the advantage of requiring each patron to pay exactly in proportion to the amount of butter manufactured for him."

Judging Butter.

Nearly every one thinks he can judge a sample of butter and it is true that all are able to compare butter from an individual standpoint. However, to judge butter for the commercial taste requires considerable experience. The standard used exclusively in this country for scoring butter is as follows:

Flavor	45 percent.
Body	25 percent.
Color	15 percent.
Salt	10 percent.
Style	5 percent.

Flavor is valued at nearly half the total. A judge must have a keen and sensitive taste and must also know the flavor that is demanded in the market. Some of the common faults in flavor are designated as "flat," "fishy," "rancid," "weedy," "old cream," "acid" and "stable." Flavor is due to the previous methods of handling the cream.

Body refers to the texture or grain of the butter. It should be firm and waxy. Criticisms of body are "greasy," "tallowy," "cloudy," "brisky," "salvy." Texture is determined by the methods of manufacture. That is, by the churning, washing, working and salting.

The color should be bright and even. The most common fault in the color of butter is "mottled" or wavy butter. Most consumers can detect small differences of the salt content of butter. This is liable to be confused with flavor.

The amount of salt should be suited to the market and is not critised in the judging as much as its condition in the butter. It should be thoroughly dissolved and entirely distributed.

Style refers to the clean and neatly finished appearance of the butter and its package.

New Zealand Dairying.

New Zealand butter is weekly shipped to Great Britain in enormous quantities, on which market it has for years past brought top prices, being beaten only by the Danish. It is graded by government dairy experts and is packed in boxes containing 56½ lbs., the extra half pound being allowed for evaporation; but as each box is lined with deodorized waxed paper evaporation must be infinitesimal. In no country in the world, excepting Denmark, is the dairy industry carried on so scientifically as in New Zealand. Milking machines are in general use and buildings are maintained in perfect order and cleanliness, as are the animals themselves, all being regularly inspected by the dairy officials, who, instead of being a bugbear to the farmer, are welcomed by him, the intelligent dairyman fully recognizing the value of the great assistance tendered in his interests by the government. Shorthorns are one of the favorite breeds, being well-known for their good milking qualities and for their cheque-raising power as beef.

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Handling the Soiling Crops.

The most economic way of feeding soiling crops is to cut and feed immediately. Soiling crops that are cut left lying on the ground dry out, and lose their succulence and palatability. It does not entail a great deal of time to hitch unto the mower once every day and cut what will be required in the next 24 hours. In the case of cutting rape or pease and oats for hogs, the scythe may be used advantageously just before feeding at each end of the day. This same means of cutting may be used in feeding horses.

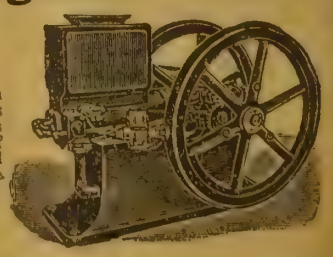
Soiling crops should be raked up with either a revolving rake or else a wide tongued fork. A light, curved toothed rake passes over the top of most of the heavy swath and calls forth emphatic language from the operator.

In hauling these crops from field to place of feeding, a low wagon with a wide long rack on it should be used. The weight of soiling crops is so great that it is unwise to lift them into a rack that is more than two feet six inches high. In having a rack of a large area, the load does not have to be built up high before the horses will have a full load to draw.

Feeding soiling crops in the stable gives each animal a fair chance and provides them with more comfortable quarters for feeding in when the flies are bad. On the other hand, when the stuff is fed outside there is less trouble feeding, and less stable cleaning. When it is fed in the field a clean place should be selected each day. Always strive to feed what the stock will eat up clean.

Keeping salt where the dairy cows can reach it at all times, maintains their good health and encourages a heavy milk-yield by promoting thorough digestion and assimilation and having a cooling effect on the whole system of the animals, at the same time making it easier to bring butter of a superior colour and flavor at churning time. ...

"Monarch" Engines Save Running Cost



"MONARCH" Engines give more power than their rating, yet use no more fuel. This is due to good material and design. The fuel tank is one solid piece, preventing leakage. Every drop of "Monarch" fuel gives a return in power, and full power at that. It pays to get a "Monarch". The "Monarch" pays for itself by saving fuel.

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THE BUTTER-BUYER said—"Your two lots of butter taste all right—but will they keep? What kind of salt did you use?"

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Should be a Premium Upon Tested Dairy Cattle.

The present demand for dairy cattle is not without its attendant dangers. As is well known, dairy cattle are often infected with tuberculosis, and the farmer who, in gathering up the nucleus of a dairy herd, introduces into it an animal affected even in a latent way with this disease in storing up plenty of trouble for himself later on.

Because of the danger, some of the agricultural experts of the Northwest have been advising—very wisely we think——that buyers of dairy cows should purchase them subject to tuberculin testing.

There is a good trade open today to the dairy breeder who, knowing that he has no tuberculosis in his own herd, guarantees in his advertising and other announcements that he will guarantee all animals sold to pass the tuberculin test.

Ripening Cheese With Electricity.

Recently an electrician in Holland has found a way of ripening a cheese in 24 hours by passing an alternating electric current through it for the period mentioned. The New York Journal of Commerce describes the invention thus:

"Another use has been found for electricity, that of aging cheese: An industrious electrician of Rotterdam, Holland, through a long series of experiments, found that he could take an absolutely fresh cheese and in one day actually "age" it two years. In other words, by means of electricity he would make this fresh cheese have all the consistency, taste, and appearance of a fine cheese that had been stored away and carefully aged for two years. He takes a fresh cheese and subjects it to an alternating current. At the end of 24 hours of constant alternating electrical currents through this cheese it possesses all the properties of a fine two-year-old cheese.

Milking.

The art or science of milking, which ever it may be called, can be successfully attained only by those who are willing to study each individual cow which they have to milk; her disposition, temperament, and peculiar characteristics must all be considered. The most important things to keep in mind are: first, maintain an absolute quietness around the cows; second, milk with clean, dry hands; third, milk quickly; fourth, milk completely; fifth, milk at regular hours each day; sixth, use five fingers, not the thumb and index finger; seventh, milk with gentleness; eighth, milk three times a day when testing the cow as a producer; ninth, do not interrupt the milker unless absolutely necessary, and tenth, have the same man milk the same cow each time.

There are right and also there are wrong ways of cleaning dairy utensils. There is in milk a substance, albumen, which resembles the white of an egg, and hot water will cook this on the tin. Hence a utensil that has been holding milk or whey should first be rinsed with cold or lukewarm, not hot, water; then washed with hot water containing some good washing powder, and then scalded with boiling water or steam, after which it should be placed in a pure atmosphere, in the sunlight, and in a position to drain. Sunlight is the great natural disinfectant. Use a good fibre brush, and not a cloth, in washing dairy utensils, and never wipe them out after scalding but allow their heat to dry them.

THE SUSSEX MOTOR CO'S

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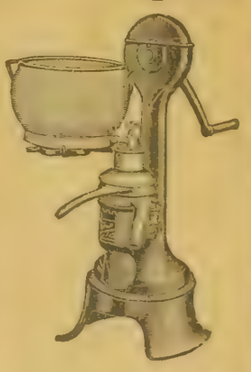

are the best and we do not believe that there is a sensible man living who would purchase any other than our cream separators and engines, if he would but see and try our machines. It is a fact that 99% of all separator and engine buyers who do SEE and TRY our machines before buying, purchase our goods and will have no other. The 1% who do buy are those who allow themselves to be influenced by something other than real genuine merit.

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LIVE STOCK.

Quack Theories in Animal Breeding.

There are two principal benefits to be derived from a careful study of a good modern book on animal breeding, such as Prof. F. R. Marshall's "Breeding Farm Animals." It gives the reader greater confidence in the power of selection to modify and fix the types of animals, and it destroys belief in what may be termed the quack theories of animal breeding. By quack theories are meant: (1) mother-marking, or the power of the dam's mental impressions to affect the developing embryo; (2) the power of previous matings of either the sire or dam to affect the embryo; (3) theories of sex control; (4) the inheritance of acquired characters. Such notions have been given much credence in the past, and even today are believed by a large number of people.

There is positively no path by which the mental impressions of the mother may reach the embryo. Yet today in hundreds of instances mares are no sooner bred than they are wheeled about in order that they may get a good look at the stallion in the hope that the mental picture may in some way affect the embryo and result in a foal similar in type and color to the sire. Buildings and fences have been painted the color desired in calves, and in many instances or unusual characters in both men and animals have been explained on the basis of some mental impression supposed to have been made upon the mother during pregnancy. Some of these explanations have been ingenious, and have been rather generally accepted in the communities where the unusual results occurred.

Every case of the mother-marking which has been investigated has admitted of just as satisfactory an explanation on grounds strictly in keeping with the facts of embryology. It is true that extreme fright may affect the nutrition of the embryo for a time, and even at certain stages of pregnancy result in abortion, but the assumption that color of hair, shape of head, or any other character is dependent upon mental impressions seems absolutely beyond the range of possibility. The relation of the dam to the embryo is three-fold: she supplies nourishment, warmth and protection. It is as easy to influence the kind of corn a soil will produce by showing the soil a picture of the corn desired as it is to produce good live stock by regulating the mental states of the dams.

The second quack theory claims that when once a female has borne offspring to the service of a certain male, all her subsequent offspring will by affected by the first mating or matings. Dog fanciers seem to have been most strongly imbued with this idea. If a valuable bitch chanced to get in whelp to a cur dog, her value as a breeder was thought to be destroyed for all time, because a supposed taint from the cur litter affected later litters sired by dogs of her own breed. It was supposed that she could never again produce strictly pure-bred puppies, no matter how mated. As a matter of fact, a bitch bred to a cur dog is no more injured for future breeding purposes than an incubator used for eggs from grade or common poultry is rendered useless for hatching eggs from pure-bred fowls. The dam of Star Pointer 1:59¼ produced two mule colts before she foaled the famous pacer. Most dog breeders now believe this thoery to be of the quack order and no longer destroy bitches which accidently produce a litter by a cur dog. Writing of incubators reminds me of some nonsense in an article in a poultry journal some years ago in which it was stated that a setting of eggs of any breed could not be hatched into strictly pure-bred chickens unless the eggs were set under a pure-bred hen of the same breed.

From time to time theories of sex control have been advanced. Some credit the phase of the moon at the time of fertilization with being the sex determiner. Other theories claim that males result if the dam is poorly fed during pregnancy; females, if the dam is well fed. Another equally valuable theory says that germ cells from the right testicle get males and from the left females. There is a similar theory in regard to the ovaries. Some breeders have attempted to control sex by adopting some such method as those mentioned, not always without success.

Within the last few years scientists have discovered and proved that sex in mammals and some insects and worms is controlled by the male germ cell which unites with the female germ cell in fertilization. Exactly half of the germ cells (spermatozoa) of a stallion or bull contain a certain element which in the other half of the spermatozoa is entirely lacking. This Element is present in all of the female germ cells (ova). When an ovum is fertilized by a spermatozoan containing this sex determiner the result is always a female. When the spermatozoa does not contain this element the result is always a male. The chances of getting a bull calf are thus exactly equal to those of getting a heifer calf, and that is why the two sexes appear in equal number the world over. In several species of animals this sex determiner (scientists call it the accessory or X chromosome) may be plainly seen in the germ cells and body cells by the use of a high-power microscope. Sex is determined at the moment of fertilization and is entirely beyond the control of the breeder.—Henry W. Vaughan, Ohio State University in Breeders Gazette.

Sheep Breeding Company Organized at Middleton, N. S.

The raising of sheep and fur bearing animals is the object of a company lately organized in Middleton, N. S.

E. T. Neily, the promoter, has been working quietly upon the scheme for several months.

In April a charter was ontained for the Middleton Sheep and Fur Co., Limited, with authorized capital of $30,000. At first only $10,000 of stock was offered, which has been subscribed. Now it has been decided to offer the balance of the stock.

The officers of the company are: Dr. S. N. Miller, president; Coun. J. H. Charlton, vire-president; J. R. Allen, secretary treasurer and E. T. Neily, Managing director. The other directors are; A. W. Allen, Mayor O. P. Goucher, and Dr. F. S. Messenger.

About 400 acres of ,and have been acquired. Nearly 200 acres of this purchased from E. T. Neily, C. H. Wright and Isaac Moore lies along the projected highway from the Dodge Road to the Morse Road and the balance is mountain land.—Middleton Outlook.

Live Stock Judging Classes in Kings County P. E. I.

The first of the Live Stock Judging Classes in King's County was held on the farm of John Annear, Lower Montague, P. E. I., on Monday June 23rd. and was conducted by Robert Robertson of the Local Department of Agriculture. There was a good attendance of farmers from Lower Montague and adjoining settlements who listened attentively for nearly four hours to Mr. Robertson's address which was made doubly interesting by having the animals and score cards and explaining the different points. George Annear's herd of Ayrshire cattle was then brought out and judged by a few of those present who gave their reasons for placing them to which Mr. Robertson agreed showed that his instructions in judging had been carefully noted. In addition to Mr. Annear's herd Walter Aitken showed a very fine Ayrshire calf, which was very much admired and highly spoken of by Mr. Robertson. In Shorthorns Mrs. Davies showed an excellent beef cow, while Bert McFarlane's was more of the dairy type, the judge explaining the difference. J. R. Brehaut, of Montague, was present with his cart stallion Lord Strathcona, and some fine young horses were shown by F. Hewitt, and D. P. Ross, and some excellent advice was given by Mr. Robertson on the breeding of horses. All present were well pleased with the afternoon spent, and thankful to the Department of Agriculture for the assistance given and the interest taken in agriculture.

Another Opening for P. E. I. Farmers.

Another notable fact, from which P. E. Is,and will do well if they take a hint, is that Messrs. Lea & Clark, of Crapaud, have sold five of their Holstein cattle at fancy prices—one at $600 to Mr. Herbert Logan of Edmunton.

We can raise first-class pure bred cattle in P. E. Island as well as first-class pedigreed foxes, and make surer if not larger profits. Mr. Logan has we learn, purchased sixteen head of Holstein cattle in Crapaud and one Clydesdale stallion, "Labora Again" which he obtained from Fred C. Clark.

Mr. Clark left to take the purchased animals to their destination, to call, en route, at the Brandon, Regina and Edmonton Agricultural Exhibitions where they will be shown.

There is a great demand in the west for purchased cattle and horses. Therefore, our good farmers may, without fear of loss, go into the production of such cattle.

It is perhaps unnecessary to add that Messrs. Lea & Clark are too shrewd to sell either the most or the best of their herd. They have many valuable breeders still to draw from—one heifer now giving between sixty and seventy pounds of milk per day.

Growth on Teat

J. S. B.—Cow, eight years old, has growth about the size of pea in front teat. It seems to hang from udder by small cord. It hurts the cow when being milked. This is fourth calf and this teat gives bloody milk this time.

The only way to remove this growth is to have it operated on, which will have to be done by a veterinarian. So long as you get bloody milk from any of the teats, you had better not use the milk.

Will run on cheap fuels

"The Fairbanks-Morse Engines are the best we have in this part of the country. They are simple to operate and give the greatest amount of power for the least quantity of fuel."—M.F. MacLeod, Spring Hill, Que. In the construction of

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THE HORSE.

Shoeing Errors.

True economy does not consist in refraining from spending money; to withold repairs at a critical time, for example, may save a labour bill, but it may mean the entire destruction of a building, and that would be very expensive "economy." So it is with the feet of the horse, unless they are kept in a proper healthy condition the horse becomes practically valueless, for "no foot, no horse" is an axiom the truth of which is very plain.

Reasonable expense in the care of the feet is, therefore, the truest of economy. One of the extravagances which country people especially are guilty of, is in allowing the shoes to remain on too long.

HEAVY SHOES.

With this end in view, they insist on the use of shoes that are unnecessarily heavy,—indeed, many seem to hold the opinion, though they would not perhaps admit it, that the best farrier is he whose shoes will wear the longest. It ought not to need saying that if a horse, every time he lifts a foot, has to raise a shoe which is needlessly heavy, a strain is put upon him for which there is no return, and to a certain extent his working powers are lessened. A well-known veterinary authority, Sir F. Fitzwygram, says that he has known very large cart horses burdened with shoes which weighed as much as 7 lb. each. This means an enormous weight of iron to lift if the movements in a day's work are calculated, and in so far as it is unnecessary it is not only unduly wearing to the horse but is a loss to the owner. It is not possible to give any exact weight to adopt for the shoe, for the wear in the case of different horses varies greatly, and much depends on where the work is done. Horses travelling over stone sets, for example, would wear their shoes much more quickly than animals working on the land. Two horses working together may have different requirements, as their "action" is different, and it must not be forgotten that the feet themselves vary in character, animals bred in an upland district having generally much stronger feet than those bred in the fens or in the low-lying moist places. But it may be taken as a general rule that no horse should be fitted with a shoe that will last more than a month or five weeks, and that the shoe should be replared as nearly as possible every month.

THE FOOT A LIVING STRUCTURE

The foot is not a mere block of horn to which iron is nailed for its preservation when travelling over hard surfaces, but a living structure, continually growing, shedding off parts that are worn out and replacing them with new material; and if the shoe is allowed to remain on too long the horse will suffer and his capacity for work will be impaired, while the foot itself may be permanently damaged. It is, therefore, not in any sense economical to keep the shoes on as long as they will last, and if they are discarded as quickly as they should be it is a waste of iron and of the horse's strength to make them too heavy. The owner should study the requirements of each of his animals and give him just what shoes are suited to him, if he desires to let the horse work in comfort and do the utmost of which he is capable.

But there is a fashion in shoeing as in most other things, and the treatment of the horse's foot is dictated by fashion, sometimes to an extraordinary degree. Who is not acquainted with the paring out of the sole and the trimming of the frog, and the rasping of the crust, that take place in the farrier's shop, and for which it is to be feared it is not the farrier so much as the owner who is responsible? The owner has his own views, and will have them carried out, if not by this farrier then by that. It would sometimes seem that the object is to make the foot to fit the shoe rather than the shoe to fit the foot, but the underlying reason of the paring and rasping is to make a "neat" foot— to finish it off nicely, so that it may look symmetrical and blocky. The desire for neatness is commendable, but a nice appearance is dearly purchased if the horse is damaged in the process.

What is it that keeps the horn of the foot in its elastic and pliable condition? It is the amount of water that it contains, and it may surprise many a horseman to know that the amount ranges from 57 per cent. in the horn of the crust to 43 per cent. in that of the frog—that is to say, nearly half of the latter is water! Let horn be exposed to sun and air and it quickly becomes so dry and brittle that it can easily be reduced to powder, but if it is soaked in water it remains tough, yet pliable, and is not easily broken. Nature provides the foot with a varnish for the special purpose of keeping the horn moist, and all the parts of the foot have some provision for the same purpose. Now, in rasping the smith takes off this varnish and leaves the horn exposed to the action of the atmosphere, with the result that it quickly dries and deteriorates, and we have all sorts of troubles arising as a consequence.

EVILS FOLLOWING MUTILATION.

Among these evils may, for example be mentioned sand-crack, which is frequently traceable to this foolish practice of rasping the crust, though it may be due to other causes also. This may cause great lameness and pain, if it progresses far, so as to expose the sensitive laminae; and it is a troublesome complaint, because split horn cannot unite, and repair can be brought about only by growth, which takes time, during which the services of the horse are lost to the owner. That very painful disease known as laminitis, or founder, may be brought about by the rasping of the crust and the paring of the sole and frog, because of the effect these practices have on the horn. The disease is directly caused by concussion, and when the horn is damaged the sensitive parts are naturally exposed to harder blows that they would get were the foot sound.

These are illustrations of the results of the mistaken practices in-

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dulged in by owners and smiths, either in response to the dictates of fashion or because of prejudice. But they do not stop here, for often the paring of the sole and trimming up of the frog are carried on to a much greater extent. Some horsemen will have the sole pared away until it "springs" when pressed by the thumb —a most mischievous thing to do. In order to enable this to be done they make use of filthy stoppings such as cow-dung to soften the horn. Or when this has not been done in preparation sometimes a spovelful of hot ashes is poured into the hollow of the foot before the removal of the shoe, and allowed to remain long enough to soften the horn and render paring easy. But the sole needs no paring at all, because the fibres break off in flakes when they have attained a certain length, and this constant succession of flakes serves a purpose in keeping the other layers in a moist and supple condition.

THE FROG.

It is similar with the frog, which is sliced away for appearance' sake. Notice the high calkins to be seen on the feet of many cart horses. It would seem that many drivers of heavy horses have the idea that something dreadful will happen if the frog comes on the ground, but that is exactly what nature intends it to do, and if the feet have been kept in a healthy condition from the start, the frog will be in a condition to carry on its natural work. It is curious that horsemen will first of all have their animals rasped and cut, and afterwards will apply a "dressing" to keep the feet moist—that is, they first destroy nature's own provision, and then go to the trouble and expense to provide something else for the same purpose, that is not really so good!

If we contrast the feet of a horse who has been shod in the conventional fashion for a long time, with those of a colt who has not yet been burdened with shoes, we shall see that the frogs of the former are weak, shrivelled and thrushy, while those of the latter are full, healthy and fleshy. Those of the horse cannot stand pressure, while the colt's are uninjured by work even on hard ground. In dealing with horses not spoilt, let the crust or wall be lowered sufficiently to allow the frog to come to the ground, but never permit the smith to use the knife on the frog or sole, or to rasp the wall above the clinches.

HOT SHOES.

Damage is often done by fitting shoes on too hot. This injures the parts near to those burnt away, and the practice ought to be prevented. We do not mean the practice of fitting hot shoes, but the use of excessive heat in order to burn away portions to make the foot fit the shoe. This we are assured is sometimes the result of "cutting" prices, and it is well to pay a good smith a fair price for doing his work properly. If prices are reduced unduly it is rarely the purchaser who benefits in the long run. In this case the smith lightens his own labour to compensate for the smaller price, but the owner, although he may not realize the fact, is the loser because his horse is injured.

Ringbone.

A ringbone is a protuberance of a bone that is not natural, an osseous tumor, a deposit of bony spiculae on the surface of a bone. It belongs to the same class of diseases as splint and spavin, and is due to similar causes, in fact differs from them only in situation. The seat of ringbone is the upper and lower pastern bones and it has received this name because the deposit takes the form of a ring around the bone involved. This form, however, is not always present, and it not uncommonly happens that the exostosis does not "ring," but the term ringbone is still employed. There are two kinds of ringbone—false and true. Unless of great size, false ringbone is not of much importance, for it is situated about the middle of the ossuffraginis, ond does not interfere with either of the articulations of this bone. True ringbone, however, is a serious unsoundness, and is often the cause of great, sometimes of permanent lameness. True ringbone may involve the joints either above or below the suffraginis, and interfere with the movements of either the pastern or the coffin joint. In some cases both forms may exist in the same animal.

LIABILITY TO RINGBONE.

The causes of ringbone are hereditary, structural and accidental. No animal having ringbone should be permitted to breed unless the origin of the ringbone can be clearly traced to accident and even then it is doubtful policy, for "like produces like." With regard to structural causes—ringbone is common in horses with very long pasterns, where there is naturally a tendency to weakness. It is also found in animals with unduly short or upright pasterns, in which formation there is a tendency to excessive concussion. This shows us that breed has something to do with liability to ringbone. The reason why ringbone is oftener found in the hind pasterns than in front is the violent action of the hind limbs in fulfilling their mission of propelling the body forward, and the strain the hind pasterns undergo in galloping and jumping. Those cases that occur in young unbroken horses—and they are very common—undoubedly arise from injury received in this voluntary exercise. Tendency to sprains that may cause ringbone is, of course, accentuated by defective conformation and inherited weakness. False ringbone is generally the most palpable on superficial examination, rarely causing lameness, in this respect, resembling splint and spavin that does not interfere with the motion of joints or the lay of tendons or ligaments. True ringbone, on the other hand, is almost always accompanied by lameness, in this respect resembling splint and spavin that does not interfere with the motion of joints, or the lay of tendons or ligaments. True ringbone, on the other hand, is almost always accompanied by lameness at some stage, and is most marked during the inflammatory period. In chronic cases there is stiffness or want of flexion in the fetlock joint, and a consequent snatching up of the foot in action. One of the effects of chronic ringbone, lameness, is the production of the "upright" hoof that follows any disease of the limb, which, for lengthened periods, prevent extension of the fetlock joint. In this case, the upright hoof, if no disadvantage, should be favored.

TREATMENT.

Rest and cooling lotions, or cold water dressings, are the essentials in the initial stage. Rest does not mean turning the horse into a bare pasture to walk for a living, but the cessation of motion in the part as far as possible. It may be rendered more complete by seconding the indications of Nature and assisting the animal to secure an easy position for the limb by surgical shoeing. If the lameness is great, give a dose of physic and feed sloppy bran and a little hay. A five-drachm physic ball has a marked effect on lameness of inflammatory origin, and particularly in cases of foot lameness. A cooling lotion may be made by dissolving ½ oz. of acetate of lead in a quart of water, and adding 2 oz. of acetic acid. This may be applied on swabs

straps to fasten round the fetlock, but any bandage or rag wrapped round the part and kept constantly wet will suffice. The lead lotion should be kept in a glass or earthenware receptacle. When, though active inflammation has subsided, lameness is still apparent on movement, there is a choice between blistering and firing. The minor remedy should be tried first, because the marks left by the cautery will remain, and, even if the lameness is cured, the attention of a purchaser is drawn to the part as having been the seat of disease, even if he does not take exception to the disfigurement. Firing, therefore, should only be resorted to because blistering has failed. As a blister, one part of biniodide of mercury to six or eight parts of lard is the most useful.

SHOEING.

Attention should be paid to the shoeing. Observe how the animal places the foot on the ground and follow this indication. If the horse places the heel on the ground first, as generally happens in a case of ringbone, a thin-heeled shoe should be put on, so as to allow the weight to be thrown on the heels with the least possible effort. If the horse walks on his toe, the production of an upright hoof, a high heel should be favored, and a wedge or high-heeled shoe applied.

FALSE RINGBONE.

In cases of false ringbone, or where young horses at grass develop the exostosis in one or more limbs, they are best left alone and the deposit is such as the prolonged use of iodine in however, is done apply a mild remedy often absorbed in time. If anything, the form of an ointment, composed as follows:—Resublimed iodine, 1 drachm iodine of potassium, 1 scruple; spirit of wine, 10 drops; lard, 1 oz. Rub in a small piece of the ointment about the size of a hazel-nut once or twice a week. If the skin gets tender stop the treatment and resume later on when the skin has hardened again.

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POULTRY.

Care of the Poultry Quarters in Warm Weather

At this season of the year do you allow your hen house to get filthy and dirty, the droppings to accumulate all over the floor and, in fact, all about the premises, or do you keep everything as neat and clean as possible? The careful poultryman prefers the latter way, for various reasons.

For one thing, he knows that unless during the hot weather of this season he takes steps to keep the poultry quarters free from vermin and filth of every description, and to give proper ventilation, the fowls will be compelled to desert their quarters. It is but natural that they should desert foul, ill-smelling, hot quarters for the more inviting conditions which the fences and trees offer them for the time being. Whenever the fowls show a tendency to prefer roosting on fences and trees it may be taken as pretty conclusive evidence that the conditions within the hen house have become such that they can no longer be endured.

Now, instead of allowing them to continue living outside the house throughout the summer, it will be much better and will save considerable work in the end to keep the house in a habitable condition through the hot months. Living out of doors entirely has a tendency to make fowls wild and more difficult to handle than where they roost in a building to which they may be confined occasionally. Then, too, the trouble of training them to return to the house in the fall is considerable after they have been roosting where ever fancy dictated for several months. Once the fowls have deserted the house for the open air, not many of them will ever return voluntarily to their proper quarters, no matter how much suffering they are compelled to undergo when the cold, wet weather of fall and winter arrives. The habit of roosting outside is then so firmly fastened upon them that they will perch in a high tree during zero weather, and perhaps lose their lives thereby, instead of returning to their old quarters. The only way to teach them to again make use of the hen house is to round them up frequently upon the approach of cold weather and confine them in the building for a few days each time until the habit of using the house is again fixed upon them. Because of the amount of work involved in this process, and also because of the loss occasioned when fowls roost outdoors even during the summer season, it is better to keep the house in a proper condition through the entire summer and then not permit any of the hens to break away from it.

Outdoor roosting and unrestricted range, with the tendency towards wildness which it creates, is the source of loss in many ways. In some sections of the country, wild animals of the woods and fields will make away with many a hen at night. Then the hens that perch outdoors will not likely use any of the nests in the poultry house or elsewhere that are provided for them, but instead they will steal their nests out and deposit their eggs where many of them probably will never be found.

In order that the quarters may be kept habitable at this season, it is necessary that they be gone over at more or less regular intervals, cleaning floors and dropping boards, and spraying with some preparation which will destroy all parasitic life. Do the entire job of cleaning in a business-like manner, removing all inside furniture first. Clear out every bit of the straw and litter in the house and give the entire inside a good coat of whitewash. This will make for a clean, inviting appearance and will help in the fight against vermin.

Right now the careful poultryman is keeping a sharp lookout for the various parasites which are known to prey upon fowls. These are many, and the worst of it is, they inrrease wonderfully fast at this season. Too many poultry raisers do not apply any remedy until lice and mites have gotten the mastery, when, by prompt work as soon as evidences of vermin appear, they could be kept in check quite easily. The treatment for lice must begin early, be thorough and often repeated.

If there is reason to suspect that any of the fowls have become infested with parasites of any kind, they should have attention now along with the general cleaning up. The lice will be found upon the head and neck, under the wings and around the vent. Some good insect powder is needed in cases of this kind; dust it into the feathers as thoroughly as possible. Or anoint the parts where lice are found with lard well thickened with fine sulphur.

The nest boxes should not be overlooked while cleaning up. Vermin increase rapidly in filthy nest boxes. Powdered sulphur or insest powder may be sprinkled in the nests occasionally, and during this season it is a good plan to carry the nest boxes outside every three or four weeks and burn them out, afterwards supplying fresh nest material. To burn out a nest, touch a match to the straw or hay, and alter the fire has gained a good start turn the box over so as to exclude most of the air. The fire will then smoulder slowly along making lots of smoke, which means the death of the lice in the crevices and corners of the box. One should remain near by during this operation in order to see that none of the boxes catch fire.

After the cleaning up of the poultry house and its furniture has been attended to thoroughly, see that plenty of the right kind of ventilation is provided so that the fowls can be comfortable on hot, sultry nights. It is doubtful then whether any tendency to desert the house will manifest itself among the fowls.—W. F. P.

Facts About Dressing Poultry

In a recent issue of an exchange we find the following:

"Birds, after they are killed, keep longer in their feathers than when they are plucked, because the feathers prevent the air or damp from getting to the bird to produce fermentation or decay."

About fifteen years ago we received a letter from a correspondent which read as follows:

"During the past year I have been supplying a local firm, which caters to a very select trade with broilers. All went well until after going into the store a short while after the last lot had been delivered I was informed by one of the firm that out of that lot they had been obliged to throw away all but two carcasses, on account of greenness around the vent, slightly on the back and on the hinder portion of the breast. He admitted that they were perfectly fresh and was puzzled to account for it. He admitted that it was noticeable about an hour or two after delivery. He ordered more and refused to let me make good his looss, which, however, I insisted upon.

"The next lot I killed at 8 o'clock p. m., had them picked by 12 o'clock p. m., and delivered at 7 a. m. the next morning. Consequence: The same unfortunate event all, with the exception of one, being discolored."

That man did just what the exchange advises in the paragraph above—allowed the feathers to remain on the carcass after killing the bird. No good poultry raiser would kill his birds, at night, and allow them to have their feathers until the next morning.

Our plan has always been to take care that, in stabbing the bird in the mouth, we did not cut too much for fear of the bird dying before the feathers were removed. While the life blood is still in the chicken, the rapid work of feather-pulling is begun. As soon as the long feathers are pulled, the pin feathers are removed, all broken skin carefully sewed up; and the birds are put in cold water, to which is added a little salt. After remaining in this water for some time, the clotted blood in the mouths of the chickens is removed with the fin-

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Pratts Worm Powder, 50c.
Pratts Veterinary Colic Cure, 50c.-1.00
Pratts Liniment (for Man or Beast), 25c-50c-$1.00
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Pratts Dip and Disinfectant, $1.50 gal.
Pratts Healing Powder, 25c-50c
Pratts Heave, Cough and Cold Cure, 50c-$1.00
Pratts Fly Chaser, $1.00-60c

Swish! Biff! BANG!
Another Milk Pail Gone To Grass

DON'T blame the cow when the flies are holding a convention on her hide. She *can't* stand still with every nerve on edge and every muscle braced to resist. Under such circumstances you are lucky to get half the usual quantity of milk, for she simply *will not* let it down unless she's comfortable.

Pratts "Fly Chaser"

will drive away the flies and keep them off. It is safe, sure and easy to use. Does not taint the milk or cause the hair to mat. Used on horses, cows and hogs, it prevents ill-nature and ensures perfect health during the trying summer season.

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send 10c to cover postage, wrapping, etc., and we will mail you Pratts "Pointers on Cows, Hogs and Sheep"—172 pages — or "Pointers on Horses" — 163 pages — both books for 20c. Use the coupon.

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ger, and the carcass is placed in another tub of clean cold water.

In response to inquir- what method was used after the bird was killed our foresaid correspondent replied:

"The chickens after being plucked were placed upon a clean, fresh napkin, and covered with the same, on a hanging shelf, and as the house to which I sell is considered first-class, I have every reason to believe that the carcasses would be placed in a clean place there."

The facts of the whole matter was that the carcass after being killed was then not properly cooled. The animal heat was not out of them. As he did not pluck the feathers when he killed the bird, he had to scald them next morning. During that whole night the animal heat could not get out of the carcass on account of the presence of feathers—and the additional heat caused by scalding them was sure to show in some way, which it did in the vent, and back.

Moral: Pluck the feathers as soon as possible after the bird is killed, and be sure that the animal heat is out of the body before it is sent to market.

Necessary or Unnecessary

I have often thought of the amount of what I consider unnecessary work in connection with the raising of the young turkeys. After reading a great quantity of articles which have latey appeared in the agricultural journals I will endeavor to show many points that my experience of thirty years plainly shows are unnecessary.

1st.—"Hollow out a sod and place under the nest when setting." I can truthfully say with reference to this that my best hatches have been : n hay-lofts and strawstacks without any sods or dampness.

2nd.—"Put some grease or grease and sulphur on the top of the head and under the wings of the young poults." Only one season in thirty did I lose a young turkey with lice and never in that time used oil or grease of any kind.

3rd.—"Give pepper and ginger or other cure-alls." I find the less handling and drugging young poults receive the better.

4th.—"Don't let young turkeys out until the dew is off the grass." All the young turkeys I have raised were let out of coop about 7 o'clock every morning.

5th.—"Don't overfeed as more turkeys are killed by overfeeding than anything else." Overfeeding is generally taken to mean "feeding many times," which is exactly wrong in my opinion. A poult fed often is never "overfed" because it only eats a small quantity and immediately strat around on the jump looking for flies, etc., then when fed they will certainly "overfeed" with a vengeance and mope in the sun in misery.

6th—"Don't feed sloppy food." I have fed all the turkeys I raised with shorts which contained all the skimmilk they would hold without showing signs of the milk until pressed. Any "sloppier' ' than this I don't think they would eat.

7th.—"Animal food should be fed in some form, either beef scrap or boiled meat." The majority of turkeys never taste either but one or the other is largely used in England. I consider skim milk much better and give my turkeys all they will take all through the growing season.

8th.—"For the first few days feed hard-boiled eggs." I consider quite unnecessary and probably often the cause of indigestion.

Now the above are some of the instructions I have not followed and I can raise young turkeys as easily Leghorns which are considered the hardiest chicks. I venture to say that outside of accidents I have not lost 25 poults under a month old in thirty years, but there are points which I consider necessary, viz.:

Healthy, vigorous breeding stock, properly fed.

Proper care of the eggs while gathering.

Dusting the nest with insect powder when setting hen.

Dusting the broody hen with insect powder upon 25th day.

Keeping the broody hen in coop for 4 weeks to provide a safe refuge for poults in rainstorms, etc.

Moving the coop every day.

Having a dust bath near coop.

Making no sudden entire changes of food or drink.

Keeping them away from other fowl.

Never feeding or allowing them to get sour, fermented food.

Keeping drinking utensils clean at all times.

Feeding regularly.—Poultry Advocate.

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ROOFING

Breeding White Birds White

I have been breeding the white varieties of poultry for some twenty-four years, and breeding some fine white ones too. The varieties have been White Rocks, which I am not now breeding, White Wyandottes and Single Comb White Leghorns. These last two I am breeding yet.

There has been much written about giving white birds white corn instead of yellow, as it has been claimed that yellow corn would help to or of itself turn the feathers yellow. This I never could believe, and have proved that it is not so, although it has been a good excuse for a man when he has failed in his mating to blame it on something else. Still no man can say I blamed it on the corn if any yellow ones were found on my place. It is harder to find brass for some years than white feathers in my yards.

The point has been proved that corn does not change the color, but it is in the breeding. I will not say more to prove it, but will touch on another matter that I have found out, that I have not seen touched by any writer. If they have written of it I have overlooked it.

It is this, that white birds kept from the sun will have a lot of unripe feathers. They will have the sap of the feather yellow, but not a particle of brass.

There are two kinds of white birds—Birds so white that the yellow pigment is almost all gone from the blood. Most of these, yes, almost every one will have poor leg color, as the same color that yellows the new feathers in some, is the same color that makes the legs yellow. And when you have poor legs it is easy to heed good color. But a good bird is one that has the yellow where it belongs and on nowhere else.

There are a few birds that grow so white that you can put them anywhere and the feathers will be white and the legs yellow. These, if right in all parts, or as near right as we can breed them, are the extra valuable birds and are the one or two in a hundred. But there are a fine lot of show birds that as they run in the sun are white as the snow as they finish feathering. But if these birds are taken from the direct sunlight, I mean each feather that grows in the winter shade of a room will be yellow from the tip to the skin. I first saw it about five years ago. We, as usual, had a bunch of nearly grown White Wyandotte cockerels when winter came about December 1. They were out on the farm, where I keep nothing but White Wyandottes. I came out to get some birds a few weeks later and saw a feather that was yellow in amongst pure white ones in back and on the wings. I said to the man who lives there, how is this. Why, that is putting them out of the sun in this rather poorly lighted room. And so it was and is. Many have written that the sun will cause feathers to turn brassy. Not a bit of it until they are dead the following summer, then they will turn yellow perhaps.

I had a big five-pound S. C. White Leghorn I sold for a show last January. He was extra large and fine in every way. Not a yellow feather and fine leg color. I sold him and heard no more from him for about six weeks, when the man wrote he was brassy. I could not believe it, but he was sick of him and I traded him back for White Wyandottes. When he came he had two, mind you, two yellow feathers in one wing bow, and about six in the other, and one here and there in his back. All that had grown since I had sold him. On account of his comb, I suppose, he had been kept in a room ever since I sold him, and there was not enough sunlight to ripen the feathers that grew after I shipped him.—W. W. Kulp.

Formulae for Lice Powder and Cresol Disinfectant.

LICE POWDER.

1½ pints gasolene;
½ pint commercial cresol;
4 quarts plaster of paris.

First, mix the gasolene and cresol together and then slowly stir in the plaster of paris until all the liquid is taken up. Use enough of the plaster of paris to absorb the liquid and no more. Spread the resulting brownish powder on sheets of paper to dry and then store away in covered cans. To use, take a large baking powder can, punch the cover full of holes with a six-penny nail and fill the can with the powder. This makes a good sifter to thoroughly sift the powder into the feathers around the vent and under the wings, while an assistant is holding the hen up by the shanks. Work the powder into the feathers with the fingers. This is one of the best powders the writer has ever used. It is also one of the cheapest.

CRESOL DISINFECTANT:

3½ quarts raw linseed oil;
1 lb. 6 ozs. commercial lye or Babbitt's potash;
½ pint of water;
8½ quarts commercial cresol.

Take a clean five-gallon stone crock and pour into it the three and one-half quarts of raw linseed oil. Then dissolve the commercial lye in just enough water to thoroughly dissolve it—one-half pint is usually sufficient. Allow the lye solution to stand a few hours until cold. Then pour it very slowly, constantly stirring, into the crock of linseed oil. Take four or five minutes in adding the lye solution to the linseed oil. Continue stirring for 20 to 30 minutes until a smooth, thick soft soap is formed. Then stir in the commercial cresol, which will dilute and blend with the soap to form a clear, red brown liquid.

A 3 per cent mixture of the above stock solution is strong enough for all ordinary disinfection, as cresol is extremely powerful in its action. When diluted in this way a thin milky liquid results, which can be applied with brush or spray pump. The latter is best, because with it the disinfectant can be forced into every crack and crevice, thus insuring a perfect job.

Points of a Good Fowl

Considerable has been written about egg type, meat type, and the general type of a good, practical fowl. Actual experience in the poultry yard has exploded all such ideas. It is desirable that a hen should excel as an egg producer, but it is equally important that she should be good at incubating and brooding. It is not uncommon to have hens that are excellent in laying, but indifferent as mothers. Important qualifications in a hen is that she be a good feeder, bright, clear eyed, quick in action, and not scarey. Years ago, the type most sought after was a large, well-feathered and deep body, short legs, small head and broad shoulders. For the cock it was preferred that he be thicker in leg, broader across the shoulders, and fully a third heavier. It was all the better if he had a gallant strut, the first to get off the roost in the morning, and the first to go to roost at night, generous to his family, and not quarrelsome. Same poultrymen of that day associated large eyes with great hardiness.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

We drove to a little inn in a bye road, where we were expected, and where we had a very comfortable dinner, and passed the day with great satisfaction. If Peggotty had been married every day for the last ten years, she could hardly have been more at her ease about it; it made no sort of difference in her; she was just the same as ever; and went out for a stroll with little Em'ly and me before tea, while Mr. Barkis philosophically smoked his pipe, and enjoyed himself, I suppose, with the contemplation of his happiness. If so, it sharpened his appetite; for I distinctly called to mind that, although he had eaten a good deal of pork and greens at dinner, and had finished off with a fowl or two, he was obliged to have cold boiled bacon for tea, and disposed of a large quantity without any emotion.

I have often thought, since, what an odd, innocent, out-of-the-way kind of wedding it must have been. We got into the chaise again soon after dark, and drove cosily back, looking up at the stars, and talking about them. I was their chief exponent, and opened Mr. Barkis's mind to an amazing extent. I told him all I knew, but he would have believed anything I might have taken it into my head to impart to him; for he had a profound veneration for my abilities, and informed his wife in my hearing, on that very occasion, that I was "a young Roeshus"—by which I think he meant prodigy.

When we had exhausted the subject of the stars, or rather when I had exhausted the mental faculties of Mr. Barkis, little Em'ly and I made a cloak of an old wrapper, and sat under it for the rest of the journey. Ah, how I loved her! What happiness (I thought) if we were married, and were going away anywhere to live among the trees and in the fields, never growing older, never growing wiser, children ever, rambling hand in hand through sunshine and among flowery meadows, laying down our heads on moss at night, in a sweet sleep of purity and peace, and buried by the birds when we were dead! Some such picture, with no real world in it, bright with the light of our innocence, and vague as the stars afar off, was in my mind all the way. I am glad to think there were two such guileless hearts at Peggotty's marriage as little Em'ly's and mine. I am glad to think the Loves and Graces took such airy forms in its homely procession.

Well, we came to the old boat again in good time that night; and there Mr. and Mrs. Barkis bade us good bye, and drove away snugly to their own home. I felt then, for the first time, that I had lost Peggotty. I should have gone to bed with a sore heart indeed under any other roof but that which sheltered little Em'ly's head.

Mr. Peggotty and Ham knew what was in my thoughts as well as I did, and were ready with some supper and their hospitable faces to drive it away. Little Em'ly came and sat beside me on the locker for the only time in all that visit; and it was altogether a wonderful close to a wonderful day.

It was a night tide; and soon after we went to bed, Mr. Peggotty and Ham went out to fish. I felt very brave at being left alone in the solitary house, the protector of little Em'ly and Mrs. Gummidge, and only wished that a lion or a serpent or any ill-disposed monster, would make an attack upon us, that I might destroy him, and caver myself with glory. But as nothing of the sort happened to be walking about on Yarmouth flats that night, I provided the best substitute I could by dreaming of dragons until morning.

With morning came Peggotty; who called to me, as usual, under my window, as if Mr. Barkis the carrier had been from first to last a dream too. After breakfast she took me to her own home, and a beautiful little home it was. Of all the moveables in it, I must have been most impressed by a certain old bureau of some dark wood in the parlor (the til-floored kitchen was a general sitting room), with a retreating top which opened, let down, and became a desk, within which was a large quarto edition of Foxe's Book of Martyrs. This precious volume, of which I do not recollect one word, I immediately discovered and immediately applied myself to; and I never visited the house afterwards, but I kneeled on a chair, opened the casket where this gem was enshrined, spread my arms over the desk, and fell to devouring the book afresh. I was chiefly edified, I am afraid, by the puctures, which were numerous, and represented all kinds of dismal horrors; but the Martyrs and Peggotty's house have been inseparable in my mind ever since, and are now.

I took leave of Mr. Peggotty, and Ham, and Mrs. Gummidge, and little Em'ly, that day; and passed the night at Peggotty's in a little room in the roof (with the crocodile book on a shelf by the bed's head), which was to be always mine, Peggotty said, and should always be kept for me in exactly the same state.

"Young or old, Davy dear, as long as I am alive and have this house over my head," said Peggotty, "you shall find it as if I expected you here directly every minute. I shall keep it every day, as I used to keep your old little room, my darling; and if you was to go to China, you might think of it as being kept just the same, all the time you were away."

I felt the truth and constancy of my dear old nurse, with all my heart, and thanked her as well as I could. That was not very well, for she spoke to me thus, with her arms round my neck, in the morning, and I was going home in the morning, with herself and Mr. Barkis in the cart. They left me at the gate, not easily or lightly; and it was a strange sight to me to see the cart go on, taking Peggotty away, and leaving me under the old elm-trees looking at the house in which there was no face to look on mine with love, or liking any more.

And now I fell into a state of neglect, which I cannot look back upon without compassion. I fell at once into a solitary condition,—apart from all friendly notice, apart from the society of all other boys of my own age, apart from all companionship but my own spiritless thoughts,—which seems to cast its gloom upon this paper as I write.

What would I have given, to have been sent to the hardest school that ever was kept!—to have been taught something, anyhow, anywhere! No No such hope dawned upon me. They disliked me; and they sullenly sternly, steadily, overlooked me. I think Mr. Murdstone's means were straitened at about this time; but it is little to the purpose. He could not bear me; and in putting me from him, he tried, as I believe, to put away the notion that I had any claim upon him—and succeeded.

I was not actively ill-used. I was not beaten or starved; but the wrong that was done to me had no intervals of relenting, and was done in a systematic, passionless manner. Day after day, week after week, month after month, I was coldly neglected. I wonder sometimes, when I think of it, what they would have done if I had been taken with any illness; whether I should have lain down in my lonely room, and languished through it in my usual solitary way, or whether anybody would have helped me out.

When Mr. and Miss Murdstone were at home, I took my meals with them; in their absence, I ate and drank by myself. At all times I lounged about the house and neighborhood quite disregarded, except that they were jealous of my making any friends: thinking, per haps, that if I did, I might complain to some one. For this reason, though Mr. Chillip often asked me to go and see him (he was a widower, having, some years before that, lost a little, small light-haired wife, whom I can just remember connecting in my own thoughts with a pale tortoise-shell cat), it was seldom that I enjoyed the happiness of passing an afternoon in his closet of a surgery; reading some book that was new to me, with the smell of the whole pharmacopoeia coming up my nose, or pounding something in a mortar under his mild directions.

For the same reason, added no doubt to the old dislike of her, I was seldom allowed to visit Peggotty. Faithful to her promise, she either came to see me, or met me somewhere near, once every week, and never empty-handed; but many and bitter were the disappointments I had, in being refused permission to pay a visit to her at her house. Some few times, however, at long intervals, I was allowed to go there! and then I found out that Mr. Barkis was something of a miser, or, as Peggotty dutifully expressed it, was "a little near," and kept a heap of money in a box under his bed, which he pretended was only full of coats and trousers. In this coffer, his riches hid themselves with such a tenacious modesty, that the smallest instalments could only be tempted out by artifice; so that Peggotty had to prepare a long and elaborate scheme, a very Gunpowder Plot, for every Saturday's expenses.

All this time I was so conscious of the waste of any promise I had given, and of my being utterly neglected, that I should have been perfectly miserable, I have no doubt, but for the old books. They were my only comfort; and I was as true to them as they were to me, and read them over and over I don't know how many times more.

I now approach a period of my life, which I can never lose the remembrance of, while I remember anything; and the recollecton of which has often, without my invocation, come before me like a ghost, and haunted happier times.

I had been out, one day, loitering somewhere, in the listless meditative manner that my way of life engendered, when, turing the corner of a lane near our house, I came upon Mr. Murdstone walking with a gentleman. I was confused, and was going by them, when the gentleman cried:

"What! Brooks?"

"No, sir,David Copperfield," I said.

"Don't tell me. You are Brooks," said the gentleman. "You are Brooks of Sheffield. That's your name."

At these words, I observed the gentleman more attentively. His laugh coming to my remembrance too, I knew him to be Mr. Quinion, whom I had gone over to Lowestoft with Mr. Murdstone to see, before—it is no matter—I need not recall when.

"And how do you get on, and where are you being educated, Brooks?" said Mr. Quinion.

He had put his hand upon my shoulder and had turned me about, to walk with them. I did not know what to reply, and glanced dubiously at Mr. Murdstone.

"He is at home at present," said the latter. "He is not being educated anywhere. I don't know what to do with him. He is a difficult subject."

That old, double look was on me for a moment; and then his eyes darkened with a frown, as it turned in its evasion, elsewhere.

"Humph!" said Mr. Quinion, looking at us both, I thought. "Fine weather."

Silence ensued and I was considering how I could best disengage my shoulder from his hand, and go away, when he said:

"I suppose you are a pretty sharp fellow still? Eh, Brooks?"

"Ay? He is sharp enough," said Mr. Murdstone, impatiently. "You

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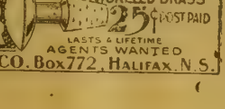

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had better let him go. He will not thank you for troubling him."

On this hint, Mr. Quinion released me, and I made the best of my way home. Looking back as I turned into the front garden, I saw Mr. Murdstone leaning against the wicket of the churchyard, and Mr. Quinion talking to him. They were both looking after me, and I felt that they were speaking of me.

Mr. Quinion lay at our house that night. After breakfast, the next morning, I had put my chair away, and was going out of the room, when Mr. Murdstone called me back. He then gravely repaired to another table, where his sister sat herself at her desk. Mr. Quinion, with his hands in his pockets, stood looking out of the window; and I stood looking at them all.

"David," said Mr. Murdstone, "to the young this is a world of action; not for moping and droning in."

—"As you do," said his sister.

"Jane Murdstone, leave it to me, if you please. I say, David, to the young this is a world for action, and not for moping and droning in. It is especially so for a young boy of your disposition, which requires a great deal of correcting; and to which no greater service can be done than to force it to conform to the ways of the working world, and to bend it and break it."

"For stubbornness won't do here," said his sister. "What it wants is, to be crushed. And crushed it must be. Shall be, too!"

He gave her a look, half in remonstrance, half in approval, and went on:

I suppose you know, David, that I am not rich. At any rate you know it now. You have received some considerable education already. Education is costly; and even if it were not, and I could afford it, I am of the opinion that it would not be at all advantageous to you to be kept at a school. What is before you, is a fight with the world; and the sooner you begin it the better."

I think it occurred to me that I had already begun it, in a poor way; but it occurs to me now, whether or no.

"You have heard the 'counting-house,' mentioned sometimes," said Mr. Murdstone.

"The counting-house, sir?" I repeated.

"Of Murdstone and Grinby, in the wine trade," he replied.

I suppose I looked uncertain, for he went on hastily:

"You have heard the 'counting-house,' mentioned, or the business, or the cellars, or the wharf, or something about it."

"I think I have heard the business mentioned, sir," I said, remembering what I vaguely knew of his and his sister's resources. "But I don't know when."

"It does not matter when," he returned. Mr Quinion manages that business."

I glanced at the latter deferentially as he stood looking out of the window.

"Mr. Quinion suggests that it gives employment to some other boys, and that he sees no reason why it shouldn't, on the same terms, give employment to you."

"He having," Mr. Murdstone observed in a low voice, and half turning round, "no other prospect, Murdstone."

Mr. Murdstone, with an impatient, even an angry gesture, resumed, without noticing what he had said:

"Those terms are, that you will earn enough for yourself to provide for your eating and drinking, and pocket-money. Your lodging (which I have arranged for) will be paid by me. So will your washing."

"Which will be kept down to my estimate," said his sister.

"Your clothes will be looked after for you, too," said Mr. Murdstone; "as you will not be able yet awhile to get them for yourself. So you are now going to London, David, with Mr. Quinion, to begin the world on your own account."

"In short, you are provided for," observed his sister; "and will please to do your duty."

Though I quite understand that the purpose of this announcement was to get rid of me, I have no distinct remembrance whether it pleased or frightened me. My impression is, that I was in a state of confusion about it, and, oscillating between the two points, touched neither. Nor had I much time for the clearing of my thoughts, as Mr. Quinion was to go upon the morrow.

Behold me, on the morrow, in a much worn little white hat, with a black crape round it for my mother, a black jacket, and a pair of hard, stiff corduroy trousers—which Miss

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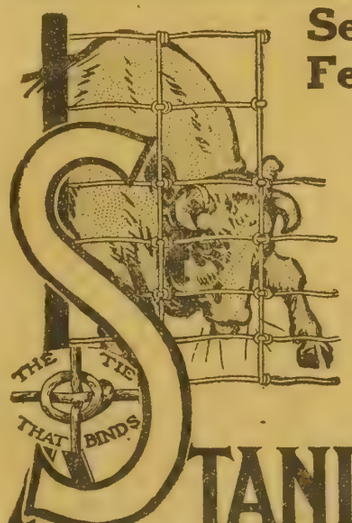

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Murdstone considered the best armor for the legs in that fight with the world which was now to come off—behold me so attired, and with my little worldly all before me in a small trunk, sitting, a lone lorn child (as Mrs. Gummidge might have said), in the post-chaise that was carrying Mr. Quioion to the London coach at Yarmouth! See, how o ur house and church are lessening in the distance; how the grave beneath the tree is blotted out by intervening objects; how the spire points upward from my old playground no more, and the sky is empty!

CHAPTER XI.

I Begin Life on my Own Account, and Don't Like It.

I know enough of the world now, to have almost lost the capacity of being much surprised at anything; but it is matter of some surprise to me, even now, that I can have been so easily thrown away at such an age. A child of excellent abilities, and with strong powers of observation, quick, eager, delicate, and soon hurt bodily and mentally, it seems wonderful to me that nobody should have made any sign in my behalf. But none was made; and I became, at ten years old, a little laboring hind in the service of Murdstone and Grinby.

Murdstone and Grinby's warehouse was at the water side. It was down in Blackfriars. Modern improvements have altered the place; but it was the last house at the bottom of a narrow street, curving down hill to the river, with some stairs at the end, where people took boat. It was a crazy old house with a wharf of its own, abutting on the water when the tide was in, and on the mud when the tide was out, and litterly overrun with rats. Its panelled rooms, discolored with the dirt and smoke of a hundred years, I dare say; its decaying floors and staircase; the sqeaking and scuffling of the old grey rats down in thc cellars; and the dirt and rottiness of the place; are things, not of many years ago, in my mind, but of the present instant. They are all before me, just as they were in the evil hour when I went among them for the first time, with my trembling hand in Mr. Quinion's.

Murdstone and Grinby's trade was among a good many kinds of people, but an important branch of it was the supply of wines and spirits to certain packet ships. I forget now where they chiefly went, but I think there were some among them that made voyages both to the East and West Indies. I know that a great many empty bottles were one of the consequences of this traffic, and that certain men and boys were employed to examine them against the light, and reject those that were flawed, and to rinse and wash them. When the empty bottles ran short, there were labels to be pasted on full ones, or corks to be fitted to them, or seals to be put upon the corks, or finished bottles to be packed in casks. All this work was my work, and of the boys employed upon it I was one.

There were three or four of us, counting me. My working place was established in a corner of a warehouse, where Mr. Quinion could see me, when he chose to stand up on the bot bottom rail of his stool in the counting-house, and look at me through a window above the desk. Hither, on the first morning of my so auspiciously beginning life on my own account, the oldest of the regular boys was summoned to show me my business. His name was Mick Walker, and he wote a ragged apron and a paper cap. He informed that his father was a bargeman, and walked, in a black velvet head-dress, in the Lord Mayor's Show. He also informed me that our principal associate would be another boy whom he introduced by the—to me—extraordinary name of mealy potatoes. I discovered, however, that this youth had not been christened by that name, but that it had been bestowed upon him in the warehouse, on account of his complexion, which was pale or mealy. Mealy's father was a waterman, who had the additional distinction of being a fireman, and was engaged as such at one of the large theatres; where some young relation of Mealy's—I think his little sister—did Imps in the Pantomines.

No words can express the secret agony of my soul as I sunk into this companionship; compared these henceforth every-day associates with those of my happier childhood—not to say with Steerforth, Traddles, and the rest of those boys; and felt my hopes of growing up to be a learned and distinguished man crushed in my bosom. The deep remembrance of the sense I had, of being utterly without hope now; of the shame I felt in my position; of the misery it was to my young heart to believe that day by daywhat I had learned, and thought, and delighted in, and rasied my fancy and my emulation up by, would pass away from me, little by little, never to be brought back any more; cannot be writteh. As often as Mick Walker went away in the course of that forenoon, I mingled my tears with the water in which I was washing the bottles: and sobbed as if there were a flaw in my breast, and it were in danger of bursting.

The counting-house clock was at half past twelve, and there was a general preparation for going to dinner, when Mr. Quinion tapped on the counting-house window, and beckoned me to go in. I went in, and found there a stoutish, middle-aged person, in a brown surtout and black tights and shoes, with no more hair on his head (which was a large one, and very shiny) than there is upon an egg, and with a very extensive face, which he turned full upon me. His clothes were shabby but he had an imposing shirt-collar on. He carried a jaunty sort of a stick, with a large pair of rusty tassels to it; and a quizzing glass hung outside his coat,—for ornament, I afterwards found, as he very seldom looked through it, and couldn't see anything when he did.

"This," said Mr. Quinion, in allusion to myself, "is he."

"This," said the stranger, with a certain condescending rail in his voice and a certain indescribable air of doing something genteel, which impressed me very much, "is Master Copperfield. I hope I see you well, sir?"

I said I was very well, and hoped he was. I was sufficiently ill at ease, Heaven knows; but it was not in my nature to complain much at that time of my life, so I said I was very well, and hoped he was.

"I am," said the stranger, "thank Heaven, quite well. I have received a letter from Mr. Murdstone, in which he mentions that he would desire me to receive into an apartment in the rear of my house, which is at present unoccupied—and is, in short, to be let as a—in short." said the stranger, with a smile and in a burst of confidence, "as a bedroom—the young beginner whom I have now the pleasure to—" and the stranger waved his hand, and settled his chin in his shirt collar.

(Continued in next issue)

Macaroni

Macaroni in Its Plain Form— Put on to cook in boiled salted water and boil rapidly until the paste will hang limply over a fork, not slipping off, stirring occasionally—enough to prevent sticking. It will require fully three-quarters of an hour to cook macaroni, nearly one-half hour for spaghetti, and ten to twelve minutes for vermicelli. The time required depends upon the quality and age of the paste. When done drain thoroughly and turn on to a hot dish, dust with pepper and add salt if there is any suggestion of freshness in the vapour of the cooked paste. Now add some lumps of butter, tossing the macaroni about between two forks until it is melted, then cover with another hot dish and send immediately to the table.

However Italian pastes are served, they must be hot to be enjoyable, this being particularly true of the plainer dishes. It is therefore desirable that dishes and serving plates be piping hot before needed. A lover of macaroni will enjoy the dish as above prepared, which is the simplest form of serving it, but most people prefer to add some grated cheese, Parmesan by preference, though any rich, well-flavored American cheese will do. Many cooks add the grated cheese with the butter, but the better way is to add it at the table.

BAKED MACARONI.

Prepare the paste as for plain macaroni, breaking the sticks once or twice before cooking. Butter a baking dish thoroughly, and cover the bottom with the cooked macaroni; sprinkle quite heavily with grated cheese, dust with pepper and salt, and dot over generously with butter. Continue these layers until the dish is full, finishing with the cheese. Now blend one teaspoonful of flour and one generous cupful of cream or rich milk, and pour this over the macaroni, making little openings with a fork for it to run through the mass. Bake until a golden brown in a moderate oven, then cover with a pie tin and let stand for fifteen or twenty minutes in the warming oven or an open baking oven. This softens the crisped brown cheese by confined moisture, making the dish more softly luscious. The amount of cream or milk used must depend upon the amount of macaroni, but the proportion of flour to the cupful must be preserved, as the creamy medium about the macaroni should seem only like thick cream, not like a sauce or paste.

Baked macaroni is a delicious dish when prepared in this way; but when the preliminary cooking is done in water not properly salted—when the paste is underdone or overdone—and when the medium is a thin milk curdled with cheese, and the top hard cheese cracklings—it is about as poor a dish as one may offer to the family.

Other Good Receipes.—The above is not the only way of preparing baked macaroni, although in a general way it covers the ground. The only difference in the other plans consists in the addition of some preferred ingredient or the substitution of one article for another in combining the materials. Here are three suggestions for those who prefer something different.

No. 1.—Prepare as above, only substituting a meat gravy for the cream or milk used. This makes a very rich dish, and in fact is rather too rich to be wholesome for children.

No. 2.—Prepare as above, alternat-

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ing the macaroni and cheese layers with one of oysters.

No. 3.—Prepare as above, using tomato sauce instead of the cream. This is a very fine dish.

Fairy Tales

I was present at a very interesting discussion among some mothers the other day concerning the value of fairy tales for our children. The first speaker maintained that the Greek people had used fairy tales and myths in their education as having a moral influence, each story was symbolic of the influences that faces the child later on and that when the boy grew up and forgot the most of the tales, what he would remember was that the good always conquered the bad, the brave knight was given strength to kill the dragon, the good daughter was remembered by the fairies and the evil sisters punished, the sleeping princess was found and made happy by the prince and so on. Good and right always conquer evil and darkness and the child is left with an impression of faith in good and right. Courage, faithfulness and endurance are also taught in such a way as to attract the child's attention.

One mother brought forward the idea that fairy tales cultivate the imagination and that imagination is the most valuable ability a child can have. From imagination comes the growth of the creative facilities and from them all great and new works, all inventions, all art and all literature. What would we do without our great writers, painters, sculpturers, musicians and statesmen. And it is their creative faculty and imagination that gives them the ideas for their works.

Fairy tales should be told as fairy tales and not as facts and then the child will not be confused between the real and the unreal. Just as we read stories—fiction of all kinds and accept them as stories and enjoy them the child loves fairy tales. They are the literature the fiction of childhood and why withhold from him what gives him so much happiness.

Another lady declared that from an awsthetic standpoint they were important. The ideas of fairies with their beautiful dresses of flower petals, etc., taught the children to love all nature for they were fondly looking to see them in all the flowers and trees and felt akin to everything they encountered.

Another explained that fairy tales satisfied the child's love of the ex travagant. The princesses can wear the most gorgeous dress imaginable the prince be covered with jewels. Things in this world may not always come up to their expectations, but in the fairy tales everything is as perfect as we like to make it.

But it was shown that we could no more let our children hear every fairy tale than we can let our young folks read every book. There are good and bad fairy tales as well as good and bad books.

The mother should read the story first and only tell it to her little ones if it will be a benefit to them. Stories of bad fairies and ugly bloody deeds would be things no little child should hear. It is cruel and wrong to frighten children and very injurious to them both mentally and morally.

But pretty stories about good fairies that love and help us and each other are a joy and a delight to all children and will develop their brains.—B. J.

Prickly Heat

Prickly heat is an acute inflammation of the skin caused directly by excessive heat, and by the resulting disturbance of the function of perspiration. The skin is red, and dotted over with scarlet pimples and with little blisters the size of a pinhead, and it itches and prickles distressingly. The eruption usually appears in very hot and especially in humid weather; and violent exercise, the eating of highly seasoned food, or the taking of hot soup or tea may bring it on. Irritation of the skin by the underclothing, especially if it be of wool, may also precipitate an attack.

If the eruption is properly treated, it usually disappears in a few days, but it is likely to recur whenever the weather becomes "muggy." The sufferer from prickly heat should wear light under-clothing, preferably linen silk, or cotton, and change it frequently; his bedclothing should be light; he should eat sparingly, and avoid food or drink that is highly spiced or hot; it is well to take moderate exercise early in the morning or in the evening, and to drink plenty of cool water, which may be mixed with lemon-juice or some other acid, but not with alcohol in any form.

A small daily dose of salts taken in the morning is useful. Two to four tablespoonfuls of borax and baking-soda added to the bath helps to prevent the eruption, or to relieve it when it is present. The itching is lessened by profusely dusting the skin with powders of zinc oxid and chalk, or by bathing it with extract of witch-hazel, or with a wash that contains zinc oxid and calamin suspended in glycerine and rose water.

For Freckles and Sunburn

Treatments for the cure of freckles are many and varied ranging from the rather drastic method of removing the outer cuticle with strong lotions to the simple process of bleaching them with an application of peroxide of hydrogen.

A simple and effective lotion for removing freckles can be made up from the following receipe. It is not advisable to make more than the quantity given at a time, as the lemon juice to be really effective must be fresh. Take one tablespoonful of strained lemon juice and the same quantity of rum and mix them with a teaspoonful of pure glycerine. Apply to the freckles with a fine camel-hair brush, allowing the lotion to dry on the skin. A little powder can be dusted on afterwards. This lotion must be applied night and morning, and, whenever possible, once or twice during the day, till a cure is affected.

For those who can obtain it, there is no finer remedy for freckles and sunburn than fresh buttermilk used regularly.

Some physicians affirm that the deep, dark freckles—commonly called winter freckles because they remain through summer and winter alike—are caused by too much iron in the blood. Others give poorness of the blood, feeble circulation, etc., as the chief reasons why some are troubled in this way. But whatever the fundamental cause may be, it is safe to say that it is the woman with the fine skin who freckles most quickly.

A Hint for the Woman of Forty

After forty the digestion is slower, and slightly less food should be taken by the woman who is anxious to preserve a youthful appearance, and a longer time allowed for digesting it. About fifteen minutes' rest after each meal will be a great help.

In the Sick Room

The ticking of a clock or watch in a sick room is often most trying to a nervous person. To obviate this, turn a tumbler over a watch on a chair or table beside the bed, and the sound of the ticking can no longer be heard.

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Another delicious sachet powder is composed of oil of patchouli, ½ drachm; oil of rose-geranium, ½ drachm; otto of rose, ½ drachm; oil of sandal-wood, 1 drachm; oil of English lavendar, 1 drachm; oil of cloves, ½ drachm; oil of bergamot, 3½ drachms; extract of musk, ½ drachm. Mix, and add two drachms of this compound to powdered orris-root, 1 oz.; Tonquin beans, 1 drachm; sifted pine sawdust, 2 oz. The scented oils, if kept in a closely-stoppered bottle, may be used to renew the perfume when desired. Little bags of this sachet powder may be placed in drawers and boxes containing gloves, hand kerchiefs and veils.

Hanging Pictures.

By hanging pictures low you increase the apparent height of a room. Coloured pictures should not be hung in halls or on staircases, unless there is plenty of light for them. In such places strong photographs, engravings, and drawings in black and white go best. A picture should not be hung from one nail; the diagonal lines formed by the cord have a very discordant effect. Two nails and two vertical cords—or, what is far more safe, pieces of wire cordage—should be used instead of the single cord.

Picture cords should be as near the colour of the wall upon which they are put as possible, so that they may be but little seen. When one picture is hung beneath another the bottom one should be hung from the one above, and not from the top; we thus avoid multiplying the cords, which is always objectionable.

A good hue for walls where prints or photographs are to be hung is a rich yellow brown or a leather colour. Lustre to the black of the print or the tone of the photograph is thus imparted.

The wall paper should have no strongly defined pattern, and should be one of uniform colour, such as red inclining to crimson or tea green. The centre of the picture, as a rule, should not be much above the level of the eye.

Variety in Diet.

Variety has been well described as the salt of life, and there is no question but that nine-tenths of the women who break down and suffer from what the doctors call "nervous debility" are really the victims of want of variety.

Although much good advice is given concerning the advantages of systematic arrangements in regard to the daily work and every detail of the home life, we must not overlook the equal advantages of variety in many departments of the home.

The elements of surprise in even the hum-drum afairs of every-day life converts the prosaic into the more soul-satisfying uncertainty about what is to be; and the excitement thus fostered is that fine line that keeps us ever on the alert, ever expectant.

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It is, reader, this vast and unusual opportunity which has enabled me to compile this very popular and valuable little free book (over a million of which have been sent everywhere to men who wrote me for them), and in a manner to reflect the exact living, breathing experiences and needs of real men who sought information as to the newer ways of self treatment without the use of drugs.

Remember, this book of over 8000 words and 30 illustrations will come to you by return mail in reply to your request, and in a perfectly plain, sealed envelope, for it is no one's business but your own what the envelope contains. There is absolutely no obligation on your part to buy anything or pay anything, and merely the receipt of this book which does not mean in any way that you are to use one of my VITALIZERS (see description below) and, in fact, only a portion of the book has any reference to the VITALIZER at all. Primarily it is a compendium of useful information for private reference, which you and all other men may easily profit by through life.

Therefore, please use the coupon, or if nearby, I should be very glad to have you call.

SANDEN, AUTHOR.

It is a fact, reader, which you and I must recognize and admit, that the whole world admires and is fascinated by strong, vigorous, husky, manly manhood, and we must also admit that it is this same manhood and this alone which is back of the real leaders and producers in every walk of life. No matter where we go, we find it to be the manly, vigorous, vital fellow who forges to the front, who fascinates men and women of his community, who does the really great things. An unmanly man merely means nature's laws gone wrong, for it is he who halts and hesitates, who takes the back seat, who does not fit into the picture in a way that a manly, vital nature should. And yet, reader, it is my firm believe that any man, no matter what his past, no matter what dissipations or follies may have left their mark upon his physical and mental being, I say to you that such a man, unless there be some unusual reason, may hope for a complete return of his strength, vigor and self confidence, if he but go about his self restoration in a natural commonsense way.

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There are many imitations of this best of all fly killers.
Ask for Wilson's, be sure you get them, and avoid disappointment.

four meals a day, and the necessary washing, baking, and sweeping incident to the running of a well-regulated household, thinks, perhaps, that the element of surprise should not be introduced into the clock-work system, lest confusion be the result. Here is just where the mistake lies, for in the endeavour to secure perfection of detail, affairs get into a rut, and order becomes both monotonous and tiresome.

The family does not like to feel that on Wednesday it will sit down to boiled beef as surely as it will dine on roast mutton on Sunday. Only the other day we heard a wife say to her husband, "What shall I get for dinner?" and the reply came straight from the man's heart, "I don't care, so long as I do not know what it is going to be."

This sentiment is universal. Herrings that are unexpected are more relished than salmon and pheasant talked and planned about days before hand. Vary the daily menu, and likewise vary the arrangement of your rooms. The eyes get tired looking at chairs and pictures always in the same spot. Of course, it will be best to enter into the new regime with moderation and good sense, or the desire to produce a surprise may result in something not so agreeable as anticipated.

Do not throw the house into confusion every day in order to obtain a new arrangement in furnishings, and do not eschew entirely the sensible meals well served that have heretofore been the standby in your daily menu; but contrive once in a while to strike the keynote of variety, for it is likewise the keynote of domestic harmony.

How to get rid of Rats.

A gentleman who has experimented and insists that he knows what he is talking about, says that it is possible entirely to clear premises of rats by a simple device.

One must have a trap that will catch a live rat. It is a good plan to chloroform the creature, as then there is no danger of getting bitten, and the bite of a rat is sometimes a very troublesome thing.

Then a tiny, tinkling bell is fastened around the rat's neck by a fine, strong chain or a wire, with the ends securely twisted, so that the rat may neither slip the collar off nor be caught in any place that it may attempt to crawl through. In a few minutes it will recover from the effects of the chloroform, when it should be turned loose in the cellar or what building one chooses to clear of these troublesome tenants.

The noise of the bell frightens it, and it rushes instinctively towards its comrades, and they in turn become frightened, and a panic takes possession of the entire colony. This is certainly a good way to banish rats.

The Sick Room.

If there must be talking in a sick room, let it be distinct and not in a suppressed voice, for nothing is more irritating to the sick than whispering or half whispering, whether or not there is an effort to hear. The very mystery of it is exasperating. No matter how weak or indifferent, or in how much of a stuper he may appear to be in, the patient may yet be conscious of every word you say, and be discouraged by an unfavorable remark you make in his hearing.

TO-DAY AND EVERYDAY

You'll Like the Flavor
35¢-40¢-50¢ Per Pound

Ford
THE UNIVERSAL CAR
275,577 is the number of a motor that left our factory one bright morning not long ago. It was a wonderful motor--the result of a big and unmatched experience. And the thousand or more motors we are building every day are exactly like it.
Our factories, produced nearly a quarter of a million Model T's. Prices: Runabout, $675, Touring Car, $750; Town Car, $1,000—f. o. b. Walkerville, Ont., with all equipment. For particulars get "Ford Times"—an interesting automobile magazine. It's free from Walkerville factory. Ford Motor Company of Canada, Limited.

A WONDERFUL REMEDY

Orange Lily is daily curing the most obstinate cases of Female Disorders. Failing of the Womb, Leucorrhoea, Painful and Suppressed Menstruation, etc., etc., are all of them relieved from the start by its use, and a few weeks' or months' treatment accomplishes a complete cure. This remedy is a positive, scientific preparation, and is based on the discoveries of Pasteur and Lister. It is an applied treatment; that is, it is not taken internally, but is applied direct to the suffering parts, and it, therefore, acts with all the certainty of the known laws of chemical action. As it comes in direct contact with the diseased tissue, its antiseptic and nerve-food properties cannot help have a beneficent influence. I receive from 10 to 50 letters daily, speaking of the benefits and cures it is performing, and so sure am I that it will do what is claimed for it that I will send, absolutely free, a 35c box to every suffering woman who will write for it. Price, $1 per box, which is sufficient for one months' treatment. Address, MRS. FRANCES E. CURRAH, WINDSOR, ONT. 3
For Sale By Leading Druggists Everywhere

It Pays to Advertise in the Maritime Farmer.

Organizing System of Reports on Fruit.

The New Brunswick Provincial Department of Agriculture is organizing a system of reports on conditions affecting fruit growing in New Brunswick in order to secure information that will be valuable to the department. At present the Dominion Department of Agriculture has correspondents in various parts of the province who made periodical reports, but it has been felt that the local authorities ought to have their own system of securing information about the conditions prevailing throughout the province, and should not be dependent upon the Dominion department for reports as to crop prospects etc. It is felt that the provincial department can learn much of value by the organization of the proposed system of collecting information about conditions in the different fruit raising districts, and will be enabled to do something to help the fruit growers.

As a result of the courses of instruction in fruit growing and packing given by the department during the winter it was expected there would be a great improvement in the quality of the exhibits at the fruit show to be held in St. John this fall. The officials who conducted the courses of instruction in fruit raising in many parts of the province gave considerable attention to the matter of packing apples, and the qualities considered desirable in exhibits, and as their lectures were largely attended it is believed there will be a more careful selection in the exhibits sent to the fruit show this year than has been the case in the past.

In regard to the crop prospects for the province, the indications that there will be a fair crop, though the cold weather this spring has been an unfavorable factor. A considerable number of new orchards have been set out this spring, and these are doing well. The St. John Board of Trade orchard at Brown's Flats is coming on very well.

Valley View Farm

228 Acres, Only $1900

Bldgs. worth more than price asked; good 8-room house; nearly new 40 x 60-ft. barn, ties 20 head stock, holds 70 tons hay; 40 acres rich tillage, fine for potatoes, hay, grain and apples; 200 young trees now set; wood and timber will make new owner rich; wire-fenced and spring-watered pasture for 25 head; near neighbors, schools and all advantages; owner has other farms, must sell one; a big snap to quick buyer; part cash; for traveling instructions, see page 67, our "New Mammoth 75-Page Farm Catalogue No. 36"; beaufifully illustrated and filled with a wonderful assortment of money-making farms; send today for your free copy, it will save you lots of time and money. Box D, Sussex, N. B

New Ditching Machine Will Tour New Brunswick

While in Sackville recently, Mr. Daggett attended a largely attended meeting of the farmers from the vicinity of that town at which the matter of fertilization was discussed. The subject is one which is interesting the farmers of that locality just now, in view of the efforts being made to mix a fertilizer of their own which will prove cheap as well as suitable. An experiment in mixing a new brand of fertilizer was made by the agricultural society of Sackville and the outcome of the endeavour will be watched by those interested in the matter. We understanh that the crops on which it was used are all doing nicely and that it gives promise of good satisfaction

The new ditching machine which the provincial government procured is in Fredericton, Mr. Daggett said, and an expert was there to set up the machine.

It was tried on the Experimental farm at Fredericton. Afterwards it will be brought to other parts of the province. The itinerary of the machine is now being worked out. The idea is to give the farmers of the different sections an opportunity to see what can be accomplished by the machine and, consequently, as much ground as possible wil, be covered during this year's itinerary. It may be found possible next year to interest the farmers to such a degree in the machine that by the formation of circles or by a co-operative system in various sections a machine may be purchased for each community.

Taking no Chance With the Browntail.

Dr. C. Gordon Hewitt, Dominion Entomologist, was recently on a trip to New Brunswick for the purpose of arranging for the establishment of a fumigating station at Reed's Point to deal with all trees and plants brought here from the States, and also to confer with Mr. Tothill, the representative of his department, stationed at Fredericton.

Dr. Hewitt said the entomology department was taking no chances with the brown tail moth and if vigilance could prevent it would not allow the pest to get out of control in New Brunswick. "It is bound to come this way," he said, "and we are importing parasites from Massachusetts and placing them in infected districts, as the only effective way to fight the pest is to do so with the parasites which destroy it."

Dr. Hewitt said that in some parts of the provinces the tent caterpillar was causing trouble and it also would be fought by the means of parasites.

50,000 Fruit Trees, This Year's Supply.

That fifty thousand fruit trees were imported to New Brunswick to form the nucleus for new fruit farms and additions to existing orchards was the statement made by Mr. A. G. Turney, provincial horticulturist.

The number of trees imported the past year was between 35 and 40 thousand; so that this year's increase will be between 20 and 30 per cent. It is expected that fully 75 per cent of the trees imported this year will be placed in the St. John River Valley.

Upwards of 18,000 trees were imported through the New Brunswick Fruit Growers' Association this year, an increase of about 33 per cent over last year's record when about 15,000 trees were imported.—Fredericton Gleaner.

Braised Duck.

Braised duck is delicious. Truss the duck ready for braising. Line a saucepan with six slices of fat bacon, one sliced onion, one sliced carrot, one sliced lemon, and a small bunch of herbs; place the duck upon this, season with salt and pepper, add one cupful of brown sauce, and cook slowly until tender. Place the duck on a hot dish, decorate with watercress and quartered oranges, and serve with a dish of mashed turnips and gravy.

Uric Acid Never Caused Rheumatism

I WANT to prove it to your satisfaction. If you have Rheumatism, acute or chronic—no matter what your condition—write today for my FREE BOOK on "RHEUMATISM—Its Cause and Cure" Thousands call it "The most wonderful book ever written." Don't send a stamp—it's ABSOLUTELY FREE.

JESSE A. CASE, Dept. 461, Brockton, Mass. U. S. A.

The Agricultural College, Truro, N. S.

Next Session of Full Course begins November 4th, 1913.

Next Short Course for Farmers and Farmers' Sons begins Jan. 6th, 1914.

Next Short Course in Domestic Science, Dairying, Horticulture and Poultry for Ladies begins January 6th, 1914.

The buildings have during the past year been doubled in capacity, the faculty increased and arrangements completed for accomodating the largest attendance in the history of the institution.

Tuition Free to all Students from the Maritime Provinces

Students can take a full course in the various branches of Agriculture, Veterinary Science, etc., and at the same time in English, Mathematics, Book-keeping, the various science and other lines regularly studied in high schools and colleges.

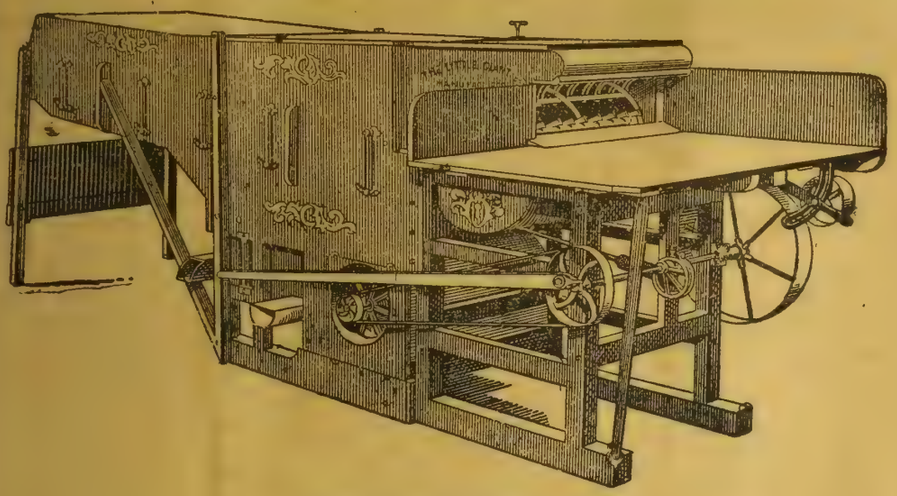
STUDENTS COMPLETING THE TWO YEARS COURSE AT TRURO CAN ENTER THE THIRD YEAR AT GUELPH, ST. ANNE DE BELLEVUE AND OTHER AGRICULTURAL COLLEGES.

Write for calendar to

M. Cumming, B. A., B. S. A.,

Principal Agricultural College, Truro, N. S.

The Sussex Manufacturing Company's Line Is Complete



Two Horse "Sussex Little Giant" Thresher

THE Sussex Manufacturing Company line is the best in their class on the market to-day. You will see by the cuts and the catalogue which we would like to send you that we have made many valuable and extensive improvements and have added to our lines a nunber of new machines which have been designed by expert mechanics.

In the construction of our machines we have availed ourselves of the services of highly practical men of long standing thus enabling us to offer to the public goods which are unsurpassed both for quality and service.

As an evidence of this large number of strong testimonials, which we will furnish upon request, have been received from satisfied customers.

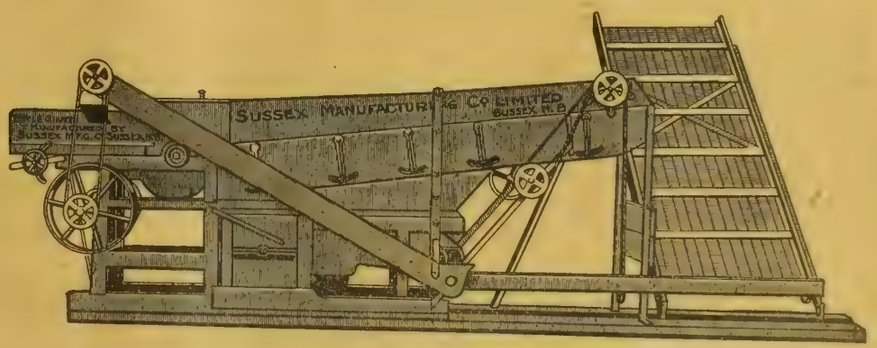
Also being closely connected with one of the leading lumber concerns in Eastern Canada, we are in a position to get the very best lumber some years in advance of the time when it is required to be used; thus giving us an opportunity of thoroughly seasoning the wood by the air dried process and it is found that our machinery which is so constructed gives splendid satisfaction and is better able to stand the climatic changes to which it is subjected in actual use.

One of the strong features is, that every machine we build is set up and given a thorough test before it leaves our factory.

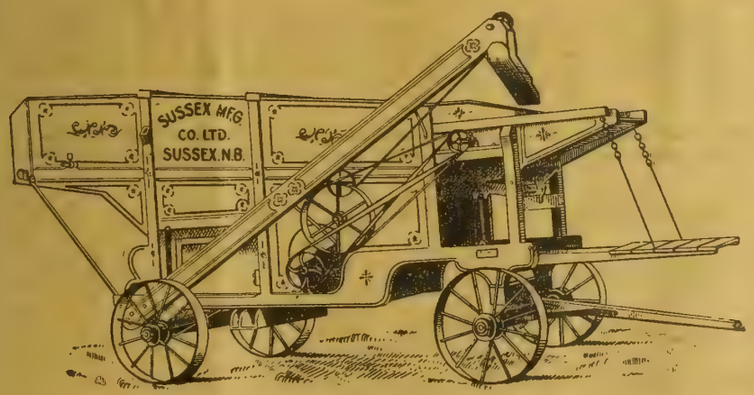
Two Horse Thresher

This is the machine on which our reputation has been built and is without doubt the best machine on the market.

Can be operated with Two Horse Tread Power or with Gasoline Engine. It is decidedly in favor where limited quantities of grain are to be threshed.



Four Horse "Sussex Little Giant" Thresher



Sussex Big Giant

Four Horse Thresher

Built especially for use with Gasoline Engines.

Experience has shown that Gasoline Engines are coming more and more into use as a power for threshing purposes.

With this power, the demand is for a machine small enough to be moved from place with ease and yet of sufficient capacity to turn out a big days work.

Our Four Horse Machine is especially built to meet this demand. A six to eight horse power engine will operate it with ease. Can be supplied with or without tailings elevator, bagger and also with trucks if so desired.

Sussex Big Giant

The Sussex Big Giant Thresher is designed to meet the requirements of those who need a heavier and faster threshing machine than our Four Horse.

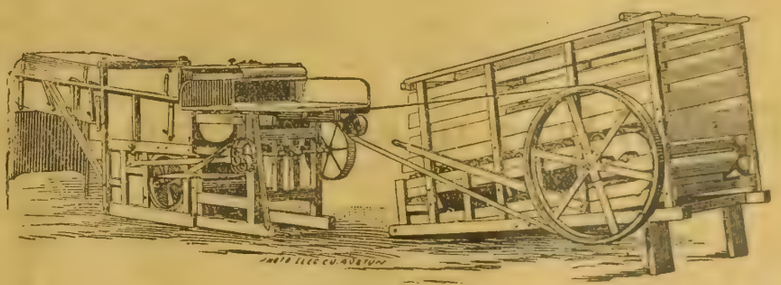
It is made very strong throughout. The frame is of the best straight lumber, well joined and thoroughly braced, so that when the machine is running at its full capacity there is very little vibration. The grain can be taken from either side of the machine and change can be made while in operation.

It is fitted with trucks; tailings elevator and one length of straw carrier. A bagging attachment is supplied at a slight additional cost and can be used on either side, to which bag can easily be attached, provision being made for two bags.

The Sussex Big Giant Thresher is operated with an eight to ten horse power engine. The main bearings are all equipped with compression grease cups. A convenient tool box is placed underneath the cylinder thus keeping the tools that you need near at hand.

Inside of Sussex Big Giant

The body is 40 inches wide. The separating device consists of a number of kickers which thoroughly agitate the straw and take it direct from the cylinder. For the perfect separation of grain, this machine has no superior.



2 Horse Outfit Complete

Manufacturers of Threshing Machines in four sizes; Horse Powers in two sizes; Hay Presses, Wood Cutters, in three different sizes; Grain Grinders Root Pulpers, Garden Seeders, Feed Boilers. A large and well assorted stock of Plow Castings, a large and complete line of House Finish, Refrigerators School and Church Furniture and General Workers in Wood and Iron.

THE SUSSEX MANUFACTURING COMPANY, LTD., SUSSEX, N. B.

The Threshing of Clover.

(Continued from page 701)
insure perfectly uniform conditions. With regard to the moisture of the clover hay, and even of the air, the day the test is made—this is most important as it is well known that the clover takes up the moisture of the air very quickly and is more difficult to thresh when damp than when dry and brittle. The brightness and good appearance of the seed depends on the dry weather during threshing. —G. Michaud in Journal of Agriculture.

Some Stable Rules From Boston.

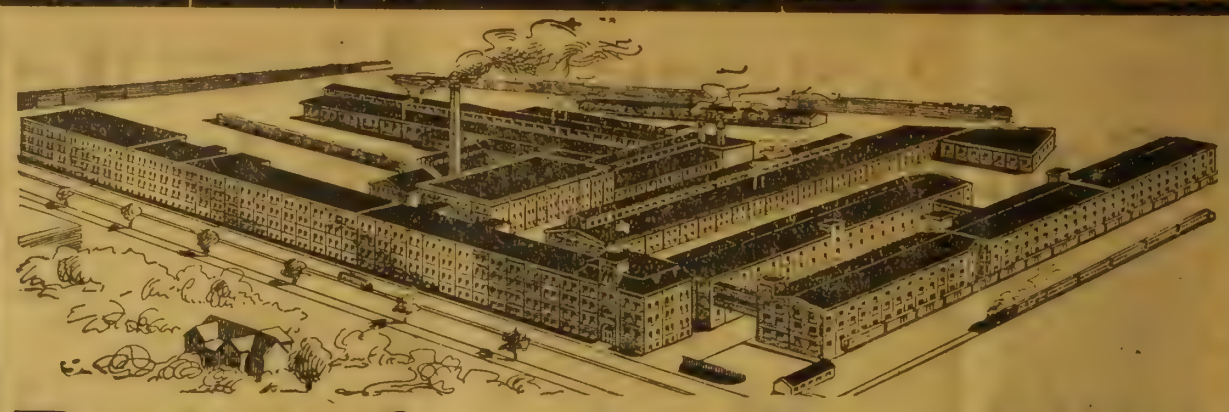
The Boston Work-Horse Parade Association is an organization with a wide reputation because of its efforts at improvement in horse comfort. It deals, of course, with city stables, and some of its teachings are scarcely applicable to farm conditions. Still they are all instructive. Here is its list of stable rules:—

STABLE RULES.

1. The best order in feeding is: Water, hay, water again, grain.
2. Never give grain to a tired horse. Let him rest and nibble hay for an hour or two first. Grain in the manger before the horse comes in looks bad.
3. Water the horses as often as possible; but let the horse that comes in hot drink a few swallows only, until he is cool.
4. Always water the horse after he has eaten his hay at night. Do not go to bed leaving him thirsty all night.
5. Do not forget to salt the horse once a week; or, better yet, keep salt always before him. He knows best how much he needs.
6. Give a bran mash Saturday night or Sunday noon; and on Wednesday night also, if work is slack. After a long day in very cold or wet weather, a hot mash, half bran and half oats, with a tablespoonful of ginger, will do the horse good. Put very little salt, if any, in the mash.
7. If the horse does not eat well, or slobers, examine his teeth.
8. Keep a good, deep, dry bed under the horse while he is in the stable, day or night, on Sundays especially. The more he lies down, the longer his legs and feet will last.
9. In order to do well, the horse must be kept warm. Give him a blanket on cool nights in late summer or early fall, and an extra blanket on an extra cold night in winter.
10. In cold rains do not tie up the horses tail. The long tail prevents the water from running down the inside of his legs, and keeps off a current of air from his belly.
11. Take off the harness, collar and all, when the horse comes in to feed. He will rest better without it.
12. Never put a horse up dirty or muddy for the night. At least brush his legs and belly, and straighten his hair.
13. In hot weather, and in all weathers if the horse is hot, sponge his eyes, nose, dock, the harness marks, and the inside of his hind-quarters when he first comes in.
14. When the horse comes in wet with rain, first scrape him, then blanket him, and rub his head, neck, loins and legs. If the weather is cold put on an extra blanket in twenty minutes. Change the wet blanket when the horse dries. DO NOT WASH THE LEGS. Run them dry, or bandage loosely with thick bandages. It is far more important to have the legs warm and dry than clean.
15. To prevent scratches, dry the horse's fetlocks and heels when he comes in, especially in winter; and rub on a little glycerine or vaseline before he goes out in snow or mud.
16. Examine the horses feet when he comes in, and wash them if he does not wear pads. If a horse in the city is not shod in front with pads, tar and oakum, which is the best way, it is absolutely necessary to keep his feet soft by packing them, or by wrapping a wet piece of old blanket or carpet around the foot, or by applying some hoof dressing or axle oil, inside and out, at least three times a week.
17. Let the horse have a chance to roll as often as possible; it will rest and refresh him. Give him a little clean earth or a piece of sod to eat now and then; he craves it, and it is good for his stomach and blood.
18. Speak gently to the horse, and do not swear or yell at him. He is a gentleman by instinct, and should be treated as such. The stable is the horses home, and it is your privilege to make it a happy one.

DRIVERS RULES.

1. Start at a walk, and let your horse work very easily for the first half hour.
2. A heavy draft horse should never be driven faster than a walk, with or without aload.
3. Look to your harness. Avoid these faults especially:—
   Bridle too long or too short.
   Blinders pressing on the eye or flapping. (A open bridle is best for most horses.)
   Throat-latch too tight.
   Collar too tight or too loose, or dirty on the inside.
   Shaft-girth too loose.
   Traces too long.
   Breeching too low down or too loose.
   Inside reins too long, in the case of pairs.
4. Do not let your horse drive himself; but handle the reins gently. Never Never jerk the reins; to do that is the sure mark of a bad driver.
5. Try to deliver your load with as little backing as possible. Backing a heavy load is apt to strain the hind legs.
6. Take the horse out of the shafts as much as possible; and if you drive a pair or four, unfasten the outside traces while the horses are standing; they will rest better that way.
7. Teach your horses to go into the collar gradually. When a load is to be started, speak to the horses and take a firm hold of the reins so that they will arch their necks, keep their legs under them, and step on their toes. A loose rein means sprawling and slipping, often with one horse ahead of the other.
8. Water your horse as often as possible. Water in moderate quantities will not hurt him, so long as he keeps moving.
9. Blanket your horse carefully when he stands, especially if he is at all hot. Repeated slight chills stiffen and age a horse before his time.
10. Bring your horse in cool and breathing easily. If he comes in hot, he will sweat in the stable, and the sudden stoppage of hard work is bad for his feet.
11. In hot weather or in drawing heavy loads, watch your horse's breathing. If he breathes hard, or short and quick, it is time to stop.
12. Remember that the horse is the most nervous of all animals, and that little things annoy and irritate him. Remember that he will be contented or miserable accordingly as you treat him.



Brantford Roofing

should be ***the best possible*** roofing for that new building of yours. It's the roofing you see on this big ***Massey-Harris*** plant. They wanted a roofing practically ***Acid-proof*** and ***Fire-Proof***—a roofing with ***known, element-resisting*** powers. So they covered this ***valuable*** plant and its ***valuable*** contents with ***Brantford Roofing.***

Brantford-Roofing is the most ***efficient*** and ***economical*** roofing you can buy. It simply ***cannot*** be affected materially by heat or water--wind or weather.

Write for our Big FREE Book on the ***Roofing*** Question. It contains samples and facts every roof buyer should know.

Brantford Roofing Co. Ltd., Brantford, Canada

Warehouses : Toronto Montreal Winnipeg

Pedlar People Limited add to Staff.

In keeping with the policy of the house as originated and developed by the late Mr. Geo. H. Pedlar, additions to the force at Oshawa headquarters have recently been made, which will further increase the efficiency of an already strong and capable organization.

Mr. W. R. Geikie, formerly Branch Manager of The Pedlar People Limited, at Toronto, and with a thorough knowledge of the financial end, gained through a long experience while with the Dominion Bank, as manager of various branches, will in his capacity as managing director, bring this ample knowledge into good use, which, added to his experience in selling sheet metal products as manager of the branch at Toronto, will enable him to gauge the situation correctly as applying to trade conditions in sheet metal lines.

The Operating Dept has been strengthened by the addition of Mr. W. Loach, formerly connected with the management of Canada Foundries Limited, Toronto, and with a wide and varied mechanical and manufacturing experience in the United States and Canada. Several new developments are now under way, which will be of general interest to the trade when particulars are announced.

A further addition has just been made in the person of Mr. A. T. Enlow, in general charge of Sales and Advertising. Mr Enlow is a steel man of large experience, having been connected with the manufacture and sale of steel, in the United States for the last twenty years. He was Plant Manager for the U. S. Steel Corporation, at Cambridge, Ohio, and later Sales Manager of Berger Mfg. Co., and General Sales Manager of The Stark Rolling Mill Co., both at Canton, Ohio, and while in that capacity developed and marketed the famous anti-crossive Toncan Metal sheets, for which The Pedlar People Limited are Canadian distributors.

It is safe to say the addition of these three experienced men to the

If Your Back Hurts You YOUR KIDNEYS ARE RESPONSIBLE.

MR. JOHN BRIGGS, Whitewood, Sask., writes:—"I am sending you this testimonial out of pure gratitude, as I am not a believer in patent medicines, but I got so run down, that I became quite willing to give anything a trial. I paid a visit to our local druggist, and told him I was suffering intense agony with my back. He told me I had kidney trouble, and handed me a box of DOAN'S KIDNEY PILLS, saying it was the best thing he could possibly give me. I tried them, and the effect was certainly marvelous. They are worth $10 a box of anybody's money, and I would not be without a box by me. I certainly owe my present condition to DOAN'S KIDNEY PILLS."

DOAN'S PILLS are 50 cents per box, or three boxes for $1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

When ordering direct from us specify DOAN'S.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

115 Acres Equipped, $2900

Near Augusta, Me.

Just out of city in lake section; 45-acres machine-worked fields; brook pasture; valuable woodlot; variety fruit; fine 7-room house, cemented cellar; 40 x 60-ft. barn with cellar; cow, poultry and hog houses; aged owner must close out at once, will throw in pr. horses, cows, heifer, hogs, poultry; mowing machine, in fact a clean sweep on easy terms if taken now; for traveling instructions to see this rare bargain and one of 140 acres for only $1400, see page 5, our "New Mammoth 75-page Farm Catalogue No. 36"; beautifully illustrated and filled with a wonderful assortment of money-making farms throughout Maine; send today for your free copy, it will save you lots of time and money. Box No. D, Sussex. N. B.

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. Dr. de Van's are sold at $5 a box, or three for $10. Mailed to any address. The Scobell Drug Co., St. Catharines, Ont.

If you are a housewife you cannot reasonably hope to be healthy or beautiful by washing dishes, sweeping and doing housework all day, and crawling into bed dead tired at night. You must get out into the open air and sunlight. If you do this every day and keep your stomach and bowels in good order by taking Chamberlain's Tablets when needed, you should become both healthy and beautiful. For sale by all dealers.

already strong and aggressive staff of The Pedlar People Limited, Oshawa, Ontario, of which Mr. W. H. Hall and Mr. F. L. Mason, have been prominently associated in the development of the great business, as active co-workers with the late Mr. Pedlar, means a continuation of the policy which has kept the firm at the head of sheet metal working activities in Canada and abroad.

Adulteration Has Barred Maple Products From British Isles.

Mr. Beckles Willson, writer upon Canadian subjects and the author of "Quebec, the Laurentian Provinces," has been spending a few days in Montreal, alter a visit to Ottawa. Mr. Willson has been making an enquiry into the maple sugar industry, the results of which are to be published in Great Britain.

"I do not think," explained Mr. Beckles Willson to a Star representative, "that the enormous possibilities of this delicious product are quite realized in Canada. A great and highly profitable market awaits us in the United Kingdom. As yet both sugar and syrup are virtually unknown, but wherever I have introduced either the reception has been most gratifying. The stuff sold as maple sugar at two or three of the London confectioners is an abominable compound, with probably not more than twenty per cent. of the genuine article. Fortunately, little is sold. Last year I obtained, through my friend, the late Mr. H. M. Price, of Quebec, a quantity of the pure product. This I distributed amongst a number of persons of taste, foodstuff authorities and medical men, asking them for their opinion of its merits. English people are ready to become enormous consumers. Canadian maple sugar and maple syrup will be the sweetmeat a la mode."

BRITISH SYNDICATE FORMED.

"I understand a British syndicate has been formed to handle Canadian sugar and syrup."

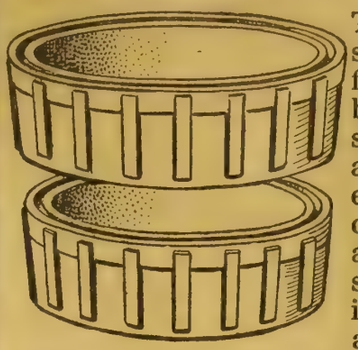
"Yes," replied Mr. Willson, "that is the case. A syndicate chiefly of Canadians resident in London, was formed last autumn, prepared to handle several thousand tons of the 1913 crop. You will understand that a pure supply was absolutely essential. When the matter was gone into it was found that this question of purity was indeed a lion in the path. The whole arrangement utterly broke down. Adulteration was so universal and virtually so unchecked by law that pure maple sugar could not be obtained.

"Just look at this thing quietly and in all its bearings," went on Mr. Willson. "Do you know what the maple stands for, not in the British Isles, but throughout the world? The leaf is the symbol of Canada. "The Maple Leaf" is now sung all over Britain and played by every village band. To introduce into the Mother Country a Canadian article whose ingredients were fraudulent, whose label was misleading, if not an actual lie, one claiming to be the product of Canada's national tree would be something more than a commercial blunder. It would be an aspersion upon the Canadian character and not to be tolerated.

"It is not a question merely of commerce; the reputation, the good name of the Dominion is at stake. Of all our products we can at least afford that maple sugar should become a bye-word, a synonym for "fake" and "bogus." The Canadian people should think of that and take it to heart."

"But are not steps being taken by the Government at Ottawa to prevent this adulteration?"

What This Sectional Firepot Means to You



These are some of the advantages of the Sunshine Furnace. Our agent will be pleased to show you others, or write for booklet.

The "Sunshine" has a straight-sided semi-steel firepot, extra heavily ribbed and made in two sections. The two sections allow for contraction and expansion—which prevents cracking. The heavy ribs and semi-steel give extra strength and added radiating surface. Ashes cannot adhere to the straight sides which assures an *all-over* clear fire. This means the greatest heat from the fuel consumed.

McClary's Sunshine Furnace

London Toronto Montreal Winnipeg Vancouver St. John, N.B.
Hamilton Calgary Saskatoon Edmonton 334

URGES IMMEDIATE ACTION.

"Something must be done at once. Otherwise it will be too late to restore maple sugar and syrup to their proper standard of purity. We do not hesitate to protect butter and cheese; why should we be less scrupcheese; why should we be less scrupulous about maple products? Fortunately, we have a small body of men convinced of the scandal and unrighteousness of the whole business. Mr. J. H. Grimm, of Montreal, has labored unceasingly in the cause and he has been loyally supported by Mr. Cromwell, M. P., and Mr. Baker, M. P., who represent great sugar-growing constituencies. Also, we have two ministers, the Hon. Mr. Burrell and the Hon. Mr. Nantel, who, I am confident, will not truckle to dishonesty. So that I am hopeful that we shall soon make it impossible for any manufacturer to impose fraudulently "maple compound," "mapleine," "maple flavor," and so forth on the public.

"I had a long conversation with Hon. Mr. Burrell in Ottawa, and he did not hesitate to say to me: "even if the passage and enforcement of a law were inexpedient for reasons we know, my self-respect as a minister of the crown demands that I should take measures to check this evil."

RIGID TEST NOT YET FOUND.

Mr. Beckles Willson then adverted to the chief difficulty in the way of putting an end to an evil which is itself killing a great national industry. The production in Canada of maple sugar and maple syrup has fallen off by nearly thirty million pounds since 1890, and this in spite of the fact that the growth of the maple has increased to such an extent that the Dominion should be producing five times the actual output. How, then, to detect adulteration—that is the cardinal difficulty. So adroit is the adulterator with the molasses, glucose, West Indian sugar and bark, that he is able to baffle the chemist. In a recent official bulletin, Professor A. McGill, the Public Analyst at Ottawa, states: "In submitting these revised standards for maple products, I am conscious that the lowering of the lead number and the malic acid number (these are the standard recognized tests for impurity) rendered necessary by considerations which have been placed before you in detail, makes it quite possible for fraud to be perpetrated in the maple sugar industry, with increasing difficulty of detection. This industry is a very important one, particularly in some sections of Canada, and it affords a source of profitable employment to a farmer at a period of the year when farm work is not otherwise pressing. For this reason it is desirable that the small manufacturer should be protected from the unfair competitions of mixtures of cane and maple sugars."

In his official bulletin Mr. McGill went on to say:

SUGGESTS ADULTERATION PENALTY.

"Recognizing the difficulty of affording as perfect protection as could be wished by inspection under the adulteration Act, I would respectfully suggest the offer of a reward to any person able to prove the manufacturer and seller of maple product which is adulterated. If a substantial penalty for adulteration of maple goods is specially named, one moiety of it should go to the informer in case of his making good his charges. This would, I venture to think, prove a powerful deterrent to fraudulent practices which now prevail."

"Here," Mr. Beckles Willson commented, "is the matter in a nutshell. Canada is losing now at least six million dollars annually in this industry. The majority of Canadian farmers who make sugar tap far less than half, possibly fewer than a third of their trees. There are millions of acreas of stony, mountainous land admirably suited to the growth of the sugar maple and good for nothing else. Quebec province alone should produce easily 200,000,000 lbs., ten times the present output. But why should the farmer go to the trouble, toil and expense of tapping his trees and preparing his sugar when any rascal can undersell him with faked cane sugar and mosasses?"

"It is sometimes argued," continued Mr. Willson, "that the adultera-

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

VALLEY FARM HOLSTEINS FOR SALE—All sold out of bulls except one calf dropped in March, 1913. W. G. CAMPBELL, Salisbury, N.B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE.—One pure bred Shorthorn bull, eighteen months old, color red, good size. Apply to C. H. RIPLEY, Rossendale, Cum. Co., N S.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

WANTED—The name and addrees of the party who mailed Postal Note No. H. 998512 at Moncton, N. B., on March 15th, so we may give proper credit for same.—THE MARITIME FARMER, Sussex, N. B.

Reduced Prices of Eggs

For the months of June, July and August only we will sell White Wyandotte, Columbian Wyandotte and S. C. White Leghorn eggs at $1.25 per 15; $3 for 50; $5 for 100. For Light Brahma eggs $2 for 15; $3 for 30. Address,

Michael K. Boyer, Box 27,
Atlantic Co., New Jersey.

Breeding Season 1913

The fashionably bred, prize-winning Clydesdale stallion, "Dunure Crag" will stand at stud and meet mares by appointment.

"Dunure Crag" is bred on the right lines, and will prove a very popular breeder, he is sired by the renowned "Baron of Buchlyvie."

For further particulars and terms apply to

J. MEIKLEJOHN, Cossar Farm,
Lower Gagetown, N. B

WANTED

About 40 good brood sows, also a number of young pigs. Apply with full particulars to

A. C. Corfield, 71 Dock St., St. John, N.B.

Holstein Bulls For Sale

We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, taree months after freshning.

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
Loch Lomond West Nova Scotia

HIGHLAND VIEW GUERNSEYS

We have very little to sell, but what we have got is the best, it is a bull calf six weeks old, out "Beadty Sue of Willow" (a cow purchased from Roger Brothers and sired by the famous "Golden Opinion." Write for price

R. R. BLACK, Amherst, N. S.

NOTICE

We have in stock at present to dispose of several pure-bred Guernsey and Ayrshire Cows and Heifers, fresh milked and to come in shortly, 3 Guernsey bulls from 12 to 10 months. A number of Shropshire Ewes and Lambs, registered and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm, Shubenacadie, N.B.

ted product is not unwholesome, but that is beside the point. Oleomargarine is wholesome, but it is not allowed to be sold as butter. The community must receive protection; they must get what they pay for. The adulterator of maple sugar should be mulcted in a fine of five hundred dollars with half to the informer. That would instantly and automatically put a stop to this nefarious business."

"If this were done," declared Mr. Willson, "not only would the general public benefit, and the farmer benefit, but it would render possible what is now impossible—the introduction of the product abroad."

Mr. Beckles Willson, who has recently acquired the famous Judge Haliburton estate, at Windsor, N. S. expects to return to Montreal in a few days.

Foul in Foot

Having several cases of fouls or foot rot in my herd could you give me the cause of this disease, also some preventive and cure?—A. L. P.

The disease is caused by wading in wet and filth and is aggravated by filth and dirt lodging between the digits. A filth germ, known as the bacillus necrophorus, is present in the worst cases and discharges from affected feet may taint grass and so infect clean cattle. Isolate affected cattle. Cut away all loose and underrun horn of hoof; then swab with a 1-500 solution of corrosive sublimate or saturated solution of sulphate of copper used hot; and then cover with a mixture of one part each of calomel and subnitrate of bismuth and six parts of boric acid, cotton batting and bandage. Renew the powder dressing daily until well . Use the caustic solution in an obstinate case.

Homeseekers Excursion to Western Canada.

Every Wednesday until the 9th of October the Intercolonial Railway will sell second class, round trip tickets to Winnipeg, Brandon, Regina, Edmonton,, Saskatoon, and Calgary. These are good to return two months from date of issue and are a special inducement to those wishing a cheap trip to the West. The nearest I. C. R. ticket agent will furnish all particulars. In that ticket read via Intercolonial Railway, the only all Canadian route from the Maritime Provinces.

—Two Persian lamb pelts obtained by Mr. J. R. Dennis will be on exhibition this afternoon and for a day or two in the show window of Messrs. Moore & McLeod, Queen Square. Mr. Dennis purchased these pelts in the United States. As is well known the fur is very beautiful and valuable — so choice, indeed, that the Russian Government will not permit the export of Persian sheep. But Mr. Dennis intends nevertheless to engage in the breeding of Persian sheep and to conduct a Persian sheep farm in connection with his Fox Ranch in Charlottetown Royalty. Success to his enterprise! as the very best fox skins can be produced in P. E. Island so we hope that Mr. Dennis will be able to demonstrate that the very best Persian lamb can be produced here. Meantime see the pelts in Moore & McLeod's window.—Examiner.

Mr. Stanley Compton, St. Eleanor's, is carrying on an excellent business in the raising of geese. A Charlottetown man who visited his farm recently reports that Mr. Compton had no less than 121 goslings in his field while over seventy more were due to arrive in a few days time. This is "going some."—Island Farmer.

Horse Breeders Association is Organized.

On Thursday morning, June 19th, a meeting of Horse Breeders was held in the Agricultural Hall, Charlotte town, and a Pure Bred Breeders Association organized. The objects of the Association are to encourage the breeding and improvement of pure bred horses by co-operating with the Departments of Agriculture, to interest and instruct farmers in the breeding and improvement of pure bred horses, and with the exhibition associations to improve the judging of horses at the exhibitions, and by keeping a record of the pure bred horses owned by each of its members who will also be encouraged to have all their horses inspected by a qualified veterinarian. Any owner of pure bred horses is eligible for membership on payment of the annual fee of one dollar. The following Board of Directors was appointed: James Mallard, Gowan Brae, and John Annear, Lower Montague, representing King's County; W. W. Crosby, Cornwall, and Thos. P. Cass, North River, representing Queen's County; Jabez Leard, Victoria, and John Richards, Bideford, representing Prince County. The Commissioner of Agriculture for Prince Edward Island, the Live Stock Commissioner for Canada and the Secretary for Agriculture are also members of the directorate, the latter being secretary-treasurer. At a subsequent meeting the following officers were chosen: President, W. W. Crosby, Cornwall; First Vice-President, Jabez Leard, Virtoria; Second Vice-President, John Annear, Lower Montague.

Farmers Ads. Bring Results.

R. R. Black, of Hereford Stock Farm, Amherst, N. S., writes:—"Enclosed please find copy of charge, for my adv. All we have left for sale in the Hereford line is one yearling bull and a few yearling cows. Within the last few months we have sold the following stock:—

1 bull and heifer to Harold A. Wills, Canaan Forks, N. B.; 2 heifers to Edwin Forrest, Amherst Point, N. S.; 1 herd of 12 individuals to A. Bradshaw, Amherst; 1 bull to Edward Anderson, Coles Island, N. B.; 1 bull to B. W. Ralston, Amherst, N. S.; 1 bull and heifer and 2 cows to Lymon A. Whitman, New Albany, N. S.

The Hereford is fast gaining favor through the Provinces. Wherever you find a purebred sire, you will also see more white faces appearing in the pastures every spring, and that means better beef.

Thanks to your paper for helping us dispose of our surplus stork."

First Entomogical Research Scholarship in Canada

J. D. Tothill, who has been in charge of the Dominion Government work for the suppression of the brown tail moth and other injurious insects, at Fredericton, N. B., has recently received notice from the Imperial Bureau of Entomology of Loodon, England, that he has been awarded one of the entomological scholarships granted by Andrew Carnegie. This scholarship, valued at $700, and awarded for successful research, is the first of the kind given in Canada; and in this instance is for the purpose of enabling the possessor to pursue at Cornell University higher research work along the lines of his special subject. Mr. Tothill, who has been granted leave of absence by the federal department of agriculture will go to Cornell in October.

Get a Start Cheap!

Six Sicilian Buttercups eggs, four Turkeys eggs, (Bronze), five of my best Single Comb Rhode Red eggs, $2.00 for the fifteen.

Four handsome pairs of Sicilian Buttercups $5.00 A pair

Sicilian Buttercups generally agreed among those who breed them to be the best layers known $3.00 for 15 eggs.

Bronze Turkeys eggs $3.00 for eleven.

Single Comb Rhode Island Reds good birds in every way, and splendid to hatch and rear turkeys $2.00 for 15 eggs.

I have plenty of all these eggs I can supply any number. Order straight from this adv. and save time.

Terms, Cash with order.

SARAH E. MOSES SMITH,
Woodward's Cove, N. B.
A pen of Indian Runner Ducks three females, one male $5.00

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

C. C. H EATON,
Canard, N. S.

1870 1913

Mumford Bros.

PRODUCE COMMISSION MERCHANTS

141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

FARM FOR SALE

Small farm of 20 acres fronting 30 rods on St. John River one mile from Brown's Flats with fair house, barn and poultry house. A small orchard and large numbers of native apple trees suitable for grafting.

A cheap farm that with a little fixing up will increase in value 100 per cent. A bargain for quick sale.

F. W. Short, Brown's Flats, N.B.

Dates to be Remembered

Nova Scotia Provincial Exhibition, Halifax, N. S., September 3 to 11, 1913.

Miramichi Exhibition, Chatham, N. B., September 8 to 13, 1913.

Fredericton Exhibition, Fredericton, N. B., September 15 to 20, 1913.

P. E. I. Provincial Exhibition, Charlottetown, P. E. I., September 23 to 26, 1913.

Canada Eastern Exhibition, Sherbrooke, Que., August 30 to September 6, 1913.

Canada National Exhibition, Toronto, Ont., August 23 to September 8, 1913.

Central Canada Exhibition, Ottawa, Ont., September 5 to 13, 1913.

Maritime Winter Fair, Amherst, N. S., December 8 to 11, 1913.

Fredericton Poultry Show, Fredericton, N. B., February 17 to 19, 1914.

Dominion Exhibition, Brandon, Man., July 15 to 25, 1913.

Buy it now. Chamberlain's Colic, Cholera and Diarrhoea Remedy is almost certain to be needed before the summer is over. Buy it now and be prepared for such an emergency. For sale by all dealers.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire attle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

Stewart Bros., Alliston, P. E. I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A, Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.

Shropshires

C. A. Archibald, Truro, N. S.

POULTRY.

Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

Springbrook Ayrshires !

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

SPRINGVALE FARM AYRSHIRES

Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd.
Young Stock For Sale.

FRED S. BLACK, Amherst, N. S.

Sea View Stock Farm

Offers for sale from their Champion Prize winning herd of Friesian Holsteins at St. John and Halifax Fairs last year, the following. Aged and young Bulls, Cows, freshened and dry, Bull and Heifer Calves, all from prize winning stock, and prize winners.

Sgd. J. D. IRVING,
Buctouche, N. B.

ROSE BANK FARM
Jerseys & Yorkshires For Sale

Jersey bull calves by Foxhall's St. John and Dreamwold, and two litters of Yorkshire pigs, ready to ship in June.

OSSELYN & YOUNG, Silver Falls, St. John, N.B.

Lawndale Stock Farm Shorthorns

We offer at present a few young heifers and bulls, as well as three cows, all bred in the purple. One two year old bull in service, very low.
Information cheerfully supplied to enquirers, address,

M. LOVITT, M. D., P. O. Box 352, Yarmouth, N. S.

OCULUM

For Roup, Canker, Cholera and White Diarrhoea.
Greatest Poultry Tonic on Earth
Sent prepaid for $1.00 per bottle.

GEO. H. SEAMAN, Moncton, N. B.,
Sales Agent for Occulum

FOR SALE!

A few choice White Leghorn Cockerels from prize stock. Eggs for hatching all breeds. Send for catalogue.

Maritime Poultry Supply Co.
MONCTON, N. B.

NORTHERN GROWN TREES

Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery —no agents. Send list of your wants for prices, etc.

E. L COLPITTS
Petitcodiac, New Brunswick

FOR SALE

We have a number of choice cockerels and pullets of Barred Plymouth Rock, White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Eggs for hatching $1.00 per setting. Apply to

Walter McMonagle & Sons, Sussex Corner, N. B.

Pure Bred Ayrshire Bull Calf

Dropped Jan. 12th, 1913. Bred from a daughter of Barcheskie Kings Own. Come and see him and his dam. Stables near the station.

ALLANDALE FARM, - Hampton, N. B.

EGGS FOR HATCHING

From prize mating Rose and Single Comb R. I. Reds and Buff Orpingtons and S. C. Brown Leghorns. Eggs $2.00 per 15. Send for mating list.

W. H. HENRY, Shubenacadie, N. S.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.

DR. BELL, V. S.
Kingston, Ont.

Fullline of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

SHORTHORN CATTLE

To avoid inbreeding am obliged to offer my splendid. dark red, imported stock bull for sale. Bred by The Right Hon. Earl of Moray, Doune, Scotland, is of the low down kind and represents the best quality and families of this breed in Scotland. His color alone is worth his price to anyone wanting a head for a herd.

J. E. Hetherington,
Codys, N. B.

BARRED ROCKS

(Exclusively.)

Never beaten out in 15 years of competition. Now holders of Silver Cup for Best Birds at Amherst Fair, 1912. Offering eggs from six pens—every bird an exhibition specimen. Prices cheertully given on application. A few colonies of Bees for sale.

CRAIG BROS., Amherst, N. S.

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

DROP A CARD

KINGSDALE MATING LIST
Our mating list is now ready for 1913.

KINGSDALE POULTRY SUPPLY CATALOG
Fully illustrated 60 pages all up to date.

EVERYTHING FOR THE POULTRY KEEPER

KINGSDALE POULTRY & SUPPLY CO., SUSSEX, NEW BRUNSWICK

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

AYRSHIRE BULLS FOR SALE

I am offering a two-year-old bull for sale. He is out of the famous cow White Heather of St. Annes. I have also two other choice bulls that are fit for service. Correspondence solicited.

J. FRANK ROACH, - - Sussex, N. B.

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

YOUNG HOLSTEIN BULLS !

We have lots of them, all ages, from one to six months. Show Calves from our best cows. Now is the time to get your choice. Females all ages, bred for the fall shows and dairy tests. Some excellent high grades fresh or springing. Also Three Draft Fillies rising two, three and four, and a quantity of Seed Potatoes.

LEA & CLARK, VICTORIA, P. E. I.

Rockview Farm, Welsford, N.B.

(Wm. S. Harding, Jr., Proprietor)

High Class Holstein Cattle. Young stock bred from heavy producing and showing ancestry for sale.

Cobequid Farm Holsteins

Present offering. One fine bull fit for service and several bull calves three or four months old, sired by Helbon Dehols Prince, and from cows that are producers. Among them one whose two nearest dams average over 26 lbs. butter in 7 days. For particulars and prices write

Samuel Dickie & Son, Central Onslow, Col. Co. N.S.

BELLEVIEW STOCK FARM

Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

C. A. ARCHIBALD, - Truro, N. S.

HOMESTEAD FARM

Holstein–Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

LOGAN BROS.
R. R. I.
Amherst, N. S.

Long distance 'Phone

JOHN RICHARDS,

Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand. Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1908 and many other shows. Also small herd of Shorthorns from imported deep milking families.

Northern Electric Telephones

"You can send the Binder parts to-day? —— That's fine? Good thing I had a Telephone— I've saved a clear day."

If this Happened to *You* What would *You* do?

When your Binder breaks at harvest time and you have to drive miles for spare parts, how much does it cost YOU in time and money?

"Yes, Mr. Brown; we'll send those parts to you right away — you will have them in a couple of hours."

The Telephone Saves Time and Money in Every Emergency

When disease breaks out among your live stock — the Telephone brings the veterinary to save them.

When your barn or house gets on fire the telephone brings your neighbors to your help.

Don't you think it's time to get a Telephone?

We will show YOU how you and your neighbors can build, own and operate a self-paying Rural Telephone System.

Your share of the cost will only amount to about the value of *20 bushels of wheat* — and for that you can have a Northern Electric Telephone right in your own home.

Our FREE BOOK tells you—in plain, simple language—how you and your friends can build every bit of the line and operate the system from start to finish. It is as easy as building a fence.

The largest telephone company in Canada—The Northern Electric and Mfg. Co., Limited—will stand back of you and guide and advise you in every step of the work until success is assured.

We made 95 per cent. of the telephones used in Canada to-day and have helped thousands of farmers to build their own telephone systems.

Better write for our 100-page book, "How to Build Rural Telephone Lines." If you don't, somebody in your district will—and you might as well be the man to start the movement.

Our Free Book is yours for the asking.

M·F. 408

The Northern Electric and Manufacturing Co., Limited

Gentlemen:

Please send me FREE, one copy of your 100-page bound and illustrated book on "How to Build Rural Telephone Lines."

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THE Northern Electric AND MANUFACTURING CO. LIMITED

Mail coupon to-day.

Manufacturer of Telephone and Fire Alarm Apparatus and Distributor of Electrical Supplies for every possible need.

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PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 18. SUSSEX, N. B., JULY 22, 1913 No. 20

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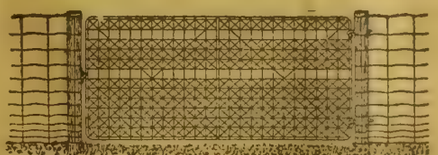

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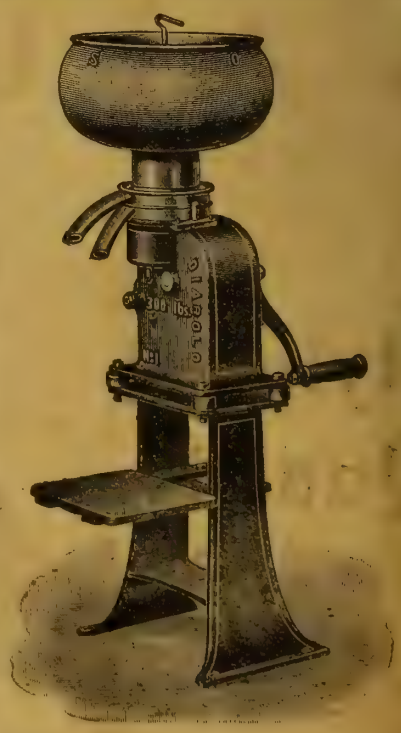

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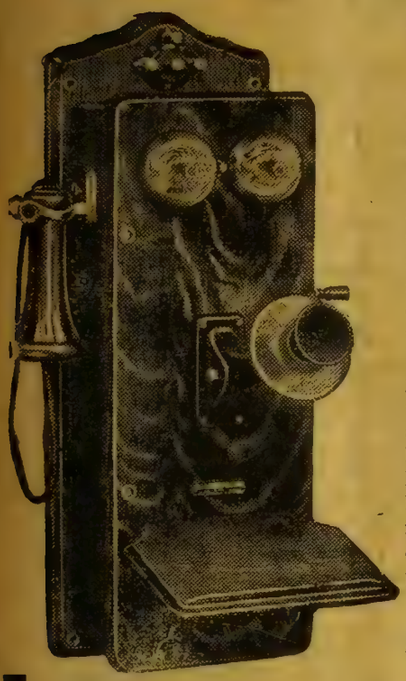

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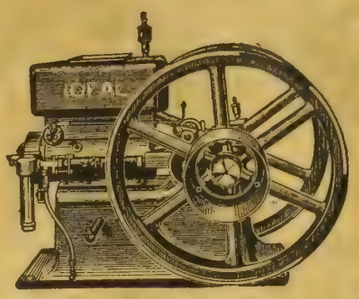

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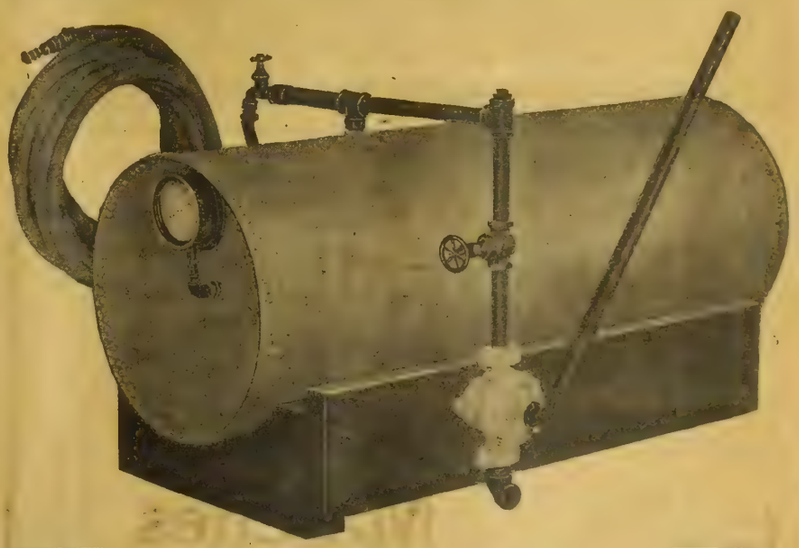

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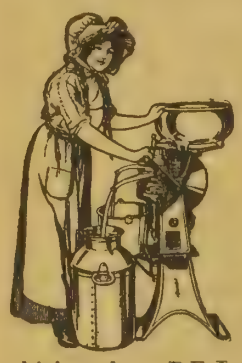

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Volume 18. SUSSEX, NEW BRUNSWICK, JULY 22, 1913. Number 20.

FLEA-BEETLES --- THEIR CONTROL

By Arthur Gibson, Chief Assistant Entomologist

THE Flea-beetles are a small but very important group of beetles which attack the foliage of many plants. They are particularly destructive to several kinds of vegetable crops, such as turnips, potatoes, tomatoes, radishes, etc., and every season more or less numerous complaints are made of their injuries. The beetles are closely related and all belong to the same family of Coleoptera viz., the Chrysomelidae, the members of which are known commonly as the "leaf-beetles." In Canada there are five species of flea-beetles which are of considerable economic importance. Other kinds occasionally appear in destructive numbers, but their injuries, as a rule, are not of a serious nature.

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APPEARANCE OF FLEA-BEETLE AND NATURE OF THEIR INJURIES.

The several kinds of flea-beetles which are destructive in Canada, vary considerably in size and colour. In general, they may be described as either yellowish, brownish, bluish, greyish, purplish or blark, shining beetles of an oval-elongate shape, and having the upper joint of the hind legs largely developed which enables them to leap suddenly and owning to which jumping habit they were given the popular name of flea-beetles. In size they range from about 1-20 to ¼ of an inch in length.

The flea-beetles are most injurious in spring, at which time the young seed leaves of such plants as turnips, radishes, etc., are visited by large numbers of the adult insect and quickly destroyed. Numerous small holes, in some of the larger leaves as many as several hundreds, are eaten into and through the leaves; in fact large portions of the foliage are often completely eaten, the larger veins onl remaining. This latter more or less complete defoliation is effected by the larvae of such species as the Grape Vine Flea-beetle. Injury is also inflicted on the plants by the larvae, or grubs, of at least one species, whirh feed upon the roots of vegetables, and at Ottawa, the leaves of curled cress have been mined by larvae of the Turnip Flea-beetle. As a rule, h wever, little injury is done by the larvae to such crops.

METHODS OF CONTROL.

Arsenicals and Bordeaux Mixture.—The usual remedy for the protection of crops against the ravages of flea-beetles, particularly the larger species, is to spray the plants with an arsenical mixture containing either Paris green or arsenate of lead, or with the ordinary Bordeaux mixture alone. The latter acts as a deterrent. For most plants, Paris green may be used in the proportion of ¼ of a pound to 40 gallons of water, with ¼ of a pound of freshly-slaked lime. Such plants as have coarse foliage, as the potato, will stand double this strength of Paris green. Arsenate of lead which has now come into such wide use may be used in the proportion of from two to three pounds to 40 gallons of water. Both of these arsenicals may be applied in the above strengths in combination with Bordeaux mixture.

In the case of Potato Flea-beetle, in experiments conducted at Ottawa, the Bordeaux mixture used alone gave satisfactory results. When the beetles are present in excessive numbers, it may be necessary to spray at least twice a week or even every third day in order to get satisfactory results. Paris green dry is also a good remedy and may be used with land plaster, in the proportion of one pound of the Paris green to twenty pounds of the land plaster. This mixture should be dusted upon the plants, preferably in the early morning when they are covered with dew. The land plaster stimulates the plants and hastens their growth, while at the same time the Paris green kills the beetles. The Turnip Flea-beetle especially is easily controlled by this remedy which should be applied early in the season, before the seed leaves, so important to the young plants, are destroyed. When flea-beetles, or other leaf-eating insects are found attacking cabbages, it is advisable to use arsenical mixtures after the heads of the plants are half formed. In spraying such plants, the mixture will adhere better if a "sticker" is added. Such can be made by boiling together for about an hour, 2 pounds of resin and 1 pound of sal soda (crystals) in a gallon of water. This is sufficient for 40 gallons and, when used with Paris green a pound of fresh lime should be added.

When setting out such plants as tomatoes, protection from flea-beetle attack may be obtained by dipping them, except the roots, in a mixture of arsenate of lead, using one pound to 10 gallons of water.

Cheese cloth covers.—In our experiments in screening beds of radishes, etc., in the control of root maggots, the protected plants were kept free of the attacks of flea-beetles in addition to the root maggots. Such a method of protecting plants from insect attack is of considerable value. Barrel hoops cut in two and the ends inserted in the ground make a cheap frame upon which the cheese cloth can be spread, the sides of which touching the ground should be covered with earth to close up all entrances which might admit the beetles. In New York State, W. J. Schoene recommends frames made with six or eight inch boards with galvanized wires four or five feet apart upon which to spread the cheese cloth. The wires may be supported on stakes and held in place by small staples. The boards may be secured by stakes driven into the ground on either side.

Whale-oil Soap and Kerosene Emulsion.—In British Columbia, gratifying results were obtained in 1909 in destroying the Hop Flea-beetle by spraying hop vines with whale-oil soap in the proportion of one pound of soap to five gallons of water. In years when the beetles are abundant, however, regular treatments of such a quick-growing crop with a soap mixture are practically prohibited, on account of cost and labour, as such would have to be applied every twenty-four hours. Kerosene emulsion has also been used for the destruction of the adults of the Hop Flea-beetle, but, like whale-oil soap, this only kills when it comes into actual contact with the insects.

Tarred sheets and other adhesive traps.—In localities where the Hop Flea-beetle is a serious pest, sheets or boards coated with tar have been used with much success. These are placed under the hop vines which are jarred lightly with a branch or stick thus causing the beetles to fall off and adhere to the tar. A large feather duster is useful for dislodging the beetles. W. B. Parker recommends banding the vines with tanglefoot after they are trained, the bands to be placed about two feet from the ground. New bands will be necessary whenever the beetles are entrapped in sufficient numbers to form a bridge over which others can crawl. Trellis poles should also be banded.

Late Sowing.—In the case of Turnip Flea-beetle, Fletcher states in Bulletin No.52 of the Experimental Farms, that careful observation has shown that, for Central Ontario, the third week in June is the most satisfactory time for sowing turnips to avoid injury by the beetles. By the time the perfect insects of the first brood have, as a rule, disappeared, and the young plants grow rapidly and produce as good crops as when sown three weeks earlier.

Clean Culture.—In view of the fact that flea-beetles in the larval state feed upon the roots of common weeds such as the nightshades, thorn apple, lamb's quarters, pigweed, ragweed, etc., it is important that such weeds be pulled and burned. If this is done about the middle of July, large numbers of the grubs will be destroyed. Weeds along margins of fields, of course, should be kept down. It is a wise practice to use land infested by such weeds for crops which are not attacked by the adult flea beetles.

It is also important to remove from fields and gardens in the fall all remnants of crops, such as cabbage stumps, leaves and tops of turnips, etc., and other refuse which would serve as hibernating shelters for the adult flea-beetles. All such refuse should be either ploughed deeply or carefully gathered up in piles and burned.

THE COMMONER SPECIES OF FLEA-BEETLES.

The Spinach Flea-beetle, (Disonycha xanthomelaene Dalm.)

As yet, little injury has been done to cultivated crops in Canada by this insect. In some seasons the beetle, which is nearly one-quarter of an inch in length and in colour black with a yellowish thorax, is fairly abundant in Ontario and Quebec, but no serious complaints have as yet been received of its work on spinach or beets, the crops chiefly attacked in the United States. At Ottawa we have found the beetles in May, June, September and October. The insect feeds naturally on lamb's quarters, chickweed and probably other closely related plants.

The Triangle Flea-beetle. (Disonycha triangularis) Say.

Some years this flea-beetle is destructive in Ohio, Michigan and elsewhere in the United States particularly to beets. The insect is common in Canada and on several occasions, we have had it sent in from Manitoba where it occurred in wheat fields, but no actual injury to this plant was detected.

This species is very similar in appearance to the Spinach Flea-beetle but is slightly larger and has three small dots on the yellowish thorax.

The Alder Flea-beetle, (Haltica bimarginata Say.)

Occasional records have been received of injury by this beetle to alder, poplar and willow. It is of wide-spread occurrence throughout Canada, specimens having been found in Nova Scotia in the east and British Columbia in the west, and as far north as Fort Simpson on the McKenzie River. Large numbers of the beetles were found feeding on Willows in 1898, at Red Deer, Alta. In length the beetle is about one-fifth of an inch and of a purplish-blue colour.

The Grape Vine Flea-beetle, (Haltica chalybea Ill.)

The tender buds of grape vines are often completely eaten by swarms of these flea-beetles which leave their winter quarters early in spring. The injury may even, occasionally, cause the death of the vines. In Ontario, grape growers in some sections have suffered considerable from the attack of this beetle which is one-fifth of an inch long, varying in colour from a steel-blue to green. The female beetle begins to deposit its oval shaped, yellowish eggs early in the season. These may be laid in cracks of the bark at the base of the bud, in cavaties where the beetles had eaten into a bud, or even upon the foliage. About the time the leaves are expanded, the young grubs hatch and eat out irregular holes becoming full-grown in three or four weeks, at which time they are one-third of an inch long and of a dirty yellowish-brown colour with black, shining, bristle-bearing tubercles. When mature, the grubs drop to the ground and enter the earth to change to the pupal state, and in a week or two the beetles emerge. As these beetles pass the winter in the perfect state beneath dead leaves and other rubbish, it is important that all such refuse be gathered up and burned in autumn so as to reduce as much as possible the opportunities for these insects to hibernate near the vines. Grape growers should watch for the appearance of the insects when the buds are forming, and when they are detected, a strong spray of either Paris green or arsenate of lead should be applied to the vines so that every bud will be literally soaked. The buds will stand as strong a dose of Paris green as one pound in 75 gallons of water, with an equal amount of freshly-slaked lime added. In a few days, the application should be renewed, or sooner if the first treatment is washed off by rain. Arsenate of lead is recommended as strong as eight pounds to the barrel of water. In small gardens, the practice of jarring the beetles from the vines into an inverted umbrella and then dropping them into a pan containing coal oil and water, is of value. When the grubs are found feeding on the leaves, spraying with Paris green or arsenate of lead in the ordinary strengths *one pound of Paris green to 160 gallons of water, or arsenate of lead 2 pounds in 40 gallons of water) will give relief. The destruction of the grubs is an important factor in the control of this insect, because every grub killed means one beetle less the following spring to attack the buds. In addition to grapes, the Grape vine Flea-beetle commonly attacks Virginia creeper.

THE STRAWBERRY FLEA-BEETLE (Haltica ignita Ill.)

This flea-beetle, also known as the Fiery Flea-beetle and the Lesser Grape Vine Flea-beetle, has in the United States seriously attacked the leaves of strawberries, and injury has also been done to grape and peach.

In 1910, specimens of a flea-beetle were received from Nelson, B. C. with a report that it was attacking freely the foliage of strawberries. The beetle was determined at the time as Haltica ignita Ill. and referred to under this name in the Report of the Dominion Entomologist for the year ending March 31, 1911. The species, however, is Haltica evicta Lec. The only record of injury in Canada which has come to our notice by Haltica ignita was in 1910 when the beetles were vesy numerous at St. Stephen, N. B., and other places nearby, doing very noticeable damage to the foliage of elm. The beetle is variable in colouration, some specimens being bronzy or purplish, others decidedly greenish or bluish. In length it is about one-eighth of an inch.

THE BRONZE FLEA-BEETLE, (Haltica evicta Lec.)

This species of Haltica which occurred at Nelson, B. C. in 1910 was abundant on the leaves of strawberry in the last week of April; 180 specimens were collected from a single plant. It is a larger flea-beetle than Haltica ignita, being about one-sixth of an inch in length and of a bronze colour. The outbreak of 1910 is the only definite record we have of injury by this beetle. In the report of the Dominion Entomologist for the year ending March 31, 1911, it is stated that Haltica evicta was very destructive to turnips and cabbages at Half Way Lake, Alta. Upon further study, however, we find that the species is certainly not evicta, but that it is at least closely allied to ignita in which the ante-basal groove of the thorax is deep and continuous.

THE POTATO FLEA-BEETLE, (Epitrix cucumeris Harr.)

One of the most destructive of the flea-beetles which occur in Canada is the Potato Flea-beetle, a very small species, measuring from about one-sixteenth of an inch to one-twelth of an inch in length, black in colour with pale-reddish legs. The foliage of potato and tomato are freely attacked by the beetles, which eat numerous small holes in the leaves. In addition, the beetles have been found feeding upon cabbages, cucumbers, beans, tobacco, squashes, pumpkins, wonderberry and other plants. As a rule the insect is more numerous in hot dry seasons. Many reports of injury have been received from Ontario and the eastern provinces as well as from as far west as Vancouver Island, B. C. The beetles pass the winter in dry sheltered spots and make their appearance early in spring; the females soon deposit their minute eggs upon the roots of common weeds of the Nightshade family, the resulting grubs feeding underground and changing there, when full grown, to the pupal state. The beetles, when they issue, freely attack the leaves of vegetables, largely the foliage of potatoes and in some years towards the end of July or early in August serious injury is effected. In the spring, the young leaves of such plants as are mentioned above are often entirely eaten by the overwintering beetles.

THE RED-HEADED FLEA-BEETLE, (Systena frontalis Fab.)

This common flea-beetle, so called from the conspicuous red patch on the top of the head, is jet black in colour and in length about three-sixteenths of an inch. The body is slender and elongated. In Ontario and other eastern provinces the beetles are sometimes extremely numerous. Records of injury at Ottawa indicate that the insect has a very wide range of feeding plants. It has been particularly destructive early in the season to the foliage of potatoes, beans and young grapes, as well as to many kinds of deciduous shrubs. Large numbers of the beetles have been found feeding upon flowering plants in gardens such as marsh mallows, rose mallows and Japanese honey suckles. Both at Ottawa and Guelph, Ont. damage has been done to clover in August. During 1912, the beetles were present in exceptional numbers, at Bryanston, Middlesex County, Ont., in corn fields, but the chief injury was to the mangel-wurzel; on one farm a two-acre crop of mangels was badly infested, the leaves being riddles and practically destroyed.

THE BLACK MARGINED FLEA BEETLE, (Systena marginalis Ill.)

Occasionally in eastern Canada outbreaks of this insect have appeared in the middle of the summer, considerable injury to certain forest and shade trees resulting therefrom. At Ottawa, the worst attack has been in August, when the beetles appeared in large numbers feeding chiefly on elm, oak and hickory. In one outbreak, the leaves of the Service Berry (Amelanchier canadensis) were freely eaten, in fact on some of the branches only the ribs of leaves remained. This flea-beetle is from ⅛ to about 3-16 inch. long, yellowish-brown in colour with the thorax and wing-cases margined with black along the outer edge. The latest date on which the writer has found the adults feeding is September 15, (on oak).

THE PALE-STRIPED FLEA-BEETLE, (Systena blanda Mels.)

In the United States, this flea-beetle, which is about one-eighth of an inch long, pale brown with a cream-coloured band on each wing-case and a reddish head, has often required control measures owing to its injuries to the foliage of such plants as corn, strawberry, melon, potato, carrot, beet, clover, etc. Few records only, however, are available of important injury by the adults of this beetle in Canada. In the County of Wentworth, Ont., some years ago, turnips, pumpkins and strawberries were seriously attacked. In some places the beetles were so abundant on pumpkins that the leaves appeared as if they had been sprinkled with ashes. During 1912 the overwintered beetles were found in numbers, in May, in Middlesex County, Ont. in timothy fields but they were not observed feeding. In July, they were noticed in corn fields but were doing little or no injury. Garden beets, beans and occasionally mangels were, however, being eaten.

THE TURNIP FLEA-BEETLE, (Phollotreta vittata Fab.)

This is one of the commonest and most regularly-occurring destructive flea-beetles which attack vegetables. It is, also, soemtimes troublesome in flower gardens, attacking the foliage of stocks and wall flowers. It is a small species of a shining black colour and in length about one-sixtn of an inch. On each wing-cover there is a wavy band of yellow. The overwintering beetles appear early in the season and in the latter half of May and during June, much injury is done to young radishes, turnips, cabbages and other cruciferous plants. The chief damage is to the seed leaves directly these appear above ground and just when the young plants can least withstand such attack. Later, when the rough, true leaves are formed, the plants as a rule, are able to make more growth each day than the beetles can destroy. The female beetles deposit their tiny, white eggs upon the roots of the plants and the young grubs feed thereon oftentimes doing considerable injury; it is probable, however, that this injury is largely confined to weeds belonging to the mustard family. When full-grown, the grub is about three-sixteenths of an inch, slender, of a darkish colour, the body bearing, sparsely, minute hairs. At Ottawa, the grubs have been found feeding in the leaves of curled cress. There are two or three broods during the season and the species occurs generally throughout Canada.

THE HORSE RADISH FLEA-BEETLE, (Phyllotreta armoraciae Koch.)

In 1893 specimens of this European flea-beetle were found in Chicago, Ill. and since then the insect has been found in other places in the United States and it has also occurred at several points in Canada. The first Canadian record we have is its appearance at Guelph, Ont. in about 1908. In 1910, it was found abundantly at Montreal, on horse radish, the leaves of which had been riddled by the beetle. In 1912, a few specimens were collected at Ottawa, one of these being found on a leaf of garden radish. The only cultivated crop attacked, however, seems to be the horse radish. The beetle is about one eighth of an inch long, oval in form and, in colour, black with the wing cases pale-yellow excepting an outer edge of black and a wide band of the same colour where the wing-cases join.

THE HOP FLEA-BEETLE, (Psylliodes punctulata Melsh.)

Growers of hops in British Columbia have lost large sums of money from the ravages of this small flea-beetle, which is bronze-black in colour and about one-twelth of an inch in length. The beetles which pass the winter in the trellis poles, under rubbish, etc., on the ground, or just under the surface of the soil, become active in the end of March and during April. There are two distinct broods of this insect in British Columbia. The over-wintered females deposit their eggs in spring and the beetles resulting from these mostly appear in early June. The beetles of the second generation appear in the end of July and during August and these latter pass the winter hidden away beneath the rubbish, etc., as above mentioned. In the bulletin on the life-history and control of this flea-beetle, referred to on page 5 it is stated that "the hibernating beetles, unless in usually large numbers, will

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The Nova Scotia Agricultural College

What it Does for Our Boys

Each succeeding year, the boys and young men of the Maritime Provinces are realizing to a greater extent the advantages of an Agricultural Course at Truro. The College opened in 1905 with an attendance of 17. In 1909, this number had increased to 43; in 1911, 62; in 1912, 77; and in 1913, the number enrolled was 114. During the past year the buildings have been added to, the teaching staff increased and strengthened and everything prepared for an attendance far in excess of any previous year.

AN AGRICULTURAL EDUCATION PAYS.

The college exists primarily to prepare our own boys for life on the farm and over 90 per cent of those who have attended the institution are so employed. For them, an agricultural education has proven of incalculable benefit, helping them to understand the principles of farming, how to make the farm pay better, and how to get the best out of life. Aside from the actual agricultural education, the instruction in English, Mathematics, Bookkepping, etc., which is given at Truro, places these agricultural graduates on a par educationally with graduates of other institutions.

Each year, a percentage of the students continue their courses at other colleges and in two years more receive the B. S. A. degree. For such of these men, who have had a good practical training in farming or fruit growing and who have applied themselves well during their course, the openings for employment are at present almost unlimited. Graduates of the Noa Scotia Agricultural College are to-day occupying positions as teachesr, investigators, managers of farms and of branches of industrial corporations for which they are receiving salaries of from $1,000 to $5,000 per annum. And the demand for such men is increasing every year.

IMPROVEMENTS.

During the past two years, the main building at the Agricultural College has been nearly doubled in size; a splendidly equipped Horticultural Building with glass houses attached has been constructed; a new horse barn has been built; the farm has been increased by some sixty acres and numerous minor improvements have been made. At the same time, new members have been added to the staff of the institution. The result is that the Nova Scotia Agricultural College faculty are in a position to provide educational facilities not to be surpassed in Canada. No better evidence of this could be given than the splendid record of the students who have already graduated from the institution.

TWO YEARS' COURSE.

The next regular term opens on November 4th, 1913, and closes on April 17th, 1914.

The duration of this term enables students to be at home during the summer months and to acquire their education in the winter months when work on farm is not so exacting.

The curriculum is arranged so that the boy from the farm, who has had the advantage of only a fair school education, can enter and derive full benefit from the classes. At the same time, many of the students are high school and college graduates who, however, are usually exempted from such class work in English, Mathematics, etc., as they may have previously studied.

SUBJECTS TAUGHT.

The subjects taught are: Soils and their Constituents, Soil Cultivation, Surveying and Drainage, Crops, Live Stock and how to judge, select and care for them to the best profit, Treatment of Disease in Animals, Poultry, Dairying, Fruit and Vegetable growing, Biology, Botany, Zoology, Entomology, Bacteriology, Chemistry, Mathematics, Book-keeping and Political Economy.

The list of subjects is a comprehensive one. Possibly it may appear formidable to the student of average education. We need only remind such that previous training in these, with the exception of English and Arithmetic, while of advantage, is not required. The science subjects are taught not so much from books but from nature itself, and keen observation is of more value in acquiring a knowledge of these than the most complete book education. No one should, therefore, hesitate to apply for entrance on account of lack of educational equipment.

One kind of training, however, is essential. Without the aid of practical experience, the course will prove of little value. No student will be awarded a Diploma unless he can give evidence of, at least, a full year's practical experience in farming; and a life time's experience will enable a student to derive far more from the course of study than any other previous training. The College is essentially intended for farmers' sons.

Interior Views of the Sheep Extension Car

COST OF A COURSE.

Board 22 weeks at $3.50 to $4.50. .... $77.00—$99.00
Books, etc. .... 10.00—15.00
Railway Fares ....
Extras depending on student...

A limited amount of work is provided by the various departments of the Farm and College whereby a number of students can earn money during their spare hours and thus help to pay their way. The student also has from the middle of April to the first of November, during which period, the classes are not in session, when he should earn sufficient to pay all his expenses at the College. No other institution in Canada offers such comprehensive educational facilities at so little cost.

TUITION FREE.

For the present, tuition will be free to all residents of Canada. Students from other countries will be required to pay a fee of $10.00. The attention of students, especially from New Brunswick and Prince Edward Island as well as Nova Scotia, is directed to the splendid educational opportunity which is thus placed so easily within their grasp at Truro.

SHORT COURSE FOR MEN.

For the benefit of farmers and farmers' sons, who cannot spare the time for the regular course, a short Course is offered during the first two weeks of January each year. Next Course, January 6 to 16, 1914. The attendance has always been large, numbering in 1912, three hundred and forty-two. The ages of those in attendance have varied from sixteen to over seventy. All parts of the Maritime Provinces and many other countries of the world have been represented. In this course, the very gist of the practical side of the college work is given. Aside from the educational advantage, the Short Course provides a splendid opportunity for a profitable holiday. The expenses are light. No tuition is charged. Board costs about $4.00 per week and the railways grant a single fare return from all parts of the Maritime Provinces. You cannot afford, in this progressive country and in this progressive age, to miss the opportunity.

SHORT COURSE FOR LADIES.

At the same time as the Short Course for Men, a similar course for ladies is conducted. The principal subjects taught are Dairying, Horticulture, Poultry and Domestic Science. Besides, the ladies are at libesty to take any of the classes in connection with the Men's Short Course. The conditions of entrance, expenses, etc., are the same as for the Men's Short Course. This course is becoming increasingly popular and the largest attendance on record is expected January 6 to 16, 1914.

RURAL SCIENCE SCHOOL.

During the months of July and August of each year, the Agricultural College, in affiliation with the Normal College, conducts a Rural Science School for Teachers. At the conclusion of the course, a Rural Science Diploma is granted which entitles the teaches to an extra government grant.

The foregoing is a brief resume of the courses and of the advantages offered at the Nova Scotia Agricultural College. A full statement will be found in the College Calendar which may be had on application. If you are interested in any of the courses, or in any of the subjects referred to in this article, write for further information to—M. Cumming, B. A., B. S. A., Principal Agricultural College, Truro, N. S.

A Hundred a Month From Bees.

About 10 per cent of the rural population are enjoying the privilege of keeping bees. About one per cent. of these beekeepers enjoy the distinction of having the bees keep them.

Bees are perhaps the most industrious and best understood of any of the farm stock. Also, in most cases, the most profitable. Again, it must be admitted that they are a very precarious proposition, and that only about one person in every 100 has any deep longing to become a beekeeper in any form whatever. Some even refuse to get wittingly anywhere in the immediate locality of even the smallest colony.

Twenty-seven years ago Mr. R. J. Young, of Tillsonburg, Oxford Co., Ont., began to "keep bees," and judging from present indications, he has made a success of the venture. The Young apiaries now have a total of 138 hives, and this year Mr. Young expects to clear $1,200, or $100 a month, from his bees. This is as much, and in some cases more, than office managers and store superintendents get in a big city for the work of a whole year. Mr. Young has only about two months' actual labor.

Last season Mr. Young cleared slightly over $700 from 78 hives, and should easily reach his $1,200 from the inrrease in number for this year.

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THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR-GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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3 inches—First insertion $2.25.

Contract rates on application.

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THE MARITIME FARMER, or
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Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

JULY 22, 1913.

DATES OF ISSUE.

August 5-26
September 16-30

THE HAND SELECTION OF SEED GRAIN.

"As a person soweth, so shall he reap," is an old, tried and true adage. The farmer who takes pains to properly fertilize and cultivate fields intended for grain growing and then sows seed taken indiscriminately from the bin does not obtain the satisfactory results obtained by the farmer who has taken the same pains in preparing his soil but has also taken the extra precaution to see that the seed he sows is the very best he can secure. Grain taken indiscriminately from the bin may be very much improved for seeding purposes by making a rigorous fanning mill selection, whereby the strong plump grains are separated from the shrunken and weak germed.

The fanning mill system of selecting seed grain is followed by many farmers with good success but the adage "As a man soweth, so shall he reap" again steps in and may be quoted in another way "like produces like." A plump grain sorted out by the fanning mill process for seed purposes may have been the only one of its kind on the stalk which produced it. The remaining grains on that stalk may have been shrunken and lifeless—perchance it may have been the only kernel of any kind that grew on the stalk and the stalk itself may have been the only stalk that grew from the mother grain sown the previous spring. Suppose every grain in the fanning mill selection for seeding purposes was of a similar nature, what would be the result if the law "like produces like" should be fulfilled without exception? If the farmer sowed 100 bushels of grain in the spring he might harvest 100 bushels of grain and he might possibly not harvest that much. This would be a rather slow, disheartening and unprofitable undertaking for the farmer.

On the other hand, suppose a certain kernel of plump grain caught in the fanning mill selection is one of a number say 100 that grew from a single grain of the previous year's sowing—a grain that had stooled out with ten stalks and each stalk produced and matured 10 grains, if every grain in the selection were of a similar character the farmer would have reaped a harvest of 100 bushels from the one bushel sowed. This in turn would be a most heartening and profitable undertaking. No farmer would like to get a crop like the former and few there be who reap a harvest like the latter.

While the fanning mill selection is an improvement on the indiscriminate use of bin grain, no farmer can say with any degree of certainty that the grain thus selected is of such parentage that he is reasonably sure of anything approaching a remunerative yield.

How can the farmer be assured that, climatic conditions being favorable, he will harvest a profit yielding crop in 1914? There is only one answer and that is:—By hand selecting his seed grain while his 1913 crop is ripening in the field.

The process is simple, does not take much time and is the system followed by the Canadian Seed Growers' Association members who have done so much for the improvement in the quality and quantity of crops throughout Canada wherever they have conducted operations or where seed grown by them has been used. If you have never followed the practice of the hand selection of seed, try it this summer. Take a sharp knife or a pair of shears and with a bag or basket slung over your shoulders cut off the ripened heads from well-stooled plants that have an abundance of plump grains. Gather all the grain you can in this way, say enough to thresh out several bushels. Sow this seed in the spring of 1914 on well prepared soil and in the fall of 1914 go over the field and in a like manner harvest enough to sow a similar plot in 1915. The remainder of the grains on the 1914 plot after you have selected a sufficient quantity for seeding a similar plot in 1915 may be used after you have given it a good fanning mill screening for the main 1915 crop.

If our readers who are not already practising hand selection of seed grain will follow the method herein outlined they will find that their yields will increase from year to year in both quantity and quality to reward with goodly profits the labors of the growers.

If a farmer does not wish to spend too much time in working up a good grade of seed from his own crops he may procure some registered grain from some member of the Canadian Seed Growers' Association and by using it as a foundation and following the system already outlined the general improvement of crops will be more rapid. There is no seed that will give so good a result as seed acclimatized and grown on the home farm. Think over these things and plan to make a start at seed selection this year. It is only a matter of a few days until this work should be done.

SCHOOL GARDENS.

The second annual report of the School Garden Association of America has just been issued. This organization is doing a work which will extend and become more appreciated as time goes on.

The object of the association is to turn the attention of the school children to gardening with a view to making better cirizens both of the city dwellers and of the people in the rural districts. City children who obtain in early life a working knowledge of gardening are better fitted to make the city residental districts more beautiful, cleaner and more sanitary; rural children who know something of gardening will be better fitted to resist the call of the city, as their thoughts will be turned towards the delights of tilling the soil and reaping the rewards of open-air work.

The results achieved by this association are notable. The children have been taught the advantage of substituting beauty for ugliness, and in a number of cities the youngsters have turned ugly and unsanitary back yards into natural beauty spots. These lessons of civic duty which are sometimes hard to impress upon older people who are set in their ways and slow to move, the youngsters learn with avidity. Back of the mischievous small boy, is not a purely bad impulse, but simply an excess of animal spirits. Let him alone, and he may do some harm; train him in the way that he should go and he will do much good and have just as much fun at the same time.

TOO WELL CONTENTED.

One of the obstacles that those who are trying to develop a better agriculture have to meet and overcome is too much content on the part of farmers with their present achievements and their present conditions. There are many localities in the Maritime Provinres where the farmers are in easy circumstances, with farms paid for and money in the bank, and they are contented with their condition just as it is, and disinclined to put forth any effort to improve it.

This content arises from a wrong conception that the farmer entertains of what he should try to acheive. Farming should not be regarded merely as a money-making game, as an occupation to be used solely for providing means for a livelihood, and at death leaving sufficient property to give the children a good start in life. Every farmer should realize that a part of the burden of the world rests upon his shoulders, that he helps to feed and clothe the world, that by every crop he raises the world is so much richer, has so much more to eat and to wear. The obligation to provide this rests in part upon his shoulders. He should not be content simply with a livlihood or with a certain amount of money in the bank. His aim should be to develop his holdings to the highest possible degree of production. If he really made an art of farming, this conception would follow as a matter of course. The farmer should take pride in what he does because it is worth doing, because it benefits the world just so much. He should look at something more than the dollar side of his operations. The man that is contented is hardly worth while in the world. It is never-ending unrest and dissatisfaction that is continually driving men to higher and better achievements. No farmer should be satisfied with money. The only thing that should satisfy him should be doing the best he can under the circumstances. The farmer that gets this idea into his head, or perhaps it would be better to say, into his heart, becomes a much more valuable citizen, of much more worth to himself and to his community.

MUST HAVE GOOD CARE.

Many farmers object to the Jersey or Guernsey or to any breed of dairy cattle because "they are not good rustlers." What they really mean is that they will not bear neglest, cold and poor care, and still give a generous flow of milk. That is true. No man ever saw a cow or breed of cows, that will give the most profitable returns and have to "rustle" for feed and care. Even the beef breeds do not make fine beef in that way. But this comparing things that differ is the bane of the average farmer's judgment. Measuring a dairy cow, her needs and what he should do to supply those needs, by what he knows about scrub cattle is altogether too common a thing. That is the reason so many farmers are keeping poor cows and keeping them poorly at that. That is the reason why we see so many undairy like stables, so much poor judgment in curing forage, in adapting grain feed, in the way the herd of cows is handled. Give the dairy bred cow the treatment all around that belongs to her and she will respond with the highest profit of any cattle.

FOREST FIRES.

In the United States between 1904 and 1907, the percentage of forests burned was reduced from 66 to 7. The task facing Canada, with a larger area to protect in a country more sparcely settled is a more difficult one than the similar problem in the United States, but the results acheived south of the boundary line illustrate what can be done by modern methods.

The great loss of property and valuable timber from forest fires in this country is a most deplorable thing. Also there have been many cases where lives have been lost. Need exists for the co-operation of all the various forces of the Federal government and the provincial governments to remove the danger in so far as it can be removed. Fires in the city can be kept down in number, as they have been, by a system of inspection, but so great is the extent of Canada's forest lands that no organization short of a great army could prevent the starting of the fires. At the coming convention of the Canadian Forestry Association first place should be given to the consideration of the fire danger. It behooves every Canadian citizen to do their utmost in proterting our forests.

This is the time of year when special attention should be given to the dairy cows. At this season of the year when the grass is short in many districts, the flies bad, the sun scorching hot and in many cases where the supply of water is very limited the milk flow will fall off materially and cause a proportionate falling off in the revenue. By the use of a fly spray, regular watering, and the feeding of soiling crops their milk flow may be retained at a high standard during this critical period and until such time as the grass is more plentiful.

The best time to cut medium red clover and alsike is when the blossoms are beginning to turn brown. If it stands longer than this, the stalks will begin to become woody and there will be a considerable loss from the dropping off of leaves and blossoms.

Potato Canker.

The monthly meeting of the Harbor Grace Agricultural Society took place on Monday last. Mr. H. H. Archibald in the chair. The attendance was smaller than desirable, and the business done was mostly of a routine character. It was decided to sell the clover seed left on hand after July first at half price and the rest of the seeds on hand after that date at one quarter off.

The matter of Canker came up for discussion, and the prospects of its spread gives the Society and should give the public much concern. All over the sections of country infected by it, there is to be seen some of our people doing their best more or less, to stamp it out by destroying the cankered tubers and not planting infected ground with potatoes. Side by side with these are some, we fear many, that are not so careful, so wise, and so neighborly. They have been selling infected potatoes and have been planting seed potatoes in infected ground. These are their own enemies and the community they live in and the country in general—little as they think or care about it. What is wanted is a big pull, a strong pull, and a pull all together to stamp out this plague before it becomes widespread and causes us the loss of our potato crop. Canada is taking, and other countries are taking the most drastic steps to exterminate the pest. We are doing comparatibely nothing.

The Board has sent around lime here and elsewhere to sell at almost nothing to persons with cankerous ground. Very good so far; although it must be remembered that lime applied to ground is no remedy for canker. The only safe thing to do is not to plant potatoes in the same ground for at least six years. But the dispensers should have been instructed ta see that it was applied to ground and used in the pit whence all cankerous potatoes and their stalks were buried. They should have been instructed also, to see that the parties getting it did not plant potatoes in the infected ground. We do not think that even a pledge to that effect was required.

This might have been some little benefit; but it is plain to every man of common sense that more is required. If we were all what we ought to be, and knew as much as we should of what a terrible thing canker is, not much more might be required. But as we all know, human nature is not perfect. It has to be helped to find out, and to do even that which is for its own self-interest. What should have been done as soon as possible, after the appearance of the pest became known, was, as we and others have long ago pointed out, and as the intelligent reader recognizes was (a) to find out through qualified men exactly what portions of ground were infected, (b) to buy at a fair valuation the cankered potatoes (c) to destroy these with all their stalks and roots (d) to give to those with infected ground oats or other seed to plant instead, (e) to forbid under penalty the disposal of cankerous potatoes or anything connected with them, (f) the making punishable the planting of infected ground until the expiration of six years. Had the other steps been taken, the last one and even the last two would have to be put into effect very seldom.

Anyone that knows what small lots of ground the most of our people have will readily understand what a sacrifice and inconvenience it is to be debarred from doing what is at the same time their and their neighbor's interest not to do—namely, plant their potatoes in infected ground. They want to be encouraged and aided in maving the sacrifice. It is a hardship to them not to be able to use their damaged crop or to plant potatoes in damaged ground. That hardship is very necessary to be imposed in the interest of their neighbors and the general public. Hence it should be paid for. This expense is essential to the extirpation of the plague.

The Government have been granted by the Legislature powers such as outlined to deal with canker, but it has not gazetted the act, and so it is a dead letter, and in the meantime the pest is spreading, and no real attempt made to grapple with it. Half or quarter measures are no good. To eradicate canker would have taken a few hundreds or thousands of dollars at the outset. It will cost more now. It will cost far more as neglect goes on. But when money can be found for so many objects of less importance, should it be grudged for this that concerns the chief food outside flour of our people at large? We don't want to pose as extremists or alarmists, nor do we speak out of any hostility to the powers that now be. We are sure that what we have said will commend itself to the intelligent reader, and had the Government taken our well-meant advice and put the agricultural interests of the country under the direction of a first-class expert, this expert would have given the administration no rest till it had adopted some such measures to save the country from the ravages of Canker as we have been urging time and again. Will not the Newfoundland Press in general take the matter up?"

Editor's Note.—The foregoing from the coldmns of the Harbor Grace Standard, Harbor Grace, Nfld, edited by our venerable friend, James Munn, Esq., will be of interest to our readers. Canada has been threatened with this plague and the foregoing should be a warning to all concerned to do their utmost in exercising vigilance in keeping our soil from becoming infested with the Canker spores.

Making the Hay Secure.

The barn affords the readiest security. Many, however, stack their hay in the open and in the building of a haystack the primary aim should be to make all secure from the heavy weather that sooner or later will have to be faced. Keep the middle well filled right from start to finish; remember also that the roof must be kept especially full, or it will not turn the weather properly even when thatched. Build so that the eaves will overhang all the way round in order that the drip may fall clear, and protect the stack with a sheet until trimmed and thatched.

There is no necessity to trim a haystack closely, all that is necessary being to make the sides look even, and to remove any extra loose portions of the outside hay. To trim to the best advantage the stack should first be allowed to settle for three or four days. The hay resulting from the trimming should be forked up from the roof, and turned to good account in making the roof firm and symmetrical for the carrying of the thatch. Pay great attention to this, for upon it depends very greatly the rain and wind resisting power of the thatch. In many instances the thatching is blamed for the letting in of the wet, when in reality the fault is in the roof itself.

This is best done when the stack has settled for a fortnight or so. It may be done sooner, but the settling that ensues is then likely to thrust up the thatching pegs, and so loosen the thatch. Do not, however, omit to thatch if the hay is worth anything at all. Much of the poor hay got together last year was really not worth thatching. Such unthatched stacks were useful as showing the penetrative power of heavy rain, and the damage it is capable of doing to the roof of even a well-built stack not protected by thatch. In thatching run plenty of rows of twine round the roof, and secure the lower row carefully. The wind is apt to disturb the thatch not very securely held.

When hay is stacked in the stackyard the yard fence makes it secure from stock, but when stacked in the field there is fencing to be done, and a temporary fence to keep stock away from the haystack when cold weather comes needs to possess plenty of strength and to be of good height. The mistake of erecting the fence near to the stack is to be avoided.

A good rule is to calculate the utmost distance that a horse could possibly crane its neck to get at the hay and to fence at double that distance from the stack. If the hay is intended to be sold anh carted straight away there is no need for a gate. tPosts and barbed wire make an effective and cheap fence. Posts and rails make a most useful fence, but one that takes more labor and time to erect. Hurdles are handy for fencing, but unless of good height and of stout material are not an effectual protection except against sheep.

As a protection against any other stock than sheep a fence should not be less than 5 ft. high, or if a little higher so much the better.

Federal Grants.

The Federal Department of Agriculture has concluded arrangements with the governments of Nova Scotia, New Brunswick and Prince Edward Island regarding the sums which those provinces are to obtain under the Agricultural Instruction Act. This leaves only Quebec and Alberta unsettled.

The total amount distributed this year in all Canada is $700,000, as against $500,000 last year. The increase of $200,000 is largely absorbed by the flat grant of $20,000 to each province, irrespective of size. This arrangement inures greatly to the benefit of the smaller provinces. Thus the grant to Nova Scotia has increased from $34,000 to $54,000; That of New Brunswick from $24,000 to $44,000; and that of Prince Edward Island from $6,000 to $26,000.

The distribution of the grants is as follows:

Additions to the staff and increased means of efficiency at agricultural college, $10,000.

Balance due on building constructed out of the grant for 1912, $9,000.

Agricultural education in the rural schools, including the conducting of a summer school for teachers at Truro, the giving of extra grants to teachers who have school gardens and assistance to school boards in establishing school gardens and the employment of a director of rural education, $7,500.

Employment of men to carry on demonstration work in the country and at the fall exhibitions together with materials used for this purpose, $10,000.

Educational work for poultry $500. vestigation and educational works, $6,000.

NOVA SCOTIA.

Dairy education, including half salary and expenses of the dairy instructor and the holding of meetings $2,000.

Educgtional work for poultry $500.

Assistance is publishing the Farmers' bulletins, leaflets, etc., $500.

Demonstrations with fertilizer, especially ground limestone, which has not been used before in the provinces, $300.

Organization of women's institutes, $1,000.

Short course during the winter of 1913-14, $5,000.

Special educational work, renovating old orchards, $1,000.

Contingencies of any kind connected with or required for the successful carrying on of the above mentioned lines of expenditures, $1,488.

Total, $54,000.

NEW BRUNSWICK.

Equipment and maintenance of agricultural schools, $6,000.

Equipment and maintenance of the dairy schools, $2,000.

Short courses in agricultural work, $1,000.

Provincial officers to instruct or inspect agricultural work, $2,000.

Director of Elementary Agriculture, and expenses, $2,500.

Printing and distributing of bulletins, $14,500.

Courses of training for teachers, $1,000.

Equipment and maintenance of school gardens, $2,500.

Teachers in agricultural schools, $5,000.

Travelling instructors, $6,000.

Organization of women's institutes or other associations for the women of rural parts, $3,000.

Instruction in domestic science, $1,000.

Training of teachers in domestic science, $1,000.

Demonstration trains, $3,000.

Demonstration work in drainage of soil, cultivation and crop production, $4,500.

Bee-keeping, $500.

Contingencies of any kind connected with or required for the successful carrying on of the above mentioned lines of expenditure, $2,000.

PRINCE EDWARD ISLAND.

Agricultural education in connection with Prince of Wales College, $4,000.

Short course in agriculture, $3,500.

Live stock judging classes, $1,000.

Dmonstration work in horticulture, and sheep and poultry husbandry, $1,500.

Building additions to agricultural halls, $3,000.

District representative work, $4,000.

Women's Institutes, $3,000.

Office assistance, $1,000.

Introducing nature study in the public schools, $5,529.

Total, $26,529.

The Yarmouth Exhibition.

We have just receive a copy of the Yarmouth County Exhibition Prize List. The exhibition will be held on October 1, 2 and 3, entries for which will close on the 27th say of September. Substantial prizes are offered in each class. One feature of this prize list appeals very strongly to us as being worthy of emulation by some other exhibitions.

The grades are not compelled to compete in one conglomorate mass. There are separate sections for the grades of each and every breed and in this way the farmers are put on an even footing with the breeders of purebred stock.

Wm. Corning, the efficient secretary of the exhibition is again at the helm. His long experience in exhibition matters is a guarantee to both exhibitors and visitors that it will be well worth patronizing the 1913 Yarmouth exhibition.

Hot Weather Hint.

When inclined to be peevish about the continued heat we obtain immediate relief by thinking of the folks in the tenement districts, where nothing green is growing, and brick and stone fling back the sun's heat into wan faces. With this in mind, one feels ashamed to complain.—B. T. L. in Chicago Tribune.

Regularity

of the bowels is an absolute necessity for good health. Unless the waste matter from the food which collects there is got rid of at least once a day, it decays and poisons the whole body, causing biliousness, indigestion and sick headaches. Salts and other harsh mineral purgatives irritate the delicate lining of the bowels. Dr. Morse's Indian Root Pills—entirely vegetable—regulate the bowels effectively without weakening, sickening or griping. Use

Dr. Morse's Indian Root Pills 50

THE "WINNER" FRUIT THINNING SHEARS

This new pruner is the handiest tool made for getting around fruit and flowers. Substantially made; black finish with polished and sharpened blades.

Length over all 6 1-2 inches; blades 2 1-2 in. long; handles 4 in. long; weight 4 oz.

It's a "winner" all right—order yours now.

Price Post Paid

Each 35c
Per Dozen $3.90

T. McAvity & Sons, Ltd.
St. John, N. B.

Gates' Life of Man BITTERS

is made of the fresh Roots, Herbs Buds, Barks and Plants.

THE PEOPLES' MEDICINE

Expressly to cure disease, and in chronic cases the INVIGORATING SYRUP is used in connection to regulate the bowels. Everyone should take a few bottles

SPRING and FALL

to purify the blood. The cheapest and best on the market, and has been in use in Nova Scotia for over 70 years.

EMPIRE LINIMENT

NONE BETTER

Just you try it. Sold by

C. GATES SON & CO.,
MIDDLETON, N. S.

Butter Parchment

Write us about our co-operative scheme.

We can save you just half of the money you pay now and remember we sell nothing but Pure Parchment.

The Maritime Pub. Co., Ltd.
Direct Parchment Importers, Sussex, N. B.

During the summer months mothers of young children should watch for any unnatural looseness of the bowels. When given prompt attention at this time serious trouble may be avoided. Chamberlain's Colic, Cholera and Diarrhoea Remedy can always be depended upon. For sale by all dealers.

HORTICULTURE.

What New Brunswick Can Do in the Way of Growing Apples.

The New Brunswick Fruit Growers' Association will again hold an apple show in St. John next November, and judging by the steps already being taken to promote the show, it is likely to prove a great success in the matter of exhibits, for all those interested throughout the province are being called upon to take part, and many local business men and others are being asked to show their interest in this rapidly growing industry by contributing prizes for the successful exhibitors.

H. T. Hoag of the St. John Board of Trade is now soliciting subscriptions from those who helped towards promoting the success of the last apple show held in St. John in 1911. As many others are doubtless interested, he hopes to hear from any who care to help either by cash donations or by offering special prizes or cups.

The competitions at the last show were for special counties, and others open to growers throughout the province. Among the latter was the competition for the best four boxes of dessert apples, the winner to receive a silver cup presented by the St. John Board of Trade. It is hoped that the number of competitions will be still larger at the show in November. No date has yet been fixed definitely.

Centralized Fruit Marketing.

The selling agency being established by the Co-operative Fruit Growers of Ontario will provide a centralized marketing bureau for the fifty-six local associations in that province. It will be to Ontario fruit growers what the United Fruit Companies is to Nova Scotia, the British Columbia Fruit Growers' Association to British Columbia, the California Fruit Growers' Exchange to the citrus fruit producers of California. Though they have been followers, rather than leaders, in the formation of a central selling agency, the Ontario fruit men are apparently ready to give robust support to the movement. Of the local associations, 52 have affliated with the provincial body. If the operations of this new organization are as successfully managed as those of its older contemporaries, there is little reason for doubting its immense utility to the fruit industry. It should make fruit-growing a more certain yieler of profit.

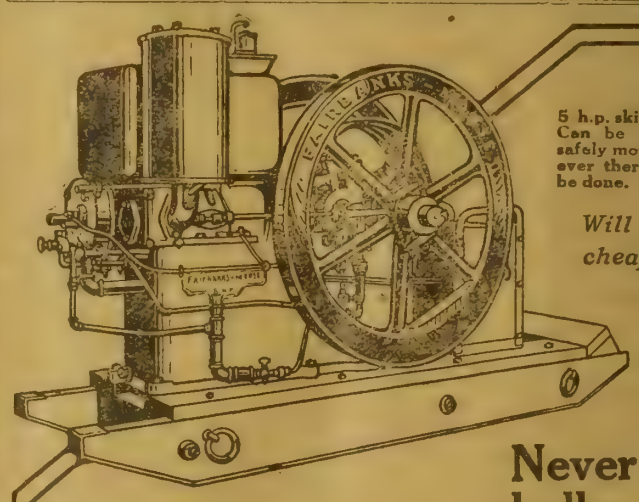
What can be done by centralized cooperation in the market of fruit, particularly of apples, is forcibly illustrated by the experience of the growers of Nova Scotia. In 1910 the United Fruit Companies was organized, and in 1911 the apple yield in the province was extraordinariy heavy, being about two million barrels. Only co-operative distribution of pickers got the fruit packed and then hundreds of carloads accumulated at Halifax. But there was no steamship accammodation offering, and the hot weather threatened to destroy the apples. It was apparent that only concerted and energetic steps would save an enormous loss. The manager of the United Growers' chartered four special fruit trains to Montreal where space in trans-Atlantic liners was available, but this was costly and inadequate. So they went to American ports and chartered four special steamers to take the fruit to Europe, over 40,000 barrels being moved in this way. Only a central selling agency, having control of enormous quantities of fruit could have taken that action. Individual shippers or local associations would have been helpless in the face of certain calamity.

The Ontario apple yield is about 5,000,000 barrels. Last year in Western Ontario a fourth of the yield rotted on the ground. Surviving adherence to the individual marketing system, and the conflicting efforts of local associations to place their fruit resulted in the loss of a large part of the yield that should have got to the consumers. A provincial selling agency, handling most of the fruit for foreign distant markets, should adjust local market conditions more favorably. The prairies market will

FRESH FRAGRANT FLAVORFUL

You'll Like the Flavor

35¢-40¢-50¢ Per Pound



5 h.p. skidded engine. Can be quickly and safely moved to wherever there is work to be done.

Will run on cheap fuels

Never balks

"While I hear of others in my vicinity who experience difficulty in starting engines manufactured by other companies, I must say that my Fairbanks-Morse engine purchased a year ago has never given me the least trouble."—Wm. G. Tewriss, Athena, Ont.

Fairbanks-Morse Farm Engines

are built for *farm* use. Their construction makes them adaptable for practically every class of heavy work met with on the average farm, whether it is sowing, hoisting, grinding, threshing, pumping, pulling stumps, cutting ensilage, or any of the other innumerable tasks that the ingenious Canadian farmer can devise.

Because of their special fitness for farm work, Fairbanks-Morse Farm Engines are thoroughly dependable at all times and under the most exacting conditions. There are more than 115,000 in use today. Any size from 1 to 200 h.p. Vertical or horizontal, portable or stationary. Equipped with Bosch magnetos and made to run on gasoline, kerosene or low grade distillate, the cost of the last being less than one-fourth that of gasoline.

The Canadian Fairbanks-Morse Co.
Limited
Montreal

Send for this booklet—"49 Uses for a Farm Engine." It is full of valuable information for the farmer, and is free. Fill in the coupon and mail now.

Please send me your free book.

Name .....

Address .....

There's Nothing Better Than

SNAP

For thoroughly cleansing baths and sinks. And it does not hurt the hands like most cleansing powders and soaps. It leaves them smooth and soft

Get a Can To-day
15c. at Your Dealers.
Save the Coupons.
Snap Company Limited, Montreal

take enormous quantities of Ontario apples, if properly packed, and priced to meet competition from the Pacific coast. The export trade is capable of extension.

Can Control Apple Maggot.

A most effective spray remedy for the apple maggot was lately discovered at the college of agriculture at Cornell, N. Y. Before describing the remedy and my experience with it, it will, perhaps, be best to first briefly consider the life, history and habits of this serious pest, for if our spray efforts are to be effective we must know exactly when and how to act.

The maggot hatches from the egg laid by a small fly just underneath the skin of the fruit. The maggot hatches in from two to six days, depending on the weather, and begins mining and tunneling inside the apple rendering it unfit for use. The infested apple may contain many maggots and the flesh of the fruit displays several thread-like lines, somewhat discolored, showing the courses the maggots followed. The apple is punky and the surface pitted.

Larvae leave the apple in about two weeks and enter the soil, where most of them remain until the following season, when they change into the form of the adult fly. The flies appear about the first of July.

This is an important date to remember. Careful dissections show that the eggs are not fully developed in the fly until three weeks after their emergence, so we have all this time in which to poison them before they begin their work of fruit destruction.

THE SPRAY AND APPLICATION.

This newly discovered poison bait is made up of one part potassium arsenate, four parts corn syrup, 45 parts water. The flies will feed greedily on it, and a small dose is fatal to them.

In applying the spray do not cover the entire tree, but spray a few of the lower branches only. The soluble arsenate may burn the foliage a little. A second brood of flies emerge about Septaember 1, and by the middle of the month are abundant, so a second spraying is necessary at this time.

I used this spray in an orchard of about 100 trees 50 years old, and it was most effective. Scarcely a trace of the destructive work of this pest could be found, while in former years they always get a large part of the crop.

The experiments at Cornell showed that the second spraying for codling moth with arsenate of lead checked the maggot, and they noted also that the maggot must enter a moist soil to pupate, or they soon dry up. This would indicate that cultivation whereby a dust mulch is maintained would be of considerable help in controlling the pest.

As a result of my experience with the spray I firmly believe that the apple maggot can be easily and effectively controlled. In applying the spray be sure to remember that the first application should be made about July 1 and the second two months later.—E. H. West in N. E. Homestead.

THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

WILSON'S
FLY PAD.
POISON

Every ten cent packet will kill more flies than $8.00 worth of any sticky fly killer. **Refuse substitutes, which are most unsatisfactory.**

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

Apples and German Market Opportunities.

That Germany, which last year imported 297,000 barrels of apples, affords a fine market for New Brunswick's fruit products is the opinion expressed by Mr. Otto Guttentag, of Germany.

He visited Fredericton several weeks ago, and has since been in Nova Scotia, visiting the Annapolis Valley. Mr. Guttentag was very much impressed with the co-operative organization of the fruit growers in the Valley, and believes that such an organization is necessary among the farmers of New Brunswick for both selling the produce and buying the supplies for the fruit farms before the industry can reach the height which it should in this province.

It is Mr. Guttentag's intention to become a naturalized citizen of Canada and to reside in either New Brunswick or Nova Scotia, and he will in all probability become actively engaged in the formation of a co operative organization of fruit growers to operate in the German market.

SPORTSMEN all over Canada have been quick to recognize the thoroughbred in the new Remington-UMC high-power slide action repeating rifle.

Just the right weight and balance for the woods. The action is completely protected by the Remington-UMC solid breech construction—the protruding hammer eliminated.

We will be glad to send you a booklet explaining simply why these features are of vital importance to you in your choice of an arm.

Remington Arms-Union Metallic Cartridge Co., Windsor, Ontario 5

That's better!

It pays, for sure, to keep Cows in a clean Stable. Give them clean stalls and lots of pure air, which they need just as much as pure water and good food, and they will give *more milk, more cream, more butter.*

Canadian Potato Machinery Co., Limited, GALT, ONT.

O.K. CANADIAN STALLS AND STANCHIONS

Our little book "The Proper Housing of Cows" will be sent free to Dairy Farmers. Write for it to-day.

12 Tumors Removed Without An Operation

Silver Lake, Ont., Sept. 20, 1909.

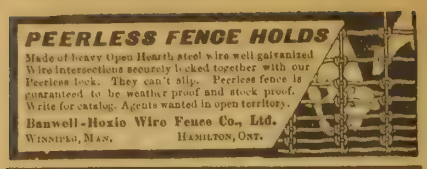
Dear Mrs. Currah,—I am enjoying better health than I have for eight years, and I think I am entirely cured. I have none of the old symptoms. I am very grateful for my present health, and think Orange Lily is the greatest treatment for women the world knows. Its use in my case caused 12 tumors or growths of some sort to be expelled. Some were as large as a hen's egg, and others smaller, down to the size of a walnut. You may use my case in your advertisement, for it is the solid truth, and pen cannot describe all the good it has done for me. Mrs. Louise E. Bolteridge.

This letter gives an indication of the positive benefits that always follow the use of Orange Lily. It is an applied treatment and comes in direct contact with the suffering organs. It produces results from the start in all cases of women's disorders, including painful periods, falling of womb, irregularities, leucorrhoea, etc.

I will send a sample box containing 10 days' treatment absolutely free to any suffering woman who has not yet tried it if she will send me her address. Enclose 3 stamps and address MRS. FRANCES E. CURRAH, Windsor, Ont.

For Sale By Leading Druggists Everywhere

Dysentery is always serious and often a dangerous disease, but it can be cured. Chamberlain's Colic, Cholera and Diarrhoea Remedy has cured it even when malignant and epidemic For sale by all dealers.



The Fall Term

—AT—

FREDERICTON The Business COLLEGE

W. J. OSBORNE PRINCIPAL.

OPENS ON

TUESDAY, Sept. 2nd

If you have not already had a catalog send for one at once. Address

W. J. OSBORNE, Principal,
Fredericton, N. B.

Butter Parchment

Write us about our co-operative scheme.

We can save you just half of the money you pay now and remember we sell nothing but Pure Parchment.

The Maritime Pub. Co., Ltd.
Direct Parchment Importers, Sussex, N. B.

Minard's Liniment Co., Limited.

Gents,—I cured a valuable hunting dog of mange with MINARD'S LINIMENT after several veterinaries had treated him without doing him any permanent good.

Yours, &c.,
WILFRID GAGNE,
Prop. Grand Central Hotel, Drummondville, Aug. 3, '04.

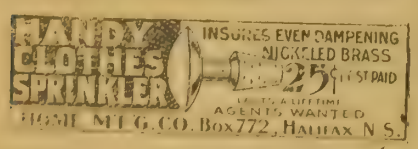
Uric Acid Never Caused Rheumatism

I WANT to prove it to your satisfaction. If you have Rheumatism, acute or chronic—no matter what your condition—write today for my FREE BOOK on "RHEUMATISM—Its Cause and Cure." Thousands call it "The most wonderful book ever written." Don't send a stamp—it's ABSOLUTELY FREE.

JESSE A. CASE, Dept. 461, Brockton, Mass. U. S. A

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**



If you are a housewife you cannot reasonably hope to be healthy or beautiful by washing dishes, sweeping and doing housework all day, and crawling into bed dead tired at night. You must get out into the open air and sunlight. If you do this every day and keep your stomach and bowels in good order by taking Chamberlain's Tablets when needed, you should become both healthy and beautiful. For sale by all dealers.

DAIRYING.

How to Increase the Revenue of a Dairy Farm.

There may be many ways, but at this time we will only consider one: As quickly as possible increase the producing capacity of the herd. Right there is one of the biggest leaks to be found on the farm in the low average of production of the cows. There are reasons for it and it is a pity that so many farmers do not clearly understand that it is in the main the fault of the farm owner in the administration of the farm forces for which he alone is responsible. For instance, we find a herd of cows that are badly bred and have been for generations. If there is a good profitable cow it is the result of accident and not of design on the part of the men who have bred that cow and her ancestors.

Now who is responsible for the low profit or, maybe, absolute loss this herd gives because these cows did not have good producing blood in their veins? Who, but the men that have bred them? There is where a lot of mischief is played with the outcome of profit. It is bad enough to face the percentage of failures that comes with the best of sires, but when we see farmers deliberately set in to breed cows from poor producing blood, is there any wonder they get but little profit? The trouble is, these farmers have no eyesight for the working of right principles and so they reap according to the seed they have sown.

Another cause for low profit is poor judgment in feeding. There is a big percentage of farmers keeping cows and pretending at least that they are and pretending at least that they are anxious to make good profit from them who exercise very shallow judgment in feeding. They fail in two ways:

(1) In adapting the feed to the purpose of milk production. They are constantly told how important it is to give the cow sufficient protein daily to enable her to build up her own body, maintain the life of the calf she is carrying, and furnish her natural ratio of curd and albumen in her milk. But they feed without any exercise of this dear bought wit. They can get it cheaply but they prefer to learn it by years of mistakes and then maybe never learn what is meant by a balanced ration.

(2.) They refuse to give their cows first enough to carry the milk production to the point of profit. Here lies a powerful working principle that cuts the ground out from under the feet of thousands upon thousands of farmers. It is as though they had to work to build a house and all the time they burned up as fast as they built. It is a common thing to find farmers who have no critics, knowledge of how to feed for profit but who do know enough to feed at a loss continually. Talk to them about the "food of support," the amount a cow must take from her feed to support the body which always comes first and they will turn from you in disgust, "O, that's some book stuff," they will say.

Read that bulletin issued by the U. S. government concerning the "Cow Census" records made by Hoard's Dairyman when over 2000 herds were studied. Note the big percentage of farmers out of those 2000 who did not understand the feeding question well enough to get a profit, or the breeding question well enough to get a cow that would give a profit if she were well fed. Right in that deep hole lies the wasted labor and wasted lives of thousands of farmers—poor judgment in producing a cow and poor judgment in feeding her. A

BIG CARTAGE COMPANY RECOMMENDS

MOLASSINE MEAL *Made in England*

THIS IS WHAT THEY SAY:

THE SHEDDEN FORWARDING CO. LIMITED
Cartage Agents for
THE GRAND TRUNK RY. SYSTEM, THE INTERCOLONIAL RY. SYSTEM, Etc.

Messrs. The MOLASSINE Co. of Canada, Limited Montreal, June 9th, 1913
402 Board of Trade Building, Montreal.

Dear Sirs—I have much pleasure in recommending your "MOLASSINE MEAL" which has been used by this Company for several years with good results.

Yours truly, (Signed) G. E. BELCOURT, General Manager

ROYAL WARRANT

After supplying the Royal Stables for several years, His Majesty King George VI has granted a Royal Warrant to the makers of MOLASSINE MEAL

This Company owns and uses such a large number of Horses that the feeding becomes a very important feature with them. "MOLASSINE MEAL" will do as much for your horses—try it.

Put up in bags containing 100 lbs. Get it at your Dealers or write us directly.

Look for this Trade Mark

on every bag

MOLASSINE Co. OF CANADA, LIMITED 930 ST. JOHN, N.B. MONTREAL TORONTO

FOR SALE

EXCELLENT BUSINESS PROPERTY, consisting of large general Store and small Hotel, new, Warehouse 30 x 75, and large new Barn, with Three Acres of Land. Property located at Hampstead Wharf, Queens Co., N. B.

The construction of the Valley Railway has created an active business centre at Hampstead, over two hundred men being employed by the railway at that district. A large number of men are also employed in the stone quarries, and a large saw mill has recently been erected that will give employment to a good many hands.

This is an excellent business opportunity for a man with a little capital. For price and full particulars write

ALLISON & THOMAS

68 Prince William Street
St. John, N. B.

SEVEN PER CENT.

is assured to the purchaser of Profit Sharing Bonds in a successful and well organized Company which we can highly recommend. The Profit Sharing feature of these securities enables the bond holder to participate, as well, with the Company in any further earnings. Interest cheques mailed to investors twice a year.

National Securities Corporation
LIMITED
CONFEDERATION LIFE BLDG., - TORONTO, ONT

WINDSOR DAIRY SALT

Is The Cheapest You Can Use

not alone, because it is the purest and best salt for salting butter. But because it will salt more butter, pound for pound, than any other salt you can use.

The big creameries will tell you this—and show you tests to prove it.

The Agricultural Colleges demonstrate this every day.

Every farmer and dairyman—who is getting good prices for butter—is using Windsor Dairy Salt.

It is pure—it makes beautiful butter—it works in quickly—and it is the cheapest in the end. Just try it yourself.

70D

Molascuit Meal

Entirely British grown nd British manufactured.

Molascuit Meal is the leal feedstuff for all anials, and a small quantity er day will keep your Horses, Cattle, Sheep and ther stock in good condiion.

Give it a trial, you will nd it more than pays for tself.

If your dealer does not tock it, please write for rices and full particulars.

Agents

anld Bros. Limited, Halifax, N. S.
. C. Smith & Co., St. John, N. B.
arvell Bros., Charlottetown, P.E.I.
Vest India Co., Limited, Montreal.

tremendous increase of profit could be had in this field alone if we had better brains to comprehend what it contains and what it means to us.—Hoard's Dairyman.

Selecting A Sire for a Grade Herd.

The other day a man from Kansas came to this county and purchased 44 grade yearling heifers of the Holstein breed for which he paid $2,200. These heifers were mainly bred by Mr. Marshall.

Anyone can see that this was a profitable transaction for the men who bred those cattle, yet the purchaser was glad to get them at that price for they were an exceptionally fine, uniform lot. But there is a deep lesson in that simple transaction. These heifers were not sired by an inferior grade bull. On the contrary, Mr. Marshall has spared neither money nor pains to secure the best sire of that breed he could get. He believes fully that as between the production of fine grade cattle and pure-bred, the grades require a stronger, more prepotent sire than the pure-bred. This is a reasonable conclusion. With the pure-bred there is the blood of the mother to back up that of the sire. But with the grade mother much of this is lacking and most of the modifying effect and improvement must come from the sire.

Then, again, the more impressive and prepotent the sire, the more uniform in type will be his heifers and then if well reared and nourished that means more money will be paid for them, for there are plenty of men who want to start dairy herds and who want the highest quality they can get.

Hoard's Dairyman has for years been urging the farmers to elevate their standard of quality in the bulls they use and yet there are many thousands who will buy and use the poorest bull they can get just because they can buy him cheap. What would we say concerning that farmer who would deliberately purchase poor, infertile seed corn because he could buy it a dollar a bushel less than he would have to pay for good seed. Most any farmer knows better than to plant poor seed if he knows it. What shall we say then of the parallel case when he uses a poor, ill-bred sire because he can buy him cheaply? Such men have a wrong notion of real cost value in cattle. There is going to be a splendid field open to enterprising farmers in the raising of first class grade dairy cattle. The tremendous advance that has come in demand for family milk and cream in municipalities, big and little, is going to take all the surplus grade cows that have quality in them for years to come. Here, then, is a place for the farmer who has some knowledge of true breeding principles. There is high profit in such knowledge if carried out.—Hoard's Dairyman.

Maritime Ayrshires in the Record of Performance.

In the revised list of the Canadian Official Records of Ayrshires, made under the supervision of the Department of Agriculture, recently published, we find the following records of Maritime Province cows:—

MATURE CLASS.

Dairymaid—24702, Andrew McRae & Sons, East Royalty, P. E. I., 11,100 lbs. milk, 572.77 lbs. fat, 5.16 per cent fat.

Miss Blanch—24693, John A. Annear, Lower Montague, P. E. I., 9,690.75 lbs. milk, 434.21 lbs. fat, 4.49 per cent fat.

THREE-YEAR-OLD-CLASS.

College Merry Maid—28776, Agricultural College, Truro, N. S., 8,371.7 lbs. milk, 321.62 lbs. fat, 3.08 per cent. fat.

Dairy Miss—24722, Andrew McRae, East Royalty, P. E. I., 7,631 lbs. milk, 318.21 ,bs. fat, 4.17 per cent. fat.

TWO-YEAR-OLD CLASS.

Milkmaid 7th—28769, Andrew McRae, East Royalty, P. E. I., 11, 673.-5 lbs. milk, 492.75 lbs. fat, 4.22 per cent. fat.

Flossie of Cardigan—28943, Roy W. Bullpitt, Cardigan, P. E. I., 9,123.25 lbs. milk, 305.8 lbs. fat, 3.35 per cent. fat.

Pansy—30214, S. R. Cairns, Freetown, P. E. I., 6,507.25 lbs. milk, 267.28 lbs. fat, 4.17 per cent. fat.

Pearl—31516, Geo. Annear, Lower Montague, P. E. I., 6,200.75 lbs. milk, 277.01 lbs. fat, 4.30 per cent. fat.

Queen of Meadowvale—26982, Agr. College, Truro, N. S., 6,176.7 lbs. milk, 237.55 lbs. fat, 3.84 per cent. fat.

Mollie Bawn—28376, Andrew McRae, East Royalty, P. E. I., 5,919.75 lbs. milk, 236.30 lbs. fat, 4.00 per cent. fat.

SHARPLES

MECHANICAL MILKER

THIS equipment is revolutionizing modern dairy operation. During the four years since its perfection it has been installed with unqualified success in hundreds of the leading dairies throughout America and abroad.

The distinctive features of the SHARPLES MILKER, to which its complete success is due, are the Teat Cups with the Upward Squeeze and the Patent Pulsator operating them. This device reproduces nature's own method of milk extraction, which the most skillful hand-milking cannot do.

The cows are more contented. The teats and udder become far better conditioned. The milk product is absolutely uncontaminated—pure and more valuable. Labor cut to one third.

Sharples Mechanical Milking means the end of all drudgery of milking.

Practically every dairyman can visit installations of SHARPLES MILKERS within easy distance, where the actual operation of this equipment can be observed under conditions approximating his own. We shall be pleased to hear from dairymen with a view to their making such inspections.

OUR comprehensive Mechanical Milker Catalogue is the most important document to the dairyman now current. Forwarded on request.

The Sharples Separator Company
West Chester, Pa.

Branch Offices:
Chicago Ill. San Francisco, Cal.
Portland Ore. Dallas, Tex.

Manufacturers of SHARPLES TUBULAR CREAM SEPARATORS—the 100% efficient Separator with the 3-part easily washed bowl. Write for the Sharples Separator Catalogue.

Agencies Everywhere

The Patent Pulsator operating the Teat Cups with the Upward Squeeze.

TRADE MARK
Wilkinson
REGISTERED
PNEUMATIC
ENSILAGE
and STRAW CUTTERS

Our Climax "A" mounted is the only successful combination machine of this capacity on the market. It will cut and deliver green corn into the highest silo, or dry straw or hay into the mow. 13" mouth, rolls raise 8 inches and set close to knives, making solid compact cutting surface. Requires less power than any other of same capacity. No lost power. Direct pneumatic delivery, no worm gears or special blower attachment. Knife wheel also carries the fans. No lodging on wheel arms, everything cut, wheel always in balance. Steel fan-case. Supplied with pipe enough to reach any silo, also pipe rock, tools, etc. Ask your dealer about them and write for catalog. We also make a "B" machine unmounted.

THE BATEMAN-WILKINSON CO.
LIMITED
438 Campbell Avenue, Toronto, Ontario.

For soreness of the muscles, whether induced by violent exercise or injury, there is nothing better than Chamberlain's Liniment. This liniment also relieves rheumatic pains. For sale by all dealers.

LIVE STOCK.

Treating Lambs for Stomach Worms.

This is an important time of year for weaned lambs as it is the season in which they are most likely to suffer from stomach worms. If they become badly infested it seriously stunts their growth and may cause death.

The most important sysptoms are poor condition, diarrhoea, and pale mucus membranes in the mouth and eyes. I have tried turpentine, creoline, thymol, arsenic, copper sulphate and mustard, tobacco and various other remedies, but none have proven so satisfactory as gasoline. The dose for a good-sized lamb is a tablespoonful and it should be given in a teacupful of sweet milk as a drench. Milk is much better than oil as there is much less danger of the animal strangling. It should be given slowly and the lamb's head should not be held too high. In case the lamb strangles as indicated by coughing, stop until it gets its breath. Some times after taking a big dose a lamb will stagger and may fall. By placing the hands under the lamb's belly, lifting it up, and giving it several good jolts to get the fumes of gasoline out of its lungs, it will usually recover in a few minutes. In treating lambs or sheep for stomach worms the gasoline should be given on an empty stomach once daily for three days. It is a good plan when lambs are weaned to give them the gasoline treatment and then put them on an uninfected pasture.

An excellent salting mixture to use for sheep or lambs infested with stomach worms is as follows, common salt 25 pounds, and one pound each of sulphur, air slaked lime, powdered charcoal, blood meal and pulverized sulphate of iron. These ingredients should be finely pulverized, well mixed and kept under cover where the sheep can lick them at will. If the pastures are not good other feed should be supplied as a poor physical condition is favorable to the development of parasites. They should be supplied with pure water to avoid infection from this source.—N. S. M.

Breeding and Feeding of Pigs.

Pigs should be well but not over fed. It is only when fed regularly that pigs give the most satisfactory results. During the first half of the sixteen weeks which a sow goes in pig she should be allowed to run on grass, and should receive a limited amount of other food. For the last eight weeks she should be treated more generously, so that she may be in good condition, but not too fat, at the time of farrowing. During the time the sow is rearing her litter she should receive as much good food as she will take, consisting of boiled potatoes, Indian meal porridge, pollard, bran, and skim milk. At three weeks old the young pigs begin to eat, and at this time should be supplied with skim milk, separated milk, or fresh buttermilk, which may be mixed with a little pollard, bran and boiled potatoes, and given twice or three times daily. For feeding the young pigs a special trough should be provided, which should be thoroughly scalded with boiling water every few days. Care should be taken to prevent the young pigs having access to the sow's food. When eight weeks old the young pigs may be weaned. After weaning they should receive the same quality of food in a sloppy condition, and be allowed a little exercise. When the pigs have reached about 1 cwt. in live weight the amount of exercise allowed them must be limited. The food should now consist of boiled potatoes broken up and mixed whilst hot with a quantity of raw Indian meal and pollard, or barley meal. After the pigs have eaten as much as they appear to require, a small quantity of buttermilk, or kitchen refuse should be added, to induce them to clean up all the food given them. The quantity of food which a pig should receive is just what it will eat up clean—no more and no less. Turnips and mangels are sometimes used instead of potatoes, but potatoes give by far the best results. Recent experiments carried out by the Department indicate that potatoes are not essential for the profitable production of pork. Moreover, it is very doubtful whether it is economical to feed pigs on saleable potatoes if they can be sold for one-fourth the value of meal in addition to the cost of marketing.

FATTENING.

When being fattened, pigs should be fed three times a day. While there is much difference of opinion as to whether the meals should be given cooked or raw, it would appear doubtful if the expense involved in cooking meal is justified. In support of this view it may be stated that in a series of experimtnts carried out at the Agricultural Station, Clonakilty, Co. Cork, as good results were obtained from feeding raw meal which has been damped with cold water as from meal that had been made into porridge by cooking with steam. The addition of oats to the food of pigs which are being finished improves the whiteness of the fat and makes the flesh firmer. The pigs should therefore, receive oatmeal or bruised oats during the three or four weeks previous to the times at which it is intended to kill the animals. During this period they should be allowed neither turnips nor mangels. When the food contains a large proportion of brewery or distillery by-products, the fat produced is soft and of a yellowish colour and the meat is not of good flavor. The excessive use of such products is therefore to be avoided.

Every farmer should try and breed the store pigs he requires, because, in the first place, a pig eight weeks of age should not have cost more than 8s. to produce, whereas more than double this amount has generally to be paid in the open market for such a pig. Furthermore, pigs reared on the farm fatten more readily, and are therefore more economical than pigs bought in the open market.

SWINE FEVER.

Swine fever is the disease most dreaded by farmers. This, it should be clearly understood, is a germ disease, and is never spontaneous in its origin. The sole cause of swine fever is the introduction into the system of a healthy pig of the specific germ from the body or excreta of a diseased pig. There is reason to believe that the disease is not unfrequently conveyed to places at which swine are kept by means of persons who have been in contact with diseased animals elsewhere. The farmer who breeds the pig he feeds is less likely to suffer loss from this disease than the farmer who buys in the open market. Great care should be exercised in keeping the houses in which the pigs are kept clean and comfortable. Cleanliness of the sties and feeding of pigs on suitable food are essential if the animals are to be kept in a healthy condition, and thus have power to resist infection.—Farm and Home, England.

Did You Receive The

FREDERICTON EXHIBITION

Prize List?

If you didn't, send your name to the Secretary, Fredericton, N. B., he will do the rest.

$15,000 In Premiums $15,000

The Big Show of 1913--Sept. 15, 16, 17, 18, 19, 20

Warm in Winter Cool in Summer

Interline the walls, floors and ceiling of your house with

"Sovereign" Sheathing Felt

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and you will find it much easier and cheaper to maintain an even, comfortable temperature within, all the year round.

SOVEREIGN Sheathing Felt does more than stop the wind—it acts like a blanket in the wall and effectually prevents the heat from leaking out in winter or filtering in during the hot summer days.

Made of the same enduring materials as RU-BER-OID Roofing, it will not rot, dry out or crack, but will give permanent protection.

Get a sample from the nearest RU-BER-OID dealer, or write for sample and booklet to 105

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MAXWELL'S HIGH SPEED CHAMPION

The Wringer Board extends from the side, out of the way of the cover. This allows practically the whole top of the tub to open up—makes it easy to put in and take out clothes.

No other washer has as large an opening. No other washer can be worked with crank handle at side as well as top lever.

Do you use Maxwell's "Favorite"—the churn that makes quality butter?

Write us for catalogues if your dealer does not handle them. 89

DAVID MAXWELL & SONS, ST. MARY'S, Ont.

FLEET FOOT

THE PERFECT SHOE for SUMMER SPORTS

FOR EVERYBODY

Made In Smart Styles, Suitable For Every Outdoor Occasion

YOUR DEALER HAS THEM

You Might As Well Get THE BEST

CANADIAN CONSOLIDATED RUBBER CO., LIMITED, MONTREAL.

2

Weaning the Lambs in England.

The usual time for weaning the lambs in the Midland counties is early in July, and, when separated, the ewes should be taken as far away from the lambs as can be made convenient, as when they are within hearing distance of each other they are unsettled for some days. One of the chief objects of the shepherd at this time is to dry the ewes, and the best and most simple way to do this is to put them on a bare pasture for a few days. Some of the ewes will in all probability be dry, or nearly so, at weaning time, others will quickly go dry; but as there will most likely be some heavy milker that will require attention, the shepherd should examine the udders about twenty-hours after the lambs have been taken away from them, and partially milk those that have full bags. The ewes udders should be examined a second time after a longer interval. Lambs require a great deal of attention after weaning, as they are very subject to husk, tapeworm, and other troublesome parasitic diseases as autumn approaches. The best preventive measures are to drench the lambs with a good vermifuge medicine, and avoid damp, stale, and tainted pastures. Lambs never thrive so well if allowed to graze clover or other aftermaths a second time the same season, even if keep is plentiful. The lambs should be supplied with a moderate quantity of mixed, concentrated food, as the percentage of losses is usually much smaller than when fed solely on succulent food, and, besides, the lambs grow faster and are in better condition either for sale at Michaelmas as stores, or for folding on roots during the winter. Some masters dose the lambs with turpentine, well diluted with linseed oil, to which some sheep owners add asafoetida. Other people use arsenical tablets, and many prefer a good proprietary medicine. But whatever remedy is used, the lambs should be fasted before drenching. The lambs should be dipped when weaned, and it is advisable to dip them a second time a few weeks later in order to insure freedom from ticks, keds, and lice. Dipping should be done under the supervision of the sheep-owner or an experienced shepherd, as instructions should be carefully carried out both with respect to the strength of the fluid and the time of immersion. The sheep should not be allowed out on the pastures for some hours after dipping. Lambs on grass farms should have a change of pasture occasionally, and should have access to rock salt and good water. On light land arable sheep farms lambs are not so subject to hust and tapeworm as lambs on grazing land, as they are frequently folded on fresh ground. In chalk and limestone districts the lambs are usually folded on sainfoin after weaning. They are also folded on clover, aftermaths, vetches, rape, kale, mustard, and early cabbages, and as autumn approaches on late cabbages and white turnips, and during the winter they are usually close folded on swedes.

Ewe lambs intended for breeding purposes are better at liberty on high and dry pastures, and although they do not require such expensive feeding as lambs that are for fattening on roots, they should be kept in good growing condition, as the object is to build up sound constitutions, and bring into the breeding flock healthy, vigorous, and well-grown theaves.

THIS BARREL

Contains flour guaranteed to give satisfaction or you get your money back. Regal Flour is always preferred by careful cooks because it insures good bread *always*—and palatable as bread can be made.

REGAL FLOUR

MAKE NO MISTAKE. Always insist upon Regal Flour and you can be sure of the quality.

THE ST. LAWRENCE FLOUR MILLS COMPANY LIMITED.

MONTREAL

THE SUSSEX MOTOR CO'S Cream Separators and Engines

are the best and we do not believe that there is a sensible man living who would purchase any other than our cream separators and engines, if he would but see and try our machines. It is a fact that 99% of all separator and engine buyers who do SEE and TRY our machines before buying, purchase our goods and will have no other. The 1% who do buy are those who allow themselves to be influenced by something other than real genuine merit.

Every responsible person who wishes may have a free trial at their own home without advance payment or any obligation whatever. Simply ask your nearest agent or write direct to

THE SUSSEX MOTOR COMPANY, LTD.

Sussex, N. B.

We want agents in a few unrepresented districts.

THE HORSE.

Heaves in Horses.

Heaves is closely related to asthma in the human family. It is attended with difficulty of breathing, and a sensation of constriction in the chest, wheezing generally accompanied by a cough. It is a genus of the order of spasmi. It is caused by over feeding on clover, vetches, or clover hay, etc., but more particularly on chaff, dry bran and oats, and husky food, a great deal of which has generally to be eaten in order to obtain the requisite percentage of nutriment.

In countries where there is a comparatively short winter, such as in the south of France, Spain and on parts of the continent, in California, it is almost entirely unknown. Heaves is almost invariably observed to exist in proportion as clover is fed, and in order to confirm this statement it is observed that when land heretofore yielding clover has refused to produce it in paying quantities, so that other regimen has had to be supplied, it disappears. It is also caused by animals being left in the stable for several days, and during this time being fed the ordinary quantity of hay which they would have received were they at work.

Dusty hay is a great producer of heaves. Violent exercise, which unnaturally distends the lungs or an hereditary predisposition to the disease, favors its appearance. It has been considered a disease peculiar to old animals, and animals with narrow chests are most likely to be affected with it, as well as phthisis. It would be well to mention some of the prominent symptoms of the disease.

There is a duplex or double motion of the flanks when the air is being expired. There is at first a semi-collapse of the abdominal parietes, or walls. Then after an interval which can be easily observed, the object of which is to complete the evacuation of the chest, there is generally a short, dry, weak, low-sounding cough, a wheezing in the throat, with evident manifestations of dyspnoea. This occurs paraxysmally, and is due to violent exercise, the effects of suddenly breathing cold air, or after drinking cold water. There is also, in some patients, observed a ravenous appetite, due to probable derangement of the digestive organs. Such animals do not stand work well, as the muscular tissue is soft and easily made to show the effects of fatigue. A close stable is unsuited for any horse, but particularly so for those suffering from the disease we are considering.

Treatment: Turn the animal out on pasture in the season for it. Laxative food, will relieve the complaint. In chronic cases give dry grain at night only, feed turnips, carrots, etc., at other times. The water should be given in small quantities and a little lime occasionally added. Keep the bowels always laxative, to accomplish which feed oilmeal occasionally. Give two ounces of pulverized belladonna leaves once a week and occasionally a dose of hyoscyamus, but you will have to rely quite as much on good care and cleanliness as upon medicinal agents. —American Horse Breeder.

Horsemen Attention ! !

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevents the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

Before Using

CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for alland every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR :—I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly recommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
RODERICK McKENZIE.

DEAR SIR :—I have used Dr. J Woodbury's Horse Liniment for a number of years, and have found it to be the most excellent article for the feet of horses kept in the stable. It prevents dryness and hardness, promotes a smooth and healthy growth and will, used according to directions, soon remedy anything like contractions of the hoof.

W. A. C. RANDALL, M. D.
Hillsboro, N. S.

MESSRS. FRASIER THORNTON & CO., Cookshire, Que.

GENTLEMEN :—I have used your "Dr. J. Woodbury's Horse Liniment" for the past seven years for coughs, colds and lameness of all kinds, and find it gives the very best results for distemper. I certainly consider it the best on the market, and would never be without a bottle in my stable

(Signed) WALTER SLATER, "Cash Livery."

FRASIER THORNTON & CO., Cookshire, Que.

DEAR SIRS :—You may put my name on your list as one using your Horse Medicines. I have found them to be the best on the market and am never without your Liniment and Condition Powders in my stable.

(Signed) G. E. CRONKHITE, (Horseman),
Hawkshaw, N. B.
March 28th, 1911.

FOR SALE BY ALL DEALERS

Manufacturers: FRASIER THORNTON & CO. LIMITED, Cookshire Que.

The Draught Foal.

The effort of the breeder who wishes to attain success in purebred draught horse peoduction should be to supply the foal with such feed and treatment that it will be kept in a thrifty, growing condition from birth to maturity. The first feed should be the colostrum milk from its mother. Soon the foal will begin to eat bits of hay, grass and grain if given opportunity. As soon as it learns what oats and grain are it should be allowed a run or creep in which is kept an open grain box. Whole oats, bran and linseed oil meal, in the proportions of 6-3-1 by weight, form a good mixture to keep in this box, where the foal may have access to it at all times.

Thus the foal has an opportunity to learn to eat grain and hay, and gets to practically full feed before weaning time. This is very desirable because it will suffer little or no setback when the dam's milk is withheld, and will worry and fret much less than if it did not know enough to satisfy the cravings of appetite.

After weaning the foal may well be given the run of the fields and pastures for the exercise it will get, and also for a good portion of the rough feed it will need. But it should not be made to glean its living from these sources during the fall and winter. It should be gllowed a liberal supply of whole oats, bran and linseed oil meal in the proportions stated above. It should also be allowed a liberal supply of bright, clean, dustless clover or clover hay. Clover hay is a great feed for the growing colts. Corn should not form any considerable proportion of the ration of the growing foal, because it is too highly carbonaceous, too rich in fat-producing and too low in muscle and bone building constituents. Feed salt daily in limited amounts. Keep acquainted with the youngsters and keep them acquainted with you. See that they have comfortable quarters. Keep the lice off them, especially during the first winter. Pay attention to the growth of the feet. Give plenty of play room and plenty of nutritious, palatable feed. Co-ordinate the good breeding which they possess with wise feeding and management.—Country Gentleman.

You Can't Cut Out

A BOG SPAVIN, PUFF or THOROUGHPIN, but

ABSORBINE
TRADE MARK REG. U.S. PAT. OFF.

will clean them off permanently, and you work the horse same time. **Does not blister** or remove the hair $2.00 per bottle, delivered. Will tell you more if you write. **Book 4 K free.** ABSORBINE, JR., the antiseptic liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments. Enlarged Glands, Goitres, Wens, Cysts. Allays pain quickly. Price $1.00 and $2.00 a bottle at druggists or delivered. Manufactured only by W. F. YOUNG, P.D.F. 124 Lymans Bldg., Montreal, Can.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

OUR Stallion Policies, covering against loss by **Death through Accident or Disease,** are more liberal and afford more protection to owners than any issued by Competing Company. They contain no vexatious clauses, having been drafted to cover **the special conditions** met with in this Country. They cover the horse no matter **where he might be** and not merely **in his own stable,** as certain Companies do. This is very important during the Breeding Season as the horse might die while being on the road. Do not **take any chances** by insuring with others, **insure with us;** The insurance premium represents only a small proportion of the service fees earned. Better risk the **loss of the premium** than the **purchase price** of your beast if it dies without insurance.

Better have and not need than need and not have.

STALLION INSURANCE

All kinds of live stock insurance transacted. *Write for particulars and address of nearest agent.*

THE GENERAL ANIMALS INSURANCE CO. OF CANADA, Head Office: 71a ST. JAMES STREET, MONTREAL, Que.

HER BLOOD WAS TURNED TO WATER.

She Doctored For Three Years But Was Finally Cured By Milburn's Heart and Nerve Pills.

MRS. JOSEPH SMITH, Box 25, Creelman, Sask., writes:—"I write you these few lines hoping they will be a help to someone suffering from heart and nerve trouble. I doctored for three years but continued to get worse. I tried three different doctors, and got no relief, and tried all the drugs I could find but all failed. I became very weak, and my blood was turned to water. I tried MILBURN'S HEART AND NERVE PILLS, and after taking five boxes, I got great relief. I was so thin, I only weighed 90 lbs., but after taking five boxes I was completely cured, and I am well and strong to-day, and weigh 159 lbs., and I can now work all day, and do not feel tired or fagged out. If anyone would like to hear more of my case, I would be pleased to answer any questions."

Price, 50 cents per box or 3 boxes for $1.25 at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

POULTRY.

The Old Time Breeds in America.

In the days of our forefathers, many of the breeds of the present day were unknown. On the other hand, many of the breeds originated from some variety popular in our grandfathers' days.

From data at hand we learn that about 1850 there was a breed known as the "Bucks County Breed," it being a cross made by the poultry fanciers of Bucks County, Pennsylvania. Like all new breeds it was claimed to be a good layer, good sitter, and good mother; the eggs large and nutritious; the flesh white, firm, tender and fine flavored. It was also said to be the equal of the Dorking fowl, the pride of England, and at that time very much thought of by American poultrymen. In the States of New Jersey and Pennsylvania, the breed was prized for caponizing, in weight running from 16 to 18 pounds to the pair.

From wnat can be learned, the Bucks County Breed was bred in a variety of colors—Felch says they were buff mongrels, an extraction from Buff Cochin or Buff Shanghai on native stock. According to Bement (a well-known authority of his day) he secured a pair which had a different plumage. The color of the cock was a dark blue-black, with the ends of the feathers tipped with white; wings tinged with a yellow or golden color; hackles dark glossy blue; rose or double comb, and large wattles, bold, lively carriage and a stately walk. The hen did not differ much from the cock in color, and was very similar in form, being deep, plump and thick set in body; short legs, of medium size and dark color; high, single comb, serrated, falling over to the side, and large wattles. It is plain Mr. Felch knew what he said when he declared them to be mongrels, as they neither bred true to comb nor had a fixed color.

Originally, we are told, this cross was known as the Ostrich fowl, probably on acsount of its size, but later on it assumed the local title.

Even with all its shortcomings from a breeding standpoint, its fame spread, and it became popular in parts of New England. Mr. Bement secured the pair referred to from a gentleman in Boston. Dr. Kittridge, of New Hampshire, then more or less prominent in poultry matters, purchased some stock from a breeder in Montgomery county, Pennsylvania, but he said that at that time the variety was known as the "Booby fowl."

The Bucks County Breed received its fatal blow when the Asiatic varieties became more generally known and popular. This was about 1860, and from then on we find no trace of the cross.

Four varieties of the Asiatic family were known and bred in America about 1860, viz., the Cochin China the Dark Brahma, the Chittagong and the Shanghai. Prior to that George P. Burnham, of Massachusetts, originated and bred what he called the Gray Shanghais, and in 1852 he sent nine of these birds to England, as a present to her late majesty, the Queen Victoria.

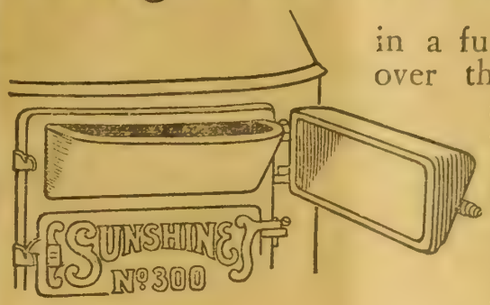
The impression, in some way or other, became general that the Light Brahmas sprung from these Gray Shanghais, but that was a mistake, as in 1896 I. K. Felch exhibited at the Boston show a stuffed carcass of a Light Brahma corkerel that came direct from England.

The following interview between the writer and Mr. Felch took place shortly after that show, and appeared in the Farm-Poultry of March, 1896:

In reply to a number of questions, Mr. Felch said: "It will be remembered by those long interested in the Brahmas, that in 1863 to 1865, and later, there was quite a paper war as to the first Brahmas having pea or single combs—Mr. Burnham and the Kerr faction claiming that they had

(Continued on page 744)

The Right Place for a Water Pan



in a furnace is just over the feed door and this is where it is placed in the "Sunshine." It has a lip front and is the right height for easy filling without removal. Its position and capacity of the pan make certain of a healthy humid heat.

Write for the Sunshine booklet, or get our local agent to explain the many advantages of this furnace over any other.

McClary's Sunshine Furnace

London Toronto Montreal Winnipeg Vancouver St. John, N.B.
Hamilton Calgary Saskatoon Edmonton 335

CANADA Portland CEMENT

SOME men ask for so many bags of "cement"—

Others, more careful, say they want "Portland Cement"—

But the man who does the best work insists upon getting "Canada" Portland Cement—

And he looks to see that every bag bears this label

CANADA CEMENT COMPANY LIMITED PORTLAND CANADA CEMENT MONTREAL

Write the Canada Cement Information Bureau, Montreal, for a free copy of "What the Farmer Can Do With Concrete."

There is a Canada Cement dealer in your neighborhood. If you do not know him, write for his name.

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue.)

"This is Mr. Micawber," said Mr. Quinion to me.

"Ahem!" said the stranger, "that is my name."

"Mr. Micawber," said Mr. Quinion, when he can get any. He has been written to by Mr. Murdstone, on the subject of your lodging, and he will receive you as a lodger.

"My address," said Mr. Micawber, "is Windsor Terrace, City Road. I—in short," said Mr. Micawber, with the same genteel air, and in another "is known to Mr. Murdstone. He takes orders for us on commission, burst of confidence—"I live there."

I made him a bow.

"Under the impression," said Mr. Micawber, "that your peregrinations in this metropolis have not as yet been extensive, and that you might have some difficulty in penetrating the arcana of the modern Babylon in the direction of the City Road—in short," said Mr. Micawber, "in another burst of confidence, "that you might lose yourself—I shall be happy to call this evening, and instal you in the knowledge of the nearest way."

I thanked him with all my heart, for it was friendly in him to offer to take that trouble.

"At what hour," said Mr. Micawber, "shall I—"

"At about eight," said Mr. Quinion.

"At about eight," said Mr. Micawber. "I beg to wish you good day, Mr. Quinion. I will intrude no longer."

So he put on his hat, and went out with his cane under his arm; very upright, and humming a tune when he was clear of the counting-house.

Mr. Quinion then formally engaged me to be as useful as I could in the warehouse of Murdstone and Grinby, at a salary, I think, of six skillings a week. I am not clear whethet it was six or seven. I am inclined to believe, from my uncertainty on this head, that it was six at first and seven afterwards. He paid me a week down (from his own pocket, I believe), and I gave Mealy six pence out of it to get my trunk carried to Windsor Terrace at night: it being too heavy for my strength, small as it was. I paid sixpence more for my dinner, which was a meat pie and a turn at a neighboring pump,; and passed the hour which was allowed for that meal, in walking about the streets.

At the appointed time in the evening, Mr. Micawber reappeared. I washed my hands and face to do the greater honor to his gentility, and we walked to our house, as I suppose I must now call it, together; Mr. Micawber impressing the names of streets and the shapes of corner houses upon me as we went along, that I might find my way back, easily in the morning.

Arrived at his house in Windsor Terrace (which I noticed was shabby like himself, but also, like himself, made all the show it could), he presented me to Mrs. Micawber, a thin and faded lady, not at all young, who was sitting in the parlor (the first floor was altogether unfurnished, and the blinds were kept down to delude the neighbors), with a baby at her breast. This baby was one of twins; and I may remark here that I hardly ever, in all my experience of the family, saw both the twins detached from Mrs. Micawber at the same time. One of them was always taking refreshment.

There were two other children; Master Micawber, aged about four, and Miss Micawber, aged about three. These, and a dark-complexioned young woman, with a habit of snorting, who was servant to the family, and informed me, before half-an-hour had expired, that she was "a Orfling" and came from St. Luke's workhouse in the neighborhood, completed the establishment. My room was at the top of the house, at the back: a close chamber; stencilled all over with an ornament which my young imagination represented as a blue muffin; and very scantily furnished.

"I never thought," said Mrs. Micawber, when she came up, twin and all, to show me the apartment, and sat down to take breath, "before I was married when I lived with papa and mamma, that I should ever find it necessary to take a lodger. But Mr. Micawber being in difficulties, all considerations of private feeling must give way."

"I said: Yes, ma'am."

"Mr. Micawber's difficulties are almost overwhelming just at present," said Mrs. Micawber; "and whether it is possible to bring him through them, I don't know. When I lived at home with papa and mamma, I really should have hardly understood what the word meant, in the sense in which I now employ it, but experience does it—as papa used to say."

I cannot satisfy myself whether she told me that Mr. Micawber had been an officer in the Marines, or whether I have imagined it. I only know that I believe to this hour that he was in the Marines once upon a time, without knowing why. He was a sort of a town traveller for a number of miscellaneous houses, now; but made little or nothing of it, I am afraid.

"If Mr. Micawber's creditors will not give him time," said Mrs. Micawber, "they must take the consequences; and the sooner they bring it to an issue the better. Blood cannot be obtained from a stone, neither can anything on account be obtained at present (not to mention law expenses) from Mr. Micawber."

I never can quite understand whether my precocious self-dependence confused Mrs. Micawber in reference to my age, or whether she was so full of the subject that she would have talked about it to the very twins if there had been nobody else to communicate with, but this was the strain in which she began and she went on accordingly all the time I knew her.

Poor Mrs Micawber! She said she had tried to exert herself; and so, I have no doubt, she had. The centre of the street-door was perfectly covered with a great brass-plate, on which was engraved "Mrs. Micawber's Boarding Establishment for Young Ladies:" but I never found that any young lady had ever been to school there; or that any young lady ever came, or proposed to come; or that the least preparation was ever made to receive any young lady. The only visitors I ever saw or heard of were creditors, They used to come at all hours, and some of them were quite ferocious. One dirty-faced man, I think he was a boot-maker, used to edge himself into the passage as early as seven o'clock in the morning, and call up the stairs to Mr. Micawber—"Come! You ain't out yet, you know. Pay us, will you? Don't hide, you know; that's mean. I wouldn't be mean if I was you. Pay us, will you? You must pay up, d'ye hear? Come!" Receiving no answer to these taunts, he would mount his wrath to the words "swindlers" and "robbers;" and these being ineffectual too, would sometimes go to the extremity of crossing the street, and roaring up at the windows of the second floor, where he knew Mr. Micawber was. At these times Mr. Micawber would be transported with grief and mortification even to the length (as I was once made aware by a scream from his wife) of making motions at himself with a razor; but within half an hour afterwards, he would polish up his shoes with extraordinary pains, and go out, humming a tune with a greater air of gentility than ever. Mrs. Micawber was quite as elastic. I have known her to be thrown into fainting fits by the king's taxes at three o'clock, and to eat lamb-chops breaded, and drink warm ale (paid for with two teaspoons that had gone to the pawnbroker's at four. On one orcasion, when an execution had just been put in, coming home through some chance as early as six o'clock, I saw her lying (of course with a twin) under the grate in a swoon, with her hair all torn about her face; but I never knew her more cheerful than she was, that very same night, over a veal cutlet over the kitchen fire, telling me stories about her papa and mamma, and the company they used to keep.

In this house, and with this family I passed my leisure time. My own exclusive breakfast of a penny loaf and a pennyworth of milk, I provided myself, I kept another small loaf and a mohicum of cheese, on a particular shelf of a particular cupboard, to make my supper on when I came bark at night. This made a hole in the six or seven shillings, I know well; and I was out at the warehouse all day, and had to support myself on that money all the week. From Monday morning until Saturday night, I had no advice, no councel, no encouragement, no consolation, no assistance, no support, of any kind, from any one, that I can call to mind, as I hope to go to heaven!

I was so young and childish, and so little qualified—how could I be otherwise—to undertake the whole charge of my own existence, that often, in going to Murdstone and Grinby's, of a morning, I could not resist the stale pastry put out for sale at half price at the pastrycook's doors, and spent in that, the money I should have kept for my dinner. Then, I went without my dinner, or bought a roll or a slice of pudding. I remember two pudding shops, between which I divided, according to my fiances. One was in a court close to St. Martin's Church,—at the back of the church—which is now removed altogether. The pudding at that shop was made of currants, and was rather a special pudding, but was dear, twopennyworth not being larger than a pennyworth of more ordinary pudding. A good shop for the latter was in the Strand—somewhere in that part which has been rebuilt since. It was a stout pale pudding, heavy and flabby, and with great flat raisins in it, stuck in whole at wide distances apart. It came up hot at about one time every day, and many a day did I dine off it. When I dined regularly and handsomely, I had a saveloy and a penny loaf, or a fourpenny plate of red beef from a cook's shop; or a plate of bread and cheese and a glass of beer, from a miserable old public-house opposite our place of business, called the Lion, or the Lion and something else that I have forgotten. Once, I remember carrying my own bread (which I had brought from home in the morning) under my arm, wrapped in a piece of paper, like a book, and going to a famous alamode beef-house near Drury Lane, and ordering a "small plate" of that delicacy to eat with it. What the waiter thought of such a strange little apparition coming in all alone, I don't know; but I can see him now, staring at me as I ate my dinner, and bringing up the other waiter to look. I gave him a half-penny for himself, and I wish he hadn't taken it.

We had half-an-hour, I think, for tea. When I had enough money, I used to get half-a-pint of ready-made coffee and a slice of bread and butter. When I had none, I used to look at a venison-shop in Fleet street; or I have strolled, at such a time, as far as Convent Garden Market, and stared

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

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Style 110

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at the pine-apples. I was fond of wandering about the Adelphi, because it was a mysterious place, with those dark arches, on a little public-house close to the river, with an open space before it, where some coal-heavers were dancing; to look at whom I sat down upon a bench. I wonder what they thought of me!

I was such a child, and so little, that frequently when I went into the bar of a strange public-house for a glass of ale or porter, to moisten what I had had for dinner, they were afraid to give it to me. I remember one hot evening I went into the bar of a public house, and said to the landlord:

"What is your best—your very best—ale a glass?" For it was a special occasion, I don't know what. It may have been my birthday.

"Twopence-halfpenny," says the landlord, "is the price of the Genuine Stunning ale."

"Then," says I, producing the money, "just draw me a glass of the Genuine Stunning, if you please, with a good head to it."

The landlord looked at me in return over the bar, from head to foot, with a strange smile on his face; and instead of drawing the beer, looked round the screen and said something to his wife. She came out from behind it, with her work in her hand, and joined him in surveying me. Here we stand, all three, before me now. The landlord in his shirt-sleeves, leaning against the bar window-frame his wife looking over the little half-door; and I, in some confusion, looking up at them from outside the partition. They asked me a good many questions; as, what my name was, how old I was, where I lived, how I was employed, and how I came there. To all of which, that I might commit nobody, I invented, I am afraid, appropriate answers. They served me with the ale, though I suspect it was not the Genuine Stunning: and the landlord's wife, opening the little half door of the bar, and bending down, gave me my money back, and gave me a kiss that was half admiring, and half compassionate, but all womanly and good, I am sure.

I allow I do not exaggerate, unconsciously and unintentionally, the scantiness of my resources or the difficulties of of my life. I know that if a shilling were given to me by Mr. Quinion at any time, I spent it in a dinner or a tea. I know that I worked from morning until night, with common men and boys, a shabby child. I know that I lounged about the streets, insufficiently and unsatisfactorily fed. I know that, but for the mercy of God, I might easily have been, for any care that was taken of me, a little robber or a vagabond.

Yet I held some station at Murdstone and Grinby's too. Besides that Mr. Quinion did what a careless man so occupied, and dealing with a thing so anonymous, could, to treat me as one upon a different footing from the rest, I never said, to man or boy, how it was that I came to be there, or gave the least indication of being sorry that I was there. That I suffered in secret, and that I suffered exquisitely, no one ever knew but I. How much I suffered it is, as I have said already, utterly beyond my power to tell. But I kept my own counsel, and I did my work. I knew from the first, that, if I could not do my work as well as any of the rest, I could not hold myself above slight and contempt. I soon became at least as expeditious and as skillful as either of the other boys. Though perfectly familiar with them, my conduct and manner were different enough from theirs to place a space between us. They and the men generally spoke of me as "the little gent," or "the young Suffolker." A certain man named Gregory, who was foreman of the packers, and another named Tipp, who was a carman, and wore a red jacket, used to address me sometimes as "David:" but I think it was mostly when we were very confidential, and when I had made some efforts to entertain them, over our work, with some results of the old readings; which were fast perishing out of my rememberance. Mealy potatoes uprose once, and rebelled against my being so distinguished; but Mick Walker settled him in no time.

(to be continued)

PEOPLE MUST EAT IN ALL KINDS OF WEATHER

And Food must be Cooked even in July and August

Most important in every house, therefore, is the Kitchen Range, and when you select a new one you should buy *the best you can find.*

This is without doubt—

THE ENTERPRISE MONARCH

and these are the reasons:—

It bakes perfectly at all times.

It is easy to operate—the dampers are the simplest possible, with no complications to confuse the housekeeper.

It has for wood a very large fire-box, so constructed that it will hold the fire many hours.

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A WRITTEN GUARANTEE WITH EVERY MONARCH SOLD.

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Enterprise

FOUNDRY CO. SACKVILLE, N.B.

Flea Beetles.

(Continued from page 730.)

not require any attention, but the sudden appearance of the first generation just before the vines are trained may require the use of the tarred board or sticky shield." The tarred board used was made by stretching a piece of 8-ounce canvas over a light wooden frame, 4 feet long by 3 feet wide. A 4-foot strip attached to the middle of the board at a convenient angle and braced by an upright to the rear edge forms a handle. The canvas was then coated with tar. Such a contrivance (Fig 14) if placed on the leaward side of the vine and the latter brushed with a large feather duster, or cedar bough, will, it is claimed, catch 85 per cent. of the beetles present. After the vines are trained, the beetles can be controlled by the use of tanglefoot bands as mentioned on page 5. In 1909, whale-oil soap was used to a considerable extent in British Columbia (page 5). In addition to the hop, the Hop Flea beetle has been found attacking tomato, mangel, radish, rhubarb, potato, etc.

Great Programme for Halifax Exhibition

The Provincial Exhibition Commission announces the opening of the Seventeenth of its splendid expositions for Wednesday, September 3rd, and to continue for seven days thereafter. The record of the years that have passed will be surpassed at the forthcoming Fair.

Efforts have been made and will be redoubled to obtain a complete display of exhibits so that every Department will have a highly interesting and instructive show.

The Horse Racing will, as previously, constitute one of the chief attractions of the Fair and these Speed competitions promise to be keenly contested. The horses were named for the stakes Tuesday last. The guaranteed amount in these races is $2,400 and the purse for the whole meeting aggregate $6,800.

The Vaudeville programme will embrace ten distinct acts of varied interest. The great sensational feature will be the demonstration of the "STEVEN'S Safety Pack." Harry B. BroUn and Arthur Lapham enter the Aeroplane and make an ascension. While they are speeding almost a mile a minute Lapham leaps from the aeroplane and descends to the earth in a Safety Pack. Nothing like it has ever been seen before in this Province The fireworks display will be magnificent.

The attendance will likely reach large proportions, and Manager Hall has made arrangements for a Lodging Bureau to place visitors who may require its services.

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Every man can have a clean collar if it's a Challenge Waterproof Collar. Best to wear at work or for dressing up after work. Not shiny, but look just like linen. Always neat and comfortable and are cleaned with soap and water.

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TORONTO CANADA 1

LITTLE BOY WAS SO SICK

Did Not Think He Could Live.

CHOLERA INFANTUM WAS THE CAUSE.

This trouble is the most dangerous of all the summer complaints of children. It begins with a profuse diarrhœa, the stomach becomes irritated, and the child is soon reduced to great languor and prostration.

Cholera Infantum can be speedily cured by the use of DR. FOWLER'S EXTRACT OF WILD STRAWBERRY.

MRS. JOHN FOOTE, Hantsport, N.S., writes:—"I can recommend DR. FOWLER'S EXTRACT OF WILD STRAWBERRY for Cholera Infantum. My little boy was so sick, I did not think he could live, as he was out of his mind, and did not know any one. I gave him "DR. FOWLER'S," and the first dose helped him, and one bottle cured him. I recommended it to a friend whose children were sick, and it cured them too."

DR. FOWLER'S EXTRACT OF WILD STRAWBERRY is a remedy that has been on the market for over sixty-five years and has been used in thousands of families during these years, so you are not making any experiment when you buy it, but be sure and get "DR. FOWLER'S" when you ask for it, as there are many imitations of this famous remedy on the market.

The price is 35c., and it is manufactured only by the T. Milburn Co., Limited, Toronto, Ont.

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

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A never failing and harmless monthly regulator. No lady can afford to be without them. They are pleasant to take and act very promptly. Mailed plain and sealed upon receipt of $2 per box or three for $5 with full instructions and advice. Correspondence confidential.

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Cows, farm machinery, equipment and crops all thrown in if taken now; move right in and make money from this year's crops; near school and all advantages, on telephone and R. F. D. line; two commodious houses, barns, sheds and poultry houses, well supplied with water; fine pasture for 20 head, cuts hay and fodder for same; variety fruit; estimated 1200 cds. wood, also pine, spruce and fir timber equal to purchase price; easy terms; for all details and traveling instructions to see this and a good 100-acre farm with stock and tools for only $1200 in Penobscot Co., see page 8, our "Mammoth 75-Page Farm Catalogue No. 36"; beautifully illustrated and fully describing many money-making farms in Nova Scotia, Maine and Mass.; send today for your free copy, it will save you lots of time and money. Box 373, Sussex, N. B.

Buy it now. Chamberlain's Colic, Cholera and Diarrhoea Remedy is almost certain to be needed before the summer is over. Buy it now and be prepared for such an emergency. For sale by all dealers.

The Old-Time Breeds in America.

(Continued from page 741.)

single combs. Thus were they striving to secure to the Gray Shanghai or Chittagong breeds the credit of producing the Bramhas. To keep in evidence the fact that the Chamberlain strain, the birds that Knox found on the India ship in New York harbor, in 1847, and their subsequent progeny, were pea comb, I had this bird set up, when some years old, although it was late, and the plumage all discolored and falling off of him.

"He was hatched in 1850, a descendant of those New York lot of birds, and when he was set up, the work made him so much of a Game shape that we never took care of him.

"I bought the bird for one dollar, and sold thirteen of his descendants for $1,300. It is safe to say that were there a truthful record kept, more Brahma of the past time."

The Shanghai seemed to be in the front seat in 1860, but it was closely crowded by the Brahmas and Cochins. The Shanghai was then the largest fowl in the country, weighing from 22 to 26 pounds to the pair at maturity.

There was considerable controversy at that time whether the Shanghais, Brahmas and Cochins were varieties of the same class, or distant breeds. Bement said they were different varieties of the same breed, claiming that fowls imported from China, whether feather-legged or smooth-legged, whether dark or light in plumage, came either directly or indirectly from Shanghai or its vicinity.

The Chittagongs came next in line, and it must be said of them they bred very uniform in both color and shape. At one time, too, it was said that the Hoang Ho fowls were the most valuable of the Asiatic breeds, but we have so little reliable data that we cannot venture an opinion.

In the early sixties the White-Faced Spanish were very popular throughout New Jersey, Pennsylvania and Ohio, noted for large white eggs, and the number of them that they produced.

At the present day, with the exception of the Brahmas and Cochins, and with a limited number of breeders of Black Spanish, none of the old time breeds are with us. Of the remaining breeds, the Brahmas, especially the Light Brahmas, are the only ones that have not only held their own, but are still forging ahead. The Cochins are less bred than they were ten years ago, and the Black Spanish variety is seldom advertised.

Simply because an egg is fertile is no guarantee of it hatching out a chick. Weak germs cannot hatch, and this weakness being caused by the hen being out of condition, may cause the chick to die in the shell. A hen may be in good condition today and in a bad state tomorrow.

While it must be admitted that no incubator is able to do as good work as a hen, yet in hatching large quantities of eggs it would be too expensive to solely rely on hens. A machine is ready when broody hens are very scarce, and if run properly, the machine will give almost as good a percentage of strong chicks as will hens. But much depends upon the work of the man in charge. Hens cannot always be relied upon. At times they give up the notion in the midst of the hatch; some hens impart too much heat, and some not enough. Some hens are restless and break eggs, and many more things are apt to go wrong at a critical time. Both hens and incubators need watching.

If common sense, and less doctoring were applied to ailing hens, there would be less spread of contagion. when hens are busy they are as a rule healthy. Nip a cold in the bud, and there will be no need for roup cures. Keep the premises in a strict sanitary condition, and there need be no fear of cholera. Nearly all the diseases that affect poultry are the effects of unsanitary surroundings, due to carelessness. In general, the treatment of diseases is not so satisfactory as preventive measures. Nowhere more than in the poultry business does that old adage apply: "An ounce of prevention is worth a pound of cure."

France classes the worth of a hen more for the production of meat and eggs than she does for fine feathess or standard looks. Some years ago the poultrymen aimed for show records, and while they no doubt gained their point, they at the same time ruined the stamina and thrift of the hen for commercial purposes. Today it is different. Utility has taken a front seat, and all breeds are bred up to conform with the ideas of the market poultryman.

No successful poultry plant was ever established with mongrel stock. Dunghill fowls, like incompetent labor, are not worth having around. Thoroughbred fowls like skilled labor, are sure to create a profit for the farm.

There is but one way to build up

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Free To Any Man

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In the handsomely printed little book or private pocket compendium for men (containing 8,000 words and 40 half-tone photo-reproductions), which I publish and gladly forward by mail, free, sealed to any man anywhere in the world who sends me the free coupon below. I have included certain parts that contain some very important advice or suggestions of a strictly personal nature, which, I believe, cannot be found in any of the Private Hygiene books for men that are now sold at high prices all over the country. It will thus be seen I have endeavored, through the medium of my free book, to give my readers absolutely free of cost really MORE, in some respects, than others offer and make a large charge for. All you have to do to get this free book of mine is to use the coupon below, or if in my neighborhood, I extend an invitation to you to call at my office. Please remember that this free offer involves absolutely no obligation on your part, and there is nothing whatsoever for you to pay, and nothing whatsoever for you to buy in any way, unless you should decide at some time in the future that you would like to try one of my mechanical VITALIZERS (described below), but that rests entirely with yourself. Over a million of these little free books have now been sent to men who wrote for them, as I want you te do, and who live in all quarters of the globe. I publish this free book in English, Swedish, Danish, Finnish, German, French and Polish, but I always send the English edition of course, unless otherwise instructed. Kindly use the little coupon.

SANDEN, AUTHOR.

In reference to manly strength, I believe it is now more generally acknowledged than ever before that the manly man stands back of all that makes for progress, development and achievement in the world, a truth which any of us can easily verify if we but look about us with impartial eyes.

As a matter of fact, the man who is debilitated, unstrung and enervated cannot, for perfectly obvious reasons, expect to approach those real and masterful attainments which seem but a natural and easy accomplishment for him whose nerve force, brain power and manly strength are perfectly normal. Hence, we acknowledge the debilitated, weakened man to be handicapped in every walk of life where real manhood counts, yet it would indeed be cruel of me to here so state the fact in public print were I not of the honest opinion that there is every hope for the unmanly man to restore himself to a state of health and vigor, if he but clear his mind of abnormal fear, and then make a fair, square effort to redeem himself.

There are two specimens of humanity for which I have no earthly use. One is the man who, though now strong and vital, yet plunges into dissipation and excess with the certain knowledge of his unmanly fate. The other is the man who, though knowingly debilitated and enervated, makes no effort to get away from his life of dissipation and wrong practices. As a matter of fact, there is no hope for either of these unfortunates But for him who acknowledges his errors, who may come to me and say. "I have paid the penalty of my past follies, but I am THROUGH with my life of dissipation, and I am going to make a manly effort to restore myself," to such a man, I care not what his physical condition may be, I can say in all truthfulness, "You, my friend, are on the right road to new strength and new manhood", for he really is, and there is no doubt about it.

I make a little appliance that I call a VITALIZER, which I designed to aid just such men who seek manly strength. I am not offering this VITALIZER here for sale, but merely suggest that you, reader, take the opportunity to learn all about what this little appliance is doing today everywhere throughout the world; then, if in the future you want to use one yourself and will so write me, I will gladly make some liberal proposition whereby you may have one to try. The VITALIZER is fully described in one section of the free book which the coupon below entitles you to.

The VITALIZER is made up in a very light form weighing only several ounces, and you wear it on your body all night. It generates a great, soft, pleasant FORCE which I call VIGOR, and which flows in a continuous stream into your nerves, organs, blood and muscles while you sleep. I am satisfied in my own mind that I have access to a great POWER in this little VITALIZER which in the future will be more and more relied upon all over the world in the treatment of debilities and nerve weaknesses.

With special attachments which carry the FORCE of the VITALIZER to any part of the body, it may be used by women as well as men for the treatment of rheumatism, kidney, liver, stomach, bladder, disorders, nervousness, lack of energy, etc. Therefore. please send for the book today, or if you happen to live in or near this city, I should be very glad to see you in person. Office hours, 9 to 6.

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The little free illustrated book of special private information, referred to above, is meant really to be a self guide for all men through the years before and after marriage and onward to a ripe old age. It is written in perfectly plain language, entirely free from technical terms, so that any one may easily grasp the full power of its good advice from two or three careful readings. It attempts to point out a safe road to new manhood or new manly strength, and as such is dedicated to mankind generally. One part of this book fully describes my little VITALIZER referred to above.

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We would greatly enjoy one, but as many of our students come from long distances and are anxious to be ready for situations as soon as possible, our classes will continue without interruption.

Then, St. John's cool summer weather makes study during the warmest weather just as pleasant as at any other time.

Students can enter at any time.

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THE St. JOHN Business COLLEGE. S. KERR Principal.

Dates to be Remembered

Nova Scotia Provincial Exhibition, Halifax, N. S., September 3 to 11, 1913.

Miramichi Exhibition, Chatham, N. B., September 8 to 13, 1913.

Fredericton Exhibition, Fredericton, N. B., September 15 to 20, 1913.

P. E. I. Provincial Exhibition, Charlottetown, P. E. I., September 23 to 26, 1913.

Canada Eastern Exhibition, Sherbrooke, Que., August 30 to September 6, 1913.

Canada National Exhibition, Toronto, Ont., August 23 to September 8, 1913.

Central Canada Exhibition, Ottawa, Ont., September 5 to 13, 1913.

Maritime Winter Fair, Amherst, N. S., December 8 to 11, 1913.

Fredericton Poultry Show, Fredericton, N. B., February 17 to 19, 1914.

Dominion Exhibition, Brandon, Man., July 15 to 25, 1913.

Yarmouth County Exhibition, Yarmouth, N. S., October 1, 2, 3, 1913.

the utility of a flock, and that is by proper selection. If each year the eggs from only the best layers are used for hatching purposes, each generation will become the more prolific; and this can also be greatly assisted by securing new males from some strain that has likewise carefully selected. In this work of selection the trap nest is the only reliable indicator.

"How many hens should be placed in a pen with a male bird for good fertility?" That question is asked time and again by beginners, and it is interesting to note the difference of opinion: Holmes says two males for each pen, using them on alternate days. For a half dozen hens or less, allow the male with them but a half day at a time. Professor Wheeler says the best results he has ever had, were 10 hens mated with year-old male. The hens were in three pens, four in one, and three in each of the others. The male was in each pen one day in three. Stevenson says by keeping about 30 to 40 hens in one pen with two vigorous cockerels, allowing only one of them with the hens at a time, changing them every day. Mount prefers using enough hens for one cock in each pen—with a small active breed, such as Leghorns, Minorcas, etc., 20 hens to one cock are about the number and with the larger breeds, such as Wyandottes, Plymouth Rocks, etc., 15 hens; with Brahmas and all very large breeds, 10 hens.

Fred Grundy says small, penned-up flocks, comprising six to twelve females and one male, will give 60 to 80 per cent fertile eggs, and strong chicks, for 15 to 25 days at the beginning of the season. After that the percent of fertility decreases rapidly, and the chicks are invariably weak, and never make good, vigorous breeding fowls. It pays well to have two male birds for each pen and alternate them. It is a practice the writer has used in his yards for years with marked success.

A Hundred a Month From Bees.

(Continued from page 731)

A greater share of the honey is extracted from the comb, and in season long strings of rigs, with everything from quart jars to milk can, line the narrow lane that leads to Hillside Farm, and their owners simply beg for "a little anyway."

Bees alone are not Mr. Young's only revenue producers, as Hillside Farm is not a wee garden plot and condenser. Chicks alone run up to over $500 a year. Besides this, there is also the revenue from grain, potatoes, berries, etc. All in all, it is quite safe to say Mr. Young's annual income is easily $2,000.

The hives are set back in the orchard not far from the house where they can be easily watched and carefully tended. The location is nearly perfect, as many large orchards are within easy flying distance, and Oxford county clover has a reputation of its own.

Mr. Young thinks honey is one of the best articles of food on the market, and that if more were eaten in the winter season there would be less colds and cases of lung trouble. He believes in eating it when well and taking it when ill, and rather looks upon it as a cure-all for most things.

Mr. Young has gradually built up his present apiary from a mere nothing, and it is safe to say that with reasonable luck he should be one of our bigger bee men in the near future. Mr. Young lost only two hives during the past severe winter.—J. C. Inman, Elgin Co., Ont., in Farm and Dairy.

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is a thoroughly tried and tested fly repellant for use on cows, horses, dogs and cats, and rids barns, stables and poultry houses of flies.

PRATTS "Fly Chaser" will keep the flies off your cattle. If it doesn't, it won't cost you a cent. It will relieve your tortured workhorse or your nervous, high-strung driving horse.

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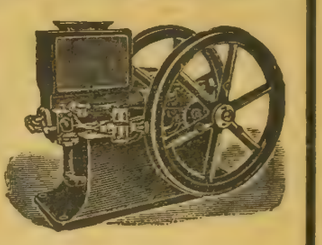

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Sole Selling Agents, Eastern Ontario, Quebec and Maritime Provinces.
The Frost & Wood Co., Ltd., Smith's Falls, Montreal and St. John. 16

The Canadian Demand for Clydesdales

We give the following extracts from a private letter received this month from a Canadian patron of the Clydesdale. His strictures should be carefully noted. The day of reckoning may come sooner than men anticipate, and when it comes it may be irretrievable.

"I see an article in your paper of 24th May stating that the breed does not make any headway in the U. S. A., and I am afraid that it will lose ground here in Canada. I think that every scrub that you had in Scotland our importers and your exporters have sent to Canada. That some good ones have come there is no doubt, but they are the exception. I heard a man say that he went to see that importation——made this spring, and he said he never saw a worse bunch of mares together. I went to see that shipment that ——made last fall, and they were just plain stuff. Keep up the agitgtion for good, thick, weighty horses with good, clean, hard bone. Every scrub mare or stallion you send to Canada is doing the breed harm. The people here are getting their eyes opened. The Percheron is going to get in here if our Clysdale importers persist in bringing in horses that are no good. I saw a horse five years old that——sold to an importer here, and he in turn sold to a neighbor of mine. That horse would not cover a mare; the owner never could get him to seed one. I saw another one that——sold to another party here that never left one foal in 1912, and these are only a few instances that I could enumerate. The horse trade is quiet here, and will be for a while, but good ones are all right, and will be. I am breeding some, and have plenty of enquiries for fillies of good quality with some size, but the importations will be light this year, and only good ones will be wanted. Any person who brings poor ones will get left. I have written you these few lines in the interest of the breed, trying to give you some light on the horse trade here."—Scottish Farmer.

Should the palms of the hands feel rough through gardening, etc., rub them with a piece of pumice-stone previously smeared with soap. This will cleanse and soften them.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Pure bred Holstein bull, 4 years old. A bargain for quick sale. F. W. NIXON, Lower Brighton, N. B.

VALLEY FARM HOLSTEINS FOR SALE—All sold out of bulls except one calf dropped in March, 1913. W. G. CAMPBELL. Salisbury, N.B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R. J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

WANTED—The name and addrees of the party who mailed Postal Note No. H. 998512 at Moncton, N. B., on March 15th, so we may give proper credit for same.—THE MARITIME FARMER, Sussex, N. B.

FOR SALE—Three pure bred registered Holstein bulls, 9, 5 and 3 months old. These bulls are from cows kept for the dollars they can earn. Milk tested and weighed. Write for particulars and prices. J. D. FRIER, Sussex, N. B,

FOR SALE—Flock of grade Leicester and Oxfordowns consisting of 1 ram 3 yrs old, 3 ewes 4 yrs old, 4 ewes 3 yrs old, 3 ewes 1 yr old, 6 ewe lambs, 4 ram lambs. All in good condition. NORMAN MacKELVIE, Rockland, Westmorland Co.

Sample Gasolene Engines at Special Prices.—1 1-2, 3 1-2 and 6 h. p. sizes. They have been only slightly used. They will be adjusted and in perfect condition and just like new before leaving factory. Prices and further particulars on request. THE PAGE WIRE FENCE COMPANY, LIMITED, Walkerville, Ontario.

CORRECTION

In printing the Halifax Exhibition Prize List an error was made which was not noticed until same was completed.

"In olasses 19 to 22 Dairy Cattle the words "or calf" in section 8 to be struck out."

The corrected readings should be: *Sec. 8 Cow 3 years old, in milk 1st, $15.00; 2nd, $12.00; 3rd, $8.00.*

Reduced Prices of Eggs

For the months of June, July and August only we will sell White Wyandotte, Columbian Wyandotte and S. C. White Leghorn eggs at $1.25 per 15; $3 for 50; $5 for 100. For Light Brahma eggs $2 for 15; $3 for 30. Address,

Michael K. Boyer, Box 27,
Atlantic Co., New Jersey.

Breeding Season 1913

The fashionably bred, prize-winning Clydesdale stallion, "Dunure Crag" will stand at stud and meet mares by appointment.

"Dunure Crag" is bred on the right lines, and will prove a very popular breeder, he is sired by the renowned "Baron of Buchlyvie."

For further particulars and terms apply to

J. MEIKLEJOHN, Cossar Farm,
Lower Gagetown, N. B.

FOR SALE—Second Hand Dog Power in first class running order. Also second hand boiler and engine about 8 to 12 h. p. THE SUSSEX MOTOR CO., Ltd., Sassex, N. B.

Get a Start Cheap!

Six Sicilian Buttercups eggs, four Turkeys eggs, (Bronze), five of my best Single Comb Rhode Red eggs, $2.00 for the fifteen.

Four handsome pairs of Sicilian Buttercups $5.00 A pair

Sicllian Buttercups generally agreed among those who breed them to be the best layers known $3.00 for 15 eggs.

Bronze Turkeys eggs $3.00 for eleven.

Single Comb Rhode Island Reds good birds in every way, and splendid to hatch and rear turkeys $2.00 for 15 eggs.

I have plenty of all these eggs I can supply any number. Order straight from this adv. and save time.

Terms, Cash with order.

SARAH E. MOSES SMITH,
Woodward's Cove, N. B.

A pen of Indian Runner Ducks three females, one male $5.00

1870 1913

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141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months.

A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.B.

Holstein Bulls For Sale

We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
Loch Lomond West Nova Scotia

HIGHLAND VIEW GUERNSEYS

We have very little to sell, but what we have got is the best, it is a bull calf six weeks old, out "Beauty Sue of Willow" (a cow purchased from Roper Bros.) and sired by the famous "Golden Opinion," Write for price.

R. R. BLACK, Amherst, N. S.

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

C. C. H EATON,
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W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire attle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
saac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

Stewart Bros., Allistoh, P. E, I.
J. W. Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
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A. A. McBeath, Marshfield, P. E. I.
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Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

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Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

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Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd.
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Jersey bull calves by Foxhall's St. John D'Dreamwold, and two litters of Yorkshire pigs, ready to ship in June.

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We offer at present a few young heifers and bulls, as well as three cows, all bred in the purple. One two year old bull in service, very low.

Information cheerfully supplied to enquirers, address,
M. LOVITT, M. D., P. O. Box 352, Yarmouth, N. S.

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Greatest Poultry Tonic on Earth
Sent prepaid for $1.00 per bottle.

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A cheap farm that with a little fixing up will increase in value 100 per cent. A bargain for quick sale.

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A few choice White Leghorn Cockerels from prize stock. Eggs for hatching all breeds. Send for catalogue.

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Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery —no agents. Send list of your wants for prices, etc.

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We have a number of choice cockerels and pullets of Barred Plymouth Rock, White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Eggs for hatching $1.00 per setting. Apply to

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Pure Bred Ayrshire Bull Calf

Dropped Jan. 12th, 1913. Bred from a daughter of Barcheskie Kings Own. Come and see him and his dam. Stables near the station.

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From prize mating Rose and Single Comb R. I. Reds and Buff Orpingtons and S. C. Brown Leghorns. Eggs $2.00 per 15. Send for mating list.

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Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.
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I am offering a two-year-old bull for sale. He is out of the famous cow White Heather of St. Annes. I have also two other choice bulls that are fit for service. Correspondence solicited.

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In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

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Present offering. One fine bull fit for service and several bull calves three or four months old, sired by Helbon Dehols Prince, and from cows that are producers. Among them one whose two nearest dams average over 26 lbs. butter in 7 days. For particulars and prices write

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We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

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Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

LOGAN BROS.
R. R. 1.
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Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand. Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

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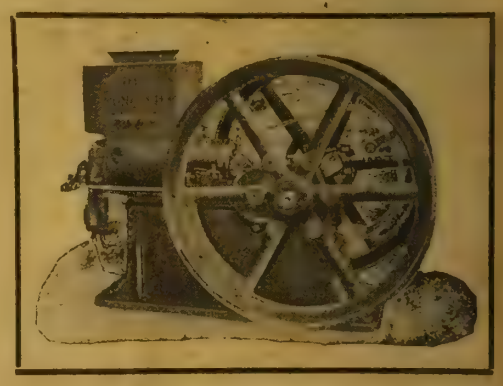

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PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 18. SUSSEX, N. B., AUGUST 5, 1913 No. 21

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WE show here the "Beaver" Sulky and Gang plow models, which are excellent implements for the Eastern provinces.

The "Beaver" frame construction gives several plowing advantages for stony, hilly land, and for irregular fields. By a tongue connection with the rear furrow wheel, guidance is easy during plowing, and short turns may be taken at furrow ends. A large land wheel, with a cushion spring on the axle arm, is placed centrally on the frame. Even in the roughest land, the operator is not jolted, and strain is taken off the team and plow frame by the land wheel arrangement. The "Beaver" runs steadily, and with light draft.

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"What's flour *gluten*, Bud?"
"It's what makes your dough *rise*, Rose."
"Yes"—she encouraged.
Added Bud very sagely:
"Makes it *rise* in the mixer and *expand*
"in the oven. It's the *elastic* part of
"flour—*absorbs* all the water and milk
"—and things."
Rose grew interested.
"FIVE ROSES, said Bud, is exceedingly *rich*
"in gluten. I s'pose because it's *all* made
"from *Manitoba* wheat. Takes up a lot
"*more* water — makes those *fat* loaves —
"lasts *longer* too."
"Saves *money*, doesn't it?" asked Rose.
Bud in a big voice:
"The fat loaf makes the fat pocketbook."
Use FIVE ROSES *always*.
And Rose said YES.

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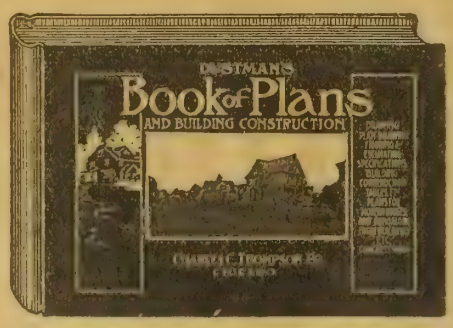

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Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 18. SUSSEX, NEW BRUNSWICK, AUGUST 5, 1913. Number 21.

FARM MANURES AND THEIR CARE

Paper Read by Moris A. Scovil, Gagetown, N. B. Before the 1913 N. B. F. & D. A.

Mr President and Gentlemen.

HE subject I have been asked to speak on this evening, viz., manures, is one of the most important connected with agriculture. What has been written about this phase of farming alone would fill many volumes, and in the limited time at my disposal this evening, I cannot hope to dwell on this subject in a very thorough manner, but can barely touch on a few of the problems most affecting New Brunswick agriculture. However, we may try and gather some points which may be of benefit to us.

As we all know, farmers are supposed to get their living from the land. Whatever branch of agriculture we are engaged in, whther it be the growing of apples, dairying, or beef production, we cannot expect, in this province, to make a success of it, unless our farms are made to produce a yield up to their greatest capacity. Modern methods have shown us that it is impossible to grow maximum crops on impoverished lands, but that our lands in order to give the greatest yield must be in a high state of fertility. Leaving out the western lands which are producing great yields of grain from the original store of fertility in the soil, we find that in our province we have to use manure of some description to enrich our lands. The keeping up of the fertility of our farms can only be accomplished by the use of animal manures, by the intelligent use of commercial fertilizer, or by cover crops, or perhaps the combination of all three; for we find that men engaged in exclusive fruit growing, use practically no animal manure in their system of keeping plant food in the ground, but rather rely on commercial fertilizer together with cover crops of vetches, clovers, etc.

To the ordinary farmer carrying on general farming, and that, of course, includes stock farming to a lesser or greater extent, barn yard manure will always remain what it has been aptly characterized, viz., "the farmer's bank account." And it is in this connection that we will try and find out whether we are getting full value for our money invested in the "bank account," or perhaps only a small percentage.

If stock farming is intelligently carried on, there is no reason why the farmer should resort to the expedient of using commercial fertilizer, though of course, where the situation will warrant it, and a good profit may be expected on the extra money invested in the fertilizer, it may be used with judgment. Certainly when a man specializes along certain lines, such as potato growing, commercial fertilizer is practically a necessity for the profitable production of the crop. However, this paper was not intended as a discussion on the merits of manure vs. commercial fertilizer, but rather as to how we may conserve the manure we already have, so that it may reach the land with as little loss of strength as possible.

No douht there are other factors to be considered in the production of maximum crops, besides the fertility of the land, chief of which is drainage. The land may be rich in its store of fertility, but owing to poor drainage the benefits derived from being in that state are largely nullified, and the crop produced may be a partial or total failure. Another important factor is cultivation. The land may hold an abundant store of plant food but oRing to lack of, or insufficient cultivation, this fertility is largely unavailable. Light, air and warmth are also great determining factors in crop production. But when all is said and done no matter how perfect the drainage, or how thorough the cultivation, the resulting crops will be disappointing unless the land holds at least a limited supply of plant food in the soil.

In the first place manures vary greatly in value, the difference in value between different manures being determined by the feed consumed, the class of stock fed, and the age of the animal.

Chemists have determined that plants are composed of various elements, some of these elements are taken from the air and some from the soil. Most of these elements are found in almost all soils, while some are absolutely necessary for the production of the plant they are oftentimes found lacking in certain soils, or when found, are in an unavailable state. The chief elements which become most quickly exhausted in the soil, and which we are most interested in, are Nitrogen, Phosphorus and Potassium and it is these elements which we restore to the soil when we apply manure. Our commercial fertilizers are valued according to the amounts of Nitrogen, Phosphoric Acid or Potash which they may contain. Our manures are valued in the same way.

To get down to facts: as an instance how the value of manure may be determined let us take a ton of timothy hay. 1 ton of timothy hay contains about 25 lbs. Nitrogen, 10 lbs. Phosphoric Acid, 18 lbs. Potash. If we were buying Nitrogen in commercial fertilizer we would pay about 20c. per lb., therefore the 25 lbs. contained in one ton of timothy would amount to $5.00. In the same way, 10 lbs. Phosphoric Acid at 7c. per lb. would be .70.c. 18 lbs. Potash which is about .5c. per lb. is .90c., so altogether the manurial value of one ton of timothy hay is about $6.60, i.e., if we had to buy commercial fertilizer we would have tp pay $6.60 for the same amount of Nitrogen, Phosphoric Acid and Potash contained in one ton of timothy hay. Other classes of roughage, grains, mill feeds, etc., have a much highes manurial value than timotny hay consequently the manure produced has a larger percentage of the three essentials necessary for plant growth, viz., Nitrogen, Phosphoric Acid, and Potash. If this is the case then, does it not seem reasonable that the farmer looking for a higher production from his fields, should not take advantage of the fact that the richer the ration fed the animal, correspondingly higher will be the value of the manure produced whether it would not often pay him better to put the money invested in commercial fertilizer into concentrated feeds to supplement the home grown fodders, thereby reaping a larger return from his stock, whether it be milk, beef, or horses, and at the same time greatly increasing the value of the manure produced. This is a question which the individual farmer has to consider for himself, whether his stock is in a position to consume high priced feeds or not at a profit if for him to decide. Cotton seed meal has a manurial value, calculated the same as timothy hay, of $32.00 per ton. It seems, therefore, that the extra profit produced by 1 ton of cotton seed meal when fed judiciously; and by that I mean to the class of stock which will make a profit on the money spent on the feed in question, together with the extra value of the manure from that stock, must be a determining factor in the building up of the fertility of our farms.

As I mentioned before, the value of manure is guided by the age of the animal fed. Certain classes of stock keep a higher percentage of the total fertilizing value of the fodder consumed, in their system. Young growing animals retain fully 50 per cent. of this fertilizing or manurial value in their system due to the extra amount of growth they are putting on at that time. Fattening cattle, on the other hand, retain only from 5 to 10 per cent. of this value, showing that they void nearly the whole amount of the value of the fodder consumed. The same might be said of the mature horse which retains only about5 per cent. in its system. Milch cows on the other hand retain fully 25 per cent. of the manurial value of the feed. Now to go back to our ton of timothy. Supposing it were fed to a milch cow, reatining 20 per cent. of the manurial value which is $6.60 in her system, would bring the value of the manure down to $4.55. It may be said the dairy cow is quite a waster of fertility, but if the skim milk be fed on the farm, it will be found that she is about as economical as any other class of stock. If all the manure applied to our farms represented the actual manurial value, at the time it was voided by the animal, I would venture to say that we would hear less about run out farms than we have in the past. While it is impossible to get manure in the land without a certain percentage of loss of fertility, there is certainly a vast room for improvement, in this connection of farming. After all farming is manufacturing. The careful business man in this age of close competition, has to shave things very fine to show a profit, and it is only by utilizing the by-products and eliminating waste in small ways that profits are realized. So it should be with the farmer, and when it is shown that a large percentage of profit is lost through the manure heap, surely it is to our advantage to take means to conserve that waste.

Probably one of the greatest losses to the farmer of New Brunswick is the neglect to properly provide for the care of farmyard manure. If we but look over almost any section of country, we cannot fail to be strurk by the wasteful methods followed in caring for manure. I have no statistics on the subject, but the amounts of valuable fertilizing ingredients annually lost through bleaching and fermentation throughout the country, must be enormous, amounting to losses reaching into the thousands of dollars.

Mr. Frank T. Shutt, the Dominion Chemist at the Central Experimental Farm, Ottawa, writing me on this subjett not long ago, says: "The waste that takes place on many of our farms is enormous, and we have evidence to show that not unfrequently one third to ane half of the man-

urial value is lost." Prof. Shutt is well qualified to know whereoff he speaks, having conducted many experiments in connection with manures under various conditions, to determine the actual losses resulting from the different methods of handling manure.

To give an instance on the actual loss of dollars and cents to the farmer who is careless with his manure, I can do no better than to quote from the Nova Scotia report on agriculture for the year 1909, in which Prof. Cumming says: "To make this loss more apparent let us assume that a man has ten cows and three horses; the manure from these is allowed to accumulate for six months in heaps, and to stand on the average for three months. In six months ten cows would make about 65 tons of manure and 3 horses, 13 tons, being altogether about 78 tons which is worth about $130. If this manure is allowed to waste, 50 per cent. of it will depreciate to $65.00, i. e., a loss of $65.00 and then to make matters worse the man who has carelessly allowed $65.00 worth of manure to escape into the air and brooks, probably buys $30.00 to $50.00 worth of commercial fertilizer, an amount he could have kept for other purposes had he more carefully conserved his manure." Now, gentlemen, here is an instance which shows in actual dollars and cents the amount lost by the careless farmer, and I don't think this instance is far out of the way either, typifying as it does about the loss occurring to the average farmer. If we would but stop and consider a moment, the total loss occurring to the farmers in this Province, or the Dominion if you will, by the neglect to properly conserve their manure, it would fairly stagger one. And yet we find a great many farmers allow this loss to go on, by fermenting and bleeching, so that manure, when the time comes for distribution on the land, has lost perhaps 30, 40 or 50 per cent. of its original strength.

It must be borne in mind, however, that it is prartically impossible to get manure in the land without a certain percentage of loss of the manurial value. In many horse barns one has often noticed the strong odor of ammonia, that in itself is a certain loss of plant food. With reasonable care, however, it should not be difficult to save from 2-3 to 3-4 of the total manurial value after it has passed through the animal, that is generally speaking a good farmer will save 75 per cent. of the manurial value, while using our standard of timothy hay fed to a dairy cow would bring the total manurial value saved to $2.73. On the other hand, the careless farmer allowing manure to remain exposed to the weather, with perhaps save only 35 per cent. of the total manurial value of the ton of hay, which brings it down to $1.59, a difference of $1.14 per ton in favor of the careful man.

The two chief losses of manure are due to bleeching and heating. If the manure is allowed to remain in loose heaps through which the air circulates, it rapidly ferments, thereby resulting in a rapid loss of actual nitrogen and organic matter. So the chief problem in dealing with manures liable to heat is to keep the air excluded from the heap, preventing the action of fermentation and its rapid loss of nitrogen.

Experiments conducted have determined that manure kept in cellars in loose heaps, and allowing fermentation to start, the resulting loss of Nitrogen was 50 per cent., though the loss of Phosphoric Acid and Potash was practically nothing, although the total weight of the manure had decreased over 50 per cent. So we see the chief loss in heating manure is the loss of Nitrogen, which in commercial fertilizers is the highest priced commodity we have to pay for.

Perhaps the greatest loss of fertiliring ingredients is that which takes place through allowing the rains to wash through the heap. In an experiment conducted by Prof. Shutt, of Ottawa, with manure allowed to remain in the weather in loose heaps it was found that 30 per cent. Nitrogen, 22 per cent. Potash and 8 per cent. Phosphoric Acid was the resulting loss.

No doubt the safest way to prevent loss is to get manure in the land as soon as made, but this course is not always practable, especially so in winter when rains tend to wash over the land. Probably the next best way is to haul the manure to the fields there making large flat heaps, and if the weather is cold enough allowing each day's accumulation to freeze before adding more, the practice of making small heaps over the field should be discouraged, as the large surface exposed to the weather causes considerable loss, also the ensuing crop is apt to be uneven, where the heaps have stood. If the manure is kept in a cellar under the barn, then the chief thing is to keep the heap level and compact thereby excluding the air as much as possible. If a few pigs are allowed to have access to the cellar they will naturally assist in the desired object. If manure has to be kept outside make some provision for it rather than letting it lie under the eaves exposed to all the variations of climate, and its consequent loss through bleeching. If at all possible have a covered shed, and keep the manure there in a well compacted heap, till it can be moved to the fields.

Perhaps we will say that the foregoing takes too much time, but surely where all authorities have shown that an immense loss occurs through just this failure to conserve our manures, we are not so blind as to our opportunities, that we cannot at least show a little more care in this regard, thereby eliminating a considerable degree of waste which through proper conservation we are in a position to control.

Finally, gentlemen, we have a great country in this Province of New Brunswick, its possibilities are enormous, our resources in agriculture have been merely scratched. With suitable imigration, and when our Province becomes more widely known as rich in agricultural possibilities, there is no reason why we should not take a foremost place in the agricultural affairs of the Dominion. Our lands are fertile, and can be made to produce more than ever, by intelligent stock farming, and I believe that stock farming in the end is one of the chief ways we can conserve that fertility, thereby enriching our lands and ourselves as well.

Formal Opening New Creamery at Loch Katrine, N. S.

Editor The "Maritime Farmer."

The new creamery at Loch Katrine N. S., was formally opened on the 10th of July. Fully one thousand people of the counties of Antigonish and Guysboro gathered for the occasion. Long before the appointed hour the road around the beautiful Loch Katrine was thronged with people many of whom had driven long distances, eager to hear the speakers who were to honour the event. The weather was most favourable. The excessive heat of previous days had given place to a cooler atmosphere, and although the clouds seemed threatening, the impending showers, so much needed to refresh the thirsty land, held up until the lengthy programme of the day had been completed.

At the appointed hout the signal for commencement was given and McDonald with his bag-pipes filled the air with strains of Highland music that thrilled the hearts of all as they marched to the natural auditorium on the hillside above the creamery. There, on the green, they reclined in comfort and for upwards of two hours listened to great men advocating better farming, better business and better living.

A strong array of talent lined the platform. Warden MacMillan made a very efficient chairman and in giving the address of welcome emphasized that the object of this Farmers' Picnic was not to make money but to educate the citizens of our country in the principles of scientific farming and co-operative dairying. The first speaker was Prof. M. Cumming, B. A. B. S. A., Secretary of Agriculture for the Province, who is well known in our rural districts as an energetic promoter of whatever is conducive to the welfare of the farmers. The burden of his address was to the effect that better business must precede better farming. In his own inimitable style he carefully outlined the advantages of co-operation in buying and selling and clearly set forth some of the difficulties that must be encountered in getting farmers to work together harmoniously. The jealousy, so characteristic of human nature, is the great obstacle in the way of the practical application of business principles to farming activity. When the farmers have learned better business methods in disposing of the products of the farm they will then become more interested in the matter of production, and thus will the way be paved for larger herds as well as more carefully selected and better fed stock. Especially did he emphasize the importance of careful feeding and instead of buying bran and meal advocated the growing of turnips and other root-crops to which the soil of Nova Scotia is so well adapted.

When the announcement was made that Premier Murray was to speak there was a great outburst of applause. From him the farmer expected a great speech and in this they were not disappointed. Having congratulated the farmers on the erection and completion of so excellent a Butter-plant and on the fact that the clergymen of the country took such an active interest in progressive farming, he forthwith proceeded to offset the pessimistic spirit that is characteristic of so many farmers and to arouse them to a full consciousness of the fact that we are living in a country whose industrial possibilities are practically unlimited As he warmed to his subject his audience felt that they were in the grip of a statesman who has unwavering faith in the agricultural resouces of Nova Scotia.

Rev. Miles Tompkins, who was the next speaker, emphasized the fact that the performance of the dairy cow is largely dependent on the feed and treatment of the calf. His address was interesting and practical. That a clergyman, accustomed to deal with what is spiritual and moral should thus identify himself with what pertains to the temporal welfare of the farmers is deserving of commendation. The church can point to a higher life and lead the way but it should not neglect to encourage the use of such means and methods as will improve the quantity and quality of the products ol the farm, church, school and social prosperity rise and fall with production on the farm.

Helpful and inspiring addresses were also delivered by Judge MacGillivray, Senator Girrioir, Hon. C. F. MacIsaac, J. H. Sinclair, M. P., William Chisholm, M. P., Dr. Ellis, M. P. P. and speaker of the house, Fred Trotter M. P. P. and J. S. O'Brien, M. P. P.

Harvey Mitchel, the Representative of the Dominion Department of Agriculture congratulated the farmers on the opening of a creamery that was one of the best and most modernly equipped in the Maritime Provinces. In a short spicey speech he reminded the farmers that they had only made a beginning and that if their plant was to be a paying proposition they must improve their stock by careful selection and feeding. W. A. MacKay, the new Dairy Superintendent, to whose guidance and energy the ecection of the creamery is largely due expressed his satisfaction with the progress that had already been made and assured the patrons that it is here to stay.

This part of the programme completed, the crowds repaired to the grove adjoining the creamery where refresbments were served and supper provided. Seated at the tables, they were entertained by the music of the pipes that issued from the motor boat as it sailed to and fro along the shore of the Lake. Towards night, as the shades of evening gathered around, the crowds began to wend their way homeward quite convinced that they had spent a pleasant profitable day.—A. A. MacLeod.

Can Farm Fertility be Increased Without use of Stable Manure?

Without decrying the use and value of manure for increasing farm fertility, yet, I maintain that the fertility of the soil, whether fertile or worn, can be increased to the most fertile stage without the use ol stable and barnyard manure.

What elements do stable and barnyard manure furnish that will increase farm fertility? Nitrogen, potash, phosphoric acid, and organic matter.

Generally, a ton of manure contains ten pounds each of nitrogen and potash, six and two-thirds pounds of phosphoric acid, and the balance is organic matter.

From whence came these elements? Originally from the food eaten by the animals that produced the manure.

The animal ate the food that contained the nitrogen, potash, phosphoric acid and organic matter. Its digestive apparatus prepared or separated it into nutritive and non-nutritive elements and destroyed two-thirds of the dry organic matter it ate. Then did not every element found in the animal's excrement, the manure, come also from the food it ate? If such be true, then the animal does not of itself manufacture any of the elements of nitrogen, potash, phosphoric acid, or organic matter, and, therefore, these elements found in animal excrement or manure come from the food it ate. Even the liquids coming from the animal ate digested from the food it eats.

FERTILITY FROM GREEN CROPS.

Now, if our premises be established, then we can get every element that contributes to soil fertility, that manure contains, from green manuring crops, or any organic matter produced on the farm, without the loss of dry matter, and the loss of fermentation that takes place in manure.

We must have domestic animals for service and for food, and it is not only a sensible but a profitable practice to consesve and care for in the most scientific manner their excrement and use it likewise upon our fields to increase their fertility; but when we have even done this, we have and can secure, under present conditions, only enough for one-tenth of our lands. What are we going to do about the other nine-tenths? Allow them to pass to the worn out or abandoned class, or seek some other method to save them that our nation may live?

Nature built up the fertility of rich prairie and timber soils without the use of manures. She commenced with a crust of rock particles. Into this crust she started the growth of certain kinds of plants and followed with the growth of other kinds, some of which were the legumes or nitrogen gathering varieties. In this manner she mixed the rock particles of the earth's crust with the vegetables or organic matter produced by these plants.

THE PART BACTERIA PLAY.

She created the soil bacteria which attacked this vegetable or organic matter, broke it down, and converted it into plant food. The growing plant roots wound themselves about the rock grains of the soil and coaxed them to give up their mineral wealth for the plant's food, which was assimilated into the plant system and given back to the soil again when the plant died, in an available form for the use of further plant growth.

This process continued until a fertile soil was made. So a fertile soil is nothing more than a soil composed of rock particles filled with decayed and decaying vegetation or organic matter, abounding in nitrogen, potash, phosphorous and other minerals which have been gathered by growing plants from the air, and the rock particles, and with soil bacteria.

A LAVISH USE OF ORGANIC MATTER.

Then our plan of keeping up the fertility of the soil without the use of stable or barnyard manure is to provide for that system of farm procedure that will give to the soil every year large supplies of vegetable or organic matter. And such a farm procedure will conserve and plow into the soil every cornstalk and every straw or bit of organic matter produced upon the farm, and for the growing of some green manuring crop to be grown and plowed under each and every year.

I believe in a lavish use of organic matter for conserving farm fertility because Nature was a lavish user of organic matter. Her richest soils abound with a plethora of it. It is my belief that under the conditions that now obtain in the agricultural world, we will never conserve or increase soil fertility until we imitate Nature's way of soil building. And when we imitate Nature's way we will every year of our farm operations "sow and plow under, sow and plow under. It is the key to the whole situation". of increasing the fertility of our soils. And the crop to sow and plow under may be any crop which will make a vigorous growth upon our soils. Preference, of course, should be given to the legumes, yet there are non-leguminous crops like rye, which are of untold value for this purpose.—W. C. Smith in O. V. J.

The N. B. Better Farming Special.

A letter recently received by the editor of the Maritime Farmer from J. B. Daggett, Secretary for Agriculture for New Brunswick read in part as follows:

"I am out on the Better Farming Coaches. We are having a splendid trip—large audiences and great interest is being manifested in all of our work. We have a large staff of instructors, and from the time the cars open until they are closed at night they are on the jump. They are not finding it a picnic by any means.

I had hoped to run a similar train over the I. C. R., but, with the tremendous pressure of work now upon the Department, will have to abandon the plan for this season. Our intention now is to get well organized and put the train over the I. C. R. and all the branches next season, starting in the latter part of May, that we may have ample time. I wish you would make note of this in the Maritime Farmer."

R. P. Gorham, assistant Horticulturist, who also attended the special wrote :—

"The cars were fitted up in Fredericton on the 14th and 15th of July, with New Brunswick live stock, products and appliances, so as to be a thoroughly provincial train. In one coach are shown horses, cattle, sheep and swine, illustrating dairy types of cows, beef type of steers, good sheep and swine and draught horses. This car is in charge of Mr. Elliott, of the Provincial Staff, assisted by Mr. J. Frank Roach, of Sussex.

In the second car are shown exhibits illustrating grain growing, poultry keeping, bee keeping, commercial fertilizers, drainage, butter and cheese making, milk testing, horticulture, insects and seeds.

The poultry exhibit is in charge of Seth Jones, of Sussex, assisted by Amos Downie, of Centreville, comprises different types of colony and brooder houses, feeding appliances and feeds for poultry in all stages as well as some two dozen live chickens and fowls. This exhibit if of great interest to all visitors and Mr. Jones has an attentive audience at every stopping place.

Mr. Durant of the Provincial staff, has charge of the drainage, fertilizer and bee exhibits. In drainage he shows the different sizes and kinds of tile to use, both clay and concrete; how to determine the grades and a practical illustration of how tiles are laid and how water enters the joints and flows through the drain. In fertilizers he shows the different raw materials and how they should be mixed to bring the best results on different soils and with different crops. This subject is of great interest to the farmers in the sections travelled through and Mr. Durant is kept busy at every stop, making clear some of the tangled threads of the commercial fertilizer trade.

Insects and weeds are in charge of Mr. W. McIntosh, of St. John, acting Provincial Entomologist, and shows the most injurious orchard and garden and field crop pests and also those that are beneficial to man in keeping down other insects. The more common injurious weeds and their seeds are shown and directions given as to the means of controlling them. Mr. McIntosh is always busy but none too busy to give the smallest child the fullest information about every insect or weed that interests them.

The horticultural exhibit is in charge of Mr. R. P. Gorham and Mr. S. L. Peters and shows a number of the best appliances in the way of spray pumps, pruning and grafting tools and the common insectcides and fungicides for the orchard. There is also an exhibit of growing trees, showing good and poor nursery stock good house plants for decorating purposes and a demonstration of the chief fruit diseases. This is made more clear by the use of a high power microscope to show the spores which spread these iseases. Mr. Peters gives particular attention to the packing of fruits, both for market and export and the types of packages in use.

So far the interest taken in the train has been most satisfactory to all. At Keswick more than 300 people spent the day inspecting the train At Millville, 180; at Woodstock 150, and at Hartland 500. The people do not seem to get tired but are loath to leave when the cars are closed at 5.30 p. m. When the weather permits the stock is unloaded and lectures and practical work in judging done outside. The cars open at 9 a. m. and close at 9.30 p. m.

It is perhaps worthy of note that six of the instructors on the train are from Kings County. The route of the train takes in north to Plaster Rock and Edmundston, then down to St. Stephen and St. Andrews, along the Shore Line to St. John and back to Harvey and Fredericton.

Amount of Spray Needed for an Acre of Potatoes.

While it is very essential that the Bordeaux mixture be properly made, the Maine Agricultural Experiment Station has found that many failures to control late blight by spraying are the direct result of faulty or insufficient application of the spray.

In the past, most sprayers, as they came from the manufacturers were equipped with a single, small vermorel nozzle per row, applying approximately 50 gallons of spray per acre. Many potato growers are using just such machines today. Now what does this mean per plant when the potatoes are full grown and cover the ground, as is the case when late blight is most likely to appear and when it always does the most damage?

If the rows are 3 feet apart from center to center, one row 90.75 feet long will be equivalent to a square rod. If the plants are 15 inches apart, the same area will be equivalent to that occupied by 72.6 plants. Also, 72.6 multiplied by 160 gives 11,616, or the number of plants per acre when the rows are 3 feet apart and the hills are 15 inches apart. If we take the other extreme and plant 32 inches apart for the rows and 9 inches for the hills, there are approximately 21,600 plants per acre. Practically all commercial potato planting in Maine comes within these limits, although it may be almost any combination of the figures given for the distance apart for rows and hills.

Fifty gallons is equilavent to 200 quarts. Dividing the number of plants per acre by this latter figure, we find that in the first instance approximately 58, and in the second about 108 plants must be covered by each quart of spray. While it is true that regardless of the distance apart the rows and hills are placed, the area of ground covered is the same in either case, the fact should be taken into consideration that the area of all the leaves of a potato plant combined are many times greater than the area of the ground which they shade and each and every leaf should be well coated with the spray at each application if absolute control of disease is expected. Hence, within certain limits, the closer the rows and hills are spaced, the greater will be the amount of spray required.

The facts pointed out above are more striking if the figures are expressed in different form. In this connection it must be remembered that the lower and interior leaves are most likely to be attacked by blight. If absolute protection from disease is expected, each of the scores of leaflets on every plant in the field must be kept covered with a dried film of the spray. The potato grower who does not do this is not doing all he can to save his crop. How much spray is he applying per plant when he uses 50 gallons per acre, applied with a single nozzle?

Where the rows are 3 feet apart and the plants are 15 inches apart in the row, each plant gets about one tablespoonful. If these distances are 32 inches and 9 inches, respectively, the quatity per plant is reduced to slightly less than a desertspoonful. But this is not the whole story. It sometimes happens that when the tops get large and tall, the nozzles on the sprayers are allowed to remain the same distance from the ground as was the case when the plants were small. As a result, the spray has no chance to spread out, and what little there is applied is squirted out in the form of a blue strip along the center of the row, while the majority of the leaves are not touched, and receive no protection whatever. Such spraying is simply a waste of labor and materials. It is more than this, for it frequently results in discrediting a practice which, when properly done, produces under Maine climatic conditions most satisfactory financial returns.

Fifty gallons of Bordeaux mixture per acre and one nozzle per row are usually sufficient for spraying potatoes when the plants are small, but when they are full grown it requires nearly three times that amount of spray. Sufficient nozzles should be used and these so arranged above and at the side of the row that at each spraying every leaf of every potato plant shall be evenly and thoroughly coated. Successful potato spraying is not alone a question of how many gallons used, but how thoroughly the work is done.

This Company Keeps on Growing.

A few years ago when the Renfrew Machinery Company entered the Canadian separator field, with their now famous Standard Cream Separator, it was predicted by those in close tourh with the field that the company would prove a success, because they had succeeded in designing a remarkably efficient separator, and the men connected with the company were able and experienced business men. But no one, not even the most enthusiastic members of the company, expected such a splendid success as this company and its products have achieved.

Last year, the company added the Renfrew Standard Gasoline Engine to its line, which resulted in immediate and immense increase in the volume of their business. And they now announce another addition; this time, no less than the Renfrew Handy Two Wheel Truck Scale.

This scale has been made and sold for several years by the Renfrew Scale Company and has gained considerable popularity in spite of the fact that it has had but a few agents handling it. But now that the Renfrew Machinery Company, with their hundreds of agents dotted all over the Dominion, have taken over the products of the Scale Company, we predict a great increase in the sale of this handy scale, which is, without doubt, an excellent article and, we believe, a profitable one for any farmer to possess.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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THE MARITIME FARMER, or
R. D. Robinson Publishing Co., Limited
Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

AUGUST 5, 1913.

DATES OF ISSUE.

August 5-26
September 16-30

THE MARITIME WINTER FAIR.

F. L. Fuller, Manager of the Maritime Winter Fair which will be held on December 8th to 11th writes;

"Through some arrangements between the Canadian Seed Grwoers' Association and the Seed Department at Ottawa the Seed Growers' Association are not putting up money for prizes this year as heretofore. The Seed Branch, however, have increased their grant to two-thirds of the money we actually pay out up to $600; that is, if we pay out $600 we get $400 of it from their Department. In notifying us of this change, the Seed Commissioner wishes us to continue to offer prizes to members of the Seed Growers' Association much in the same manner as heretofore. The Provincial Departments of Agriculture have agreed to assist us in this matter, so the prizes in the seed classes will be much as heretofore.

"We are trying to make some special demonstration in the interests of sheep, and I am now corresponding [illegible] Welfer and the proposition is to have a Sheep Shearing Demonstration and also a Sheep Shearing Competition."

THE FARMER'S CROP GUARDS.

Comparatively few people realize what it means to have a thousand or two active, keen-eyed guards on each farm working from sun to sun throughout the crop-growing season to save the crops from insect destruction.

If search were made through orchards, windbreaks, hedgerows, pastures, meadows and home grounds on almost any farm where birds have been protected and encouraged, a hundred or so birds' nests would probably be found during the young-rearing season. These would represent at least a possibility of a thousand crows constantly clamoring for insect food during every hour of the long midsummer days.

As example of bird appetites: a scarlet tanager has been seen to eat thirty-five gipsy-moths per minute for thirty-five consecutive minutes; and many of the warblers have a capacity to consume thousands of plant-lice or simi,ar small insects every hour in the day.

In view of these figures a moment's reckoning will show what a numerous bird population will do for any farm thus protected.

Our bird life has had to undergo extraordinary changes of environment during the past few generations. Changes that have made almost a revolution in the conditions under which many of them had existed for uncounted ages.

The clearing of our vast timbered areas has made orchard and park residents of scores of varieties of birds that were formerly denizens of the virgin forests. Among these are the great families of warblers, most of the thrushes, fly-catchers, woodpeckers, and others.

This shifting of the haunts of these birds is for the most part a distinct gain to the farmer, since most of the varieties mentioned and many other former wood-dwellers depend almost entirely on destructive insects for subsistence.

Another sweeping change effected by the settlement and cultivation of the prairies and plains was the interruption of the young rearing of the many varieties that nested on the ground. The quail, prairie-chickens, larks, sparrows and bobolinks well illustrate this class of ground-nesting birds. Settlement of this vast territory brought with it constant destruction of bird life from hunters both for game and plumage. But an even greater loss of bird life now results from the millions of marauding cats and dogs distributed wherever man has settled. It is safely within bounds to say that more than half the eggs and young of the ground-nesting and orchard-nesting birds are now destroyed every year by cats and dogs in all thickly populated rural sections and a larger proportion in towns and villages.

A "BOOST" FOR PERMANENT FLOORS.

Every farmer who kept stock on decaying wood floors and has tried to prevent the seeping of liquid manure and the continuous putrefaction of the filth beneath the flooring knows how impossible it is to keep a dairy barn, a horse-stable, hog-house or other stock-quarters from smelling to heaven, so long as the ordinary wood floors remain.

Heretofore the unsanitary wood or earth floors have received strong objection and criticism, but the actual money loss sustained from the escape of fertility has been mostly estimate and conjecture. Now some convincing testimony in favor of more permanent forms of flooring is available.

Investigation in connection with feeding steers carried on by the Ohio Experiment Station has demonstrated that the value of the manure for each animal was more than four dollars greater when the feeding was done on cement floors than when earth floors were employed. The result would be practically the same were the floors plank if the seepage of the liquid manure were eventually lost through chemical changes and other avenues of escape. The loss would, of course, be much less where the animals are kept under cover and bedding is freely used, thus allowing the mass to be packed into a thick stratum during the winter season.

To make the application clear, the farmer who feeds only a dozen steers could afford to hire eight hundred dollars annually at six per cent. interest and provide a cement-covered floor and yard rather than lose forty-eight dollars' worth of fertility by feeding his animals on an earth floor. A feeder of twenty-five or fifty head of animals on earth or leaky wood floors loses, in plant-food, the price of a good barn in a few years' time.

BETTER FARM CREDIT IS NOT FAR OFF.

Recently a party of Canadian and United States delegates left for Europe to study co-operative loan systems whereby farmers are able to borrow money as cheaply as do men in other lines of business, thereby saving millions annually. On this side of the water farmers pay about 10 per cent. for their money while their old country cousins where agricultural credit systems are in force, get maney to carry on their work at 4 or 5 per cent. Why the difference? you ask. Simply because the farmers are organiled over there and they are as safe as are business men in any other line: safer, in fact, so long as the crops are good. Take the situation year after year and the crops are a good money risk, better than the other lines of endeavor, as all other lines depend on the crops. Hence, where farmers are united and standing together behind loans they can borrow money as easily and in as large amounts as needed, and they pay no more for the privilege than do other business men. Farming is a business in these enlightened days. The best farmers are those who are best able to work together in communities. The individual is left out, and men help themselves by helping all. With the passing of the old time business man who made war on his rivals have come the mergers and combinations which have made living possible to all after the readjustment. The same principle is eliminating the old time banker. And now the farmer is awakening. Among the different lines the new relation has spread until now each line of business aids others, as the success of all those lines means safer and stronger business for itself. Just as war is a relic that will ultimately be cast off as belonging to the dark ages, the old ideas are being flung aside and co-operation is taking the lace of strife. As one of the leading mercantile concerns argues: "The more competition and the healthier the competition the better for our business. We don't stamp out rival concerns because they are needed."

MONEY SPENT IN ATTENDING FAIRS IS WELL INVESTED.

Fair time is again upon us. It is the annual holiday handed down by our forefathers who tilled the soil and gathered to discover which had been able to wrest the fairest fruits from their labor. It is a time of healthy competition and relaxation that every member of the family should be allowed to enjoy. Both farmers and city cousins should attend. Even the most insulated city dweller is but a generation or so away from soil tilling, as men all tilled the soil or grazed their herds at one time. Those who can have gotten back to the soil after drifting into the unnatural hothouse city life. There is something for everybody at the fair, whether it be merely a "country show" or the more enlarged and classified exhibition and your attendance helps both the local exhibition and yourself, if you take an active part in entering your best farm produce or help in managing or superintending it. The local fair, like the country newspaper, the country schoolhouse and the country church is a success or failure just to that extent that home folks take active part. Its power for good is also much greater than ordinarily conceded. Many a big breeder of pure bred live stock got his inspiration from the local "two-by-twice" country fair when his cow, pig or colt won the red ribbon from the neighbors. That victory or defeat may have aroused friendly competition which started one or more "plain farmers" to breeding pure-breds to show neighbors Jones and Smith that they could not beat the products of the rival neighbor's farm. Attend at least two fairs the coming season—the home "district fair," if you wish to so designate it, and the big fair that will be advertised and talked about in your section. See what your neighbors are doing and see what the best herds, flocks and fields in the Dominion are doing.

"I" VS. "WE."

The following clipping from the columns of "Power" is very much to the point. We have tried and proved its merits and found it to work admirably. We gladly pass it along to our readess:—

"A man in charge of a plant, or any man having men under him, will secure better results if he does not try to be self-important, but uses a little tact. Men under the direction of another are quick to appreciate consideration at his hands even in small ways. For example, it is just as easy to say, "We must get this work done today," as to say, "I want that work done today," and the chances are much more favorable that the work will be done. The use of "we" encourages co-operation, keeps the men interested by suggesting that they have a share in the responsibility and is gratifying to them because it does not remind them of their inferior position.

"It's a pleasure to work under a boss who makes you feel that you are working with him rather than under him. He is the kind that encourages the men to make suggestions in regard to the work, realizing that every man under him knows soemthing that he does not know.

When the boss shows interest in the men he will find that they will show interest in him."

The Dry Rot of the Potato.

The dry rot here described is a strict tuber rot affecting mature tubers only. Neither the stems nor the young tubers are ordinarily in the least affected. Natural infection is known to occur solely through wounds produced in the process of digging or subsequent handling. In many cases this rot secured a foothold through wounds produced by scab-producing animals of certain sorts and perhaps even through scab spots due to fungus parasitism, though the latter method is certainly very rare, if we may judge from the laboratory experiments.

The rotting is rather slow, and in general within four to six weeks from one-third to three-fourths of the tuber is destroyed. The epidermis of the rotted portion becomes slightly wrinkled and usually has a characteristic bluish color. On account of the rapid destruction of the underlying tissues, the surface over these areas soon becomes distinctly depressed.

The rot may make its appearance at any point on the surface of the tuber, though more commonly perhaps at the bud end of the tuber. There is no watery degeneration of the tuber unless other organisms gain entrance, so that this is, in fact, a dry rot.

CAUSE.

Numerous inoculation experiments have shown that this dry rot is caused by a parasitic fungus, not previously described, for which we have proposed the name, Fusarium tuberivorum. At the same time, it has also been demonstrated that this dry rot fungus does not cause the injury to the leaves and stems often referred to as "blight" or "wilt." In other words, the present dry rot of the tuber is not connected in any manner with diseased conditions of other parts of the plant.

METHODS OF CONTROL.

Experiments have clearly demonstrated that dry rot may be held in check through treatment of the tubers before being placed in the storage cellars. For this purpose, the best results were secured through the use of either formalin dip, formalin vapor, or the lime-sulphur wash. Not only did the tubers in these lots show a very small percentage of dry rot but they were in excellent condition otherwise when removed in April. The storage time, it should be remembered, employed in this experiment is longer than would ordinarily be employed by the average farmer, and these are the treatments a severe test. Under ordinary farm conditions the development of the formalin vapors is not easily secured, and, therefore, we would particularly recommend the use of the formalin dip as the easiest method to employ the one that should give excellent results in practice.—E. Mead Wilcox and Geo. K. Link, Nebraska Experiment Station.

A Talk on the Use and Misuse of Checks.

It seems that Farmer Blake must always be in trouble. Recently he stepped in the bank one morning, good natured and happy.

"Good morning, Mr. Blake," said the cashier. "Just the man I wanted to see. Your account is overdrawn one hundred dollars."

A startled expression flashed over the farmer's face.

"How's that?" he demanded.

"Your check in favor of Harry Smith, amounting to $180, came in yesterday, and caused the shortage," replied the cashier.

"But I only paid Smith $80," ejaculated Blake. "It's a forgery."

"Evidently," agreed the cashier. "But you will have to make good the shortage until the guilty party is found and the money recovered.

This Blake was forced to do. Later it was found that Smith had never received the check, but that a hired man of his had opened the mail, and, being a clever penman, had raised the amount, cashed the check and escaped.

Do you know it's an easy matter to raise amounts on checks and in these days when farmers send their small checks for a dollar or so to concerns all over the country, it is well to be very careful about the writing of all your checks. You will easily understand that in a check written in the wrong way it is very easy to write the words, "one hundred," in front of the eighty, and where the amount is placed in figures to place the figure 1 in front of 80, which makes the check valid for one hundred eighty dollars, instead of eighty dollars. On the other hand, if care is taken to draw a firm line filling all of the blank spaces, and to write the figures always close to the dollar mark, so that no other figures may be placed in front of them, then there is no possibility of the amounts of your checks being raised.

SOME HELPFUL INFORMATION ABOUT CHECKS.

A check when returned to you cancelled from the bank is as good as a receipt. Therefore, it is not only a good plan to save old checks, but it is worth either a little of your own time to paste them right back in your check book by taking strips of gummed paper and attaching part to the stub and part to the check. Then you not only have your stub, but the returned check to prove payment of the money. Such an old check book is also valuable in many other ways. You might make such checks serve a double purpose by simply writing along the bottom line what the check is for; that is, in important cases or where it is to be sent through the mail.

If your name has not been correctly written on the face of any check paid to you, do not neglect to first write your name on the back just as it appears on the face, and then under that write your name correctly.

In depositing checks it is well as you endorse each to write the words, "Credit account of," before you write your name, for in case the check should be misplaced, this shows that it was not endorsed and paid over to some other party, but endorsed and placed in bank.

Never endorse a check until you are ready, either to get it cashed, spend it, or deposit it in bank, for the minute it is endorsed it becomes the same as cash, and any person may use it if it should be found.

If you wish to draw money out of bank for your own use, write out a check reading, "Pay to the order of Cash," instead of using your own name, as it is simpler, and where you keep a set of books will be simply charged to your cash account.

If you should give a person a check and he loses it, or it becomes destroyed before being cashed, you may issue another just like it, and write the word, "Duplicate" on the check anywhere, then notify your bank to pay the check marked "Duplicate," and not the original should the first check ever be found or presented. The stub of your check should also show the amount and items for which the check is drawn.

Many persons neglect subtracting the amounts of checks from the balance in bank every time a check is drawn. In this way they are never positive just what the right balance is, and as a result their accounts are frequently overdrawn. If you do not care to have people see your balance when you are writing checks, such balance may be kept on the under side or back of the stub, instead of the face.

In buying a farm or other property involving a large amount of money, and especially when buying from strangers, the proper thing to do is to give a certified check. The certified check is simply an ordinary check which the cashier of the bank where your money is deposited indorses for you. This shows that you actually have that amount of money in bank, and strangers will take the check as eagerly as cash.

In selling to a stranger who offers you a check in payment, especially if the amount is large, it is well to ask that the check be certified before accepting it.

Finally, one of the most important things for the farmer to remember in regard to checks is to deposit them promptly. Deposits of checks should be made the same day or the day after they are received. In this way, if accounts are overdrawn, you are not so apt to be the loser as you would be if the checks were held.

Inefficiency in Doing Farm Work Expensive.

F. M. Lutts says that inefficiency in doing farm work is expensive and in the following article, whirh recently appeared in an American exchange, he goes on to tell in a practical common-sense way some of the things farmers do, resulting in loss of energy, money and results. He says:—

"The inefficiency of men and teams in doing farm work is not always measured by the apparent ability of either. The condition of the tools and machinery used often limits efficient labor production, and the results obtained for the energy and time expended and the effectiveness of the work are thus influenced by factors largely under the control of the farmer or operator. To illustrate: A man can accomplish twice as much with a sharp hoe as with a dull one, and do it more easily—a sacrifice of energy on account of a tool out of order. A team can pull and a man can operate a cultivator with the teeth worn down almost to the bolt holes with less power than one with new, sharp teeth, but it is not a sacrifice of effectiveness, the condition of the tool being the limiting factor in both cases. A hoe was made to be sharpened when it became dull and cultivator teeth were made to be renewed; therefore, if they are out of order and not in proper condition to save energy in the one case and to be effective in the other some one is to blame.

Every farmer knows that a new tool works nicely and loves to use that kind if he loves work at all, and for no other reason than the new tool is in the proper condition to do the work designed for it. Wear, however, has a tendency to most farm tools to change the shape, and consequently the working condition is also changed; usually it is not improved. Now, if a tool is alright to do the best kind of work when it leaves the factory the proper thing for the ultimate owner to do is to keep it as near the "new" shape as possible. A mowing machine cuts clean and easy when new, principally because the sections and ledger plates are sharp, the right shape and come into close contact. The principal reason for not cutting is because of nicked and dull sections and ledger plates and sprung section bars which separate the cutting edges. A new smoothing harrow has sharp teeth which cut the earth effectively, while blunt teeth, the result of wear, bruise the soil much the same as a dull knife bruises soft pine. "Farm shop tools are not always what they should be, and the following sign might be appropriate for most farms: "Wanted—saws that will bite; chisels that will cut; bits that will bore; squares that are square; planes that do not choke; hammers that will stay on the handle; a proper place to keep and use them and an owner who places a fair value upon man, time when necessity calls for their use in making farm repairs." A farmer would object to paying a carpenter $3 or $4 a day if he used the same class of tools the farmer himself uses, and, further, you have got to show us that a farmer's time isn't worth as much as that of a common mechanic, any old time, and more in a busy time. Moral: Put a high value on time and then make it worth while with good tools in the proper condition.

"Some men offer the excuse that they don't have time to look after all the little details, and, being a farmer, I venture the suggestion that this is not true, generally speaking. The real reason is too often found in this expression: "What's the use working so hard to keep the tools in good order when it is so easy to let them go?" In other words, carelessness and lack of vigilence are most often responsible for tools out of condition than lack of time. How often farm tools and machinery are put away in the tool shed (sometimes in a fence corner), out of condition from a season's wear—maybe two or three seasons—and in the rush, when the time comes to use them again, they are taken out in the same condition. Perhaps a whole winter gone and the necessary repairs not made—lack of time? No! "Out of sight, out of mind" tells the story.

"How often a breakdown occurs in a busy time when it might have been avoided. Farmers are likely to be like the man who started out with a defective harness which broke on a particularly bad hill—he trusted to luck until the breeching broke. They trust to luck when they should trust to their own vigilence by repairing broken parts and strengthening weak one at the first opportunity. I venture the statement that nine times out of ten breaks occur from parts known to be defective or from the loss of burs that should have been attended to.

"With regard to wasted energy resulting from tools out of condition, I purpose making a statement that may seem rather radical, but it is the writer's estimate, given honestly and for what it is worth:—

"One fourth of the energy used in doing farm work is expended uselessly because of the farm tools and equipment not being in the proper condition to save energy. Are the valves and buckets on the farm pumps working properly? Do the barn doors roll freely? Do you grease the bright part of tools when you put them away for winter? Oh, what's the use of going into details; you know, dear reader, as well as I know that the great troable is we don't do as well as we know how; we follow the path of least resistance and we might as well "fess up." In these times of scarcity and high price of hired farm labor and with the high value which all farmers should place upon their own time, is it not better to look the matter of tools out of condition squarely in the face and turn over a new leaf? Put all the farm tools in good condition during the season of inactivity on the farm and keep them so on rainy days during the active season. Cut out the old practice of going to town when it rains too hard to work out doors.

"Constant vigilence and oil is the price of smooth running, efficient farm tools, and to spare either is dangerous as well as expensive.

"Keeping tools under cover when not in use is another feature that promotes efficiency as well as longe-

(Continued on page 776)

HORTICULTURE.

Thinning the Apple Crop a Profitable Operation.

Thinning the apple crop is the last feature of improved orchard culture a grower will take up. The object is to improve the quality of the fruit. The first steps in orcharding are proper cultivation, pruning and spraying. In our work in these countries (Durham and Northumberland) we have found it hard to persuade many farmers to undertake these tasks. The majority of them are not ready for thinning.

Many think that it is a very expensive operation. In our demonstration orchards we have thinned trees at a cost of sixty cents a tree. These apples had to be picked anyway, and it was much cheaper to snip them off when small and allow them to fall to the ground than to pick and pack them in the fall.

By thinning, the percentage of culls is reduced very greatly. These are not only of small value themselves but they lower the value of the entire pack. Considering the increased value of number ones resulting, P. C. Dempsey, an extensive apple grower of Trenton, Northumberland County, argues that the culls thus taken away are selling readily at nine dollars a barrel.

The work is in its infancy in Ontario. In some orchards in Durham and Northumberland counties, experiments have been conducted, and some also in Norfolk. W. J. Schuyler, fruit specialist of Norfolk county, in the employ of the Ontario fruit branch, states that a system of thinning will bring uniform crops. In the natural state trees bear apples uniformly one year with another. But when unfavorable weather conditions produce a failure one year a very heavy set of fruit is produced the next. The tree cannot bring this abnormal crop to maturity and at the same time develop a strong growth of fruit spurs. When the apples are thinned abnormal crops do not exist, and fewer off years occur. By thinning before the seeds are developed a great deal of food is saved for the tree also. Of course, some varieties do not require thinning as do others. The Duchess, Wealthy, Snow, Russet and in some cases the Spy, are especially benefited in our counties.

In 1912 experiments were conducted in two of our demonstzation orchards. In one at Colborne, in Northumberland county, a few Snow trees were selected. The apples were thinned when about the size of hickory nuts. They were taken off with thinning shears and all the work was done from ladders. The intention was to thin all clusters to one specimen and to leave no apples close enough together so as to touch each other or in such a position that they would rub against a limb or a twig when mature. The quality of apples on thinned trees was much superior to that of those on unthinned trees. But the thinning was not severe enough. When the apples matured it was found that full allowance had not been made for their increase in size.

The result from two trees under identical conditions was:

Thinned tree—Six barrels number ones; three-quarters barrel number twos, and two and a half barrels of culls.

In an orchard at Welcome, Durham county, another experiment was made this time with Duchess apples. The same methods were used as with the Snows. The results were:

Six thinned trees—Seventeen barrels number ones; three barrels number twos, no culls.

Six unthinned trees—Twelve barrels number twos and one-half barrel culls.

In this case the thinning should have been more thorough and more severe also. The three barrels of number twos equalled the number ones in size, but lacked color, and there were no culls at all. These trees were thinned at the rate of sixty cents a tree, three hours labor at twenty cents an hour being expended on each. It will be seen that the total crop was larger in the case of the unthinned trees.

The value of thinning rests in the increased percentage of number ones. If the entire crop is sold to a buyer at a flat rate for number ones and twos, there is very little profit in undertaking this work. But if the apples are sold through associations and are pro-rated according to class, as is done by the Norfolk Fruit Growers' Assotiation, the profit is at once apparent. Consider the two Snow trees already mentioned. The 1912 price for number one Snows paid by the Norfolk Association was three dollars and ten cents, and for the number twos two dollars. The profit per tree would be something as follows:

Thinned tree; Six barrels number one's at three dollars ten cents, eigh teen dollars sixty cents; three-quarters of a barrel number two's at two dollars, one dollar fifty cents; cost of thinning, sixty cents; total, nineteen dollars fifty cents.

Unthinned tree: Three barrels number one's at three dollars ten cents, nine dollars thirty cents; three barrels number two's at two dollars, six dollars; total, fifteen dollars thirty cents; profit, excluding culls, four dollars twenty cents.—Justus Miller, Department of Agriculture, Port Hope, in Canadian Horticulturist.

Bean Anthracnose or "Rust."

Bean anthracnose is commonly known as "rust", but this is a misnomer, as the malady belongs to an entirely different class of plant diseases. Moreover, there is a true rust of beans which is more or less common, but it is not usually one of the most serious of bean diseases. It is most frequently found on certain varieties of pole beans, on the leaves of which in late summer it produces numerous dark brown or almost black pustules about the size of a pin head.

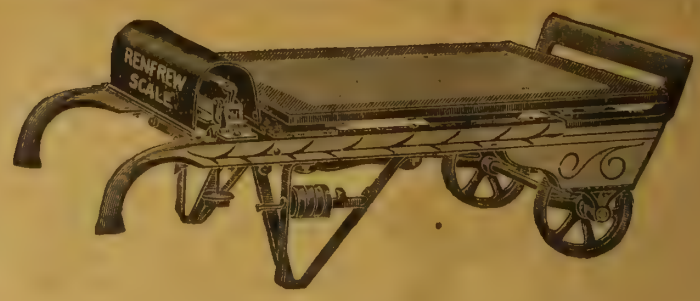
The anthracnose is the most destructive disease of field and garden varieties of bush beans in Maine. Some varieties like the yellow-eye are particularly susceptible to its attacks and certain farmers who have been raising beans on an extensive scale have either gone out of the business or have been obliged to give up raising these most valuable and otherwise profitable varieties.

Anthracnose is carried over winter in the seed beans and while it is usually not noticed till later it begins its destructive work as soon as the plants are out of the ground. It is most conspicuous in the pods, where it produces large, brownish or rusty-colored pits or ulcers. Previous to the appearance of the pods the disease may be found on the stems, leaf petioles and undersides of the leaf veins, forming somewhat elongated, narrow lesions. Here it is often over looked, but it frequently does much damage. One field seen in August last year appeared to be nearly ripe. Examination showed that the pods were only half or two-thirds grown and that the yellowing of the leaves was the result of the killing of the leaf-stalks by anthracnose.

Bean anthracnose has not been found to be an easy disease to control. The most effective means have been the use of uninfected or clean seed, rotation of crops, planting only on high, well-drained soils and not cultivating or working in the crop when the leaves are wet with dew or rain. Quite contradictory results have been reported from spraying. No method of seed treatment has been devised which will kill the fungus without seriously affecting the germinating qualities of the beans.

This season the Maine agricultural experiment station is making an attempt at Highmoor farm to control this disease by spraying. The experiment is based on the assumption that the secret of success in spraying for bean anthracnose lies in beginning early and spraying thoroughly and frequently.

Yellow-eye beans sufficient to plant something over half an acre were obtained from a field where the disease was prevalent last season. The field upon which these beans are planted this year has been divided into three equal parts, the central part forming an unsprayed check plot. One of the remaining thirds is being sprayed thoroughly and frequently with a 5-5-50 bordeaux mixture, the same as is used on potatoes. The other is being sprayed in the same manner with a



An Important Announcement

SUBSCRIBERS of this paper will be glad to learn that they can now procure the Renfrew Handy Two Wheel Truck Scale without difficulty. It can now be obtained from any agent of the Renfrew Machinery Company, as this company has lately taken over the products manufactured by the Renfrew Scale Company.

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home-cooked lime-sulphur diluted to the same strength as is used for summer spraying of apples trees. The first application of the spray was made as soon as the first two foliage leaves were formed and this will be repeated every week or ten days or sufficiently often to keep the plants well protected, particularly the new growth, till the pods obtain considerable size. In the case of a baking bean like the yellow-eye the spraying can be carried on later than would be the case with string beans.—C. D. Woods, Maine Agricultural Station.

Amendment to the Fruit Marks Act.

The Dairy and Cold Storage Commissioner has just issued a circular giving the recent amendments to the Inspection and Sale Act with the new Regulations. The amendments chiefly concern imported fruit.

Hereafter the words "Packed by" must precede the name and address of the packer as marked on any closed package of fruit intended for sale.

A new section is added empowering the Governor in Council to make regulations regarding the branding, marking, and inspecting of imported fruit. Persons violating such regulations are liable to a fine of not more than fifty dollars and costs or, in default of payment, to imprisonment for a term not exceeding one month. The package of fruit not properly marked may be confiscated.

In virtue of this amendment new regulations have been passed and were publisned in the Canada Gazette of June 28, 1913. According to these regulations every importer of fruit must have all grade marks found on closed packages containing imported fruit erased or obliterated when such marks are not in accordance with the Act or the new Regulations. This must be done when the packages are being taken from the railway car, steamship or other conveyance in which they have been brought into Canada. The importer must place on the end of such packages the proper grade marks, the correct name of the variety of fruit, and his own name and address.

Copies of the circular may be obtained, free of charge, from the Publications Branch, Department of Agriculture, Ottawa, or from sny Dominion Fruit Inspector.

Summer Pruning.

Market growers often neglect summer pruning, but there can be little doubt that it pays—at any rate, with bush or half-standard trees. There is perhaps, no need to trouble about old trees, but summer pruning helps greatly in the training of young trees. Look at a plantation of young apples or plums now. They are full of new growth, but more than half of it is not wanted. Some varieties are much worse than others in this respect. Many of the shoots are undesirable because they are growing in the wrong direction—into the middle of the tree—,or across other branches. It may be argued that these would be cut out or spurred back at the usual winter pruning. That is quite true; but is it not better to restrict their growth earlier, and so throw the energies of the tree into the desirable shoots? This can be done by summer pruning, which also admits air for the ripening of the remaining wood, and of any fruit the tree may be carrying. One thing must be guarded against, however. We must not cut too early, or there will be a lot of secondary growth. Amateurs do not mind this, because they have plenty of time on their hands, and can go over the trees a second time to stop any secondary growth. This the market grower cannot afford to do, and he can avoid the necessity by delaying his summer pruning till the last week in July. If he starts then and gets it finished in August, he will be right. There will then be no secondary growth to matter. He should start with the earliest varieties, if there is any thought of benefiting the fruit; but some of it will already have been gathered.

HOW TO PRUNE.

In summer pruning leading shoots should never be shortened. That must be left till winter. The only exception is where these shoots are so long that they are blown about unduly by the wind. In such a case

(Continued on page 774)

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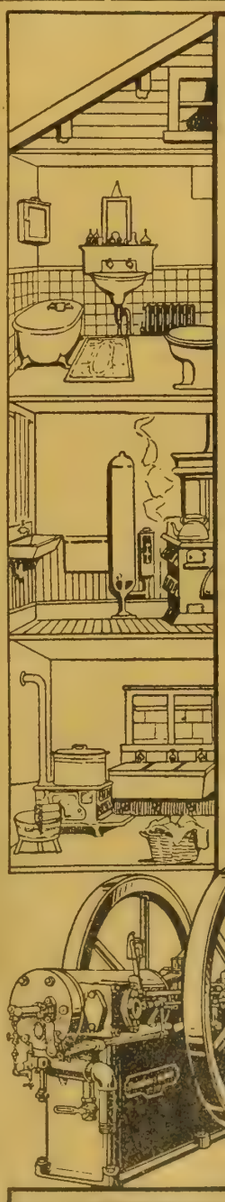

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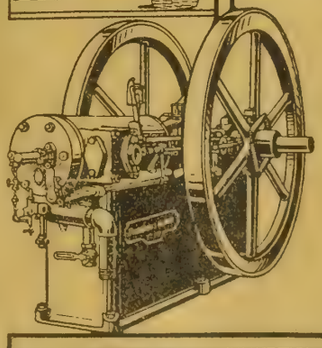

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DAIRYING.

Flavor of Butter Injured by Metals.

Economic conditions make it necessary at present to hold butter in storage from the summer season, whet it is plentiful, to the winter season, when it is scarce. If the butter is properly made this can be done without materially injuring its quality. It often occurs, however, that butter which has been held in storage for some months develops disagreeable flavors that greatly lessen its value. These bad flavors that will often pass unnoticed when the butter is fresh may become so serious a defect after three or four months in storage as to render the butter almost unsalable. The chemical changes which cause these bad flavors are often too small to be detected by the ordinary analytical methods of the laboratory, but the senses of smell and taste are far more delicate and as soon as bad flavors are detected by them the value of the product is lessened.

Some metals either cause or greatly accelerate certain bad flavors in butter, although most of the experiments along this line have not included storage butters. Recently the scientific staff of the Dairy Division of the Bureau of Animal Industry in the United States Department of Agriculture has reported that the presence of very small amounts of iron in cream causes certain undesirable flavors to increase in intensity during storage. These flavors are often designated by butter experts as "metallic," "oily" or "fishy". The injurious effect of iron was found by adding iron in known quantities, varying from 1 to 500 parts, to a million parts of cream. The butter made from such cream was compared with that made from cream where all precautions were taken to avoid any undue contact with iron during the whole process of butter making. The butter was stored at 6 deg. to 10 deg. Fahrenheit, and the quality of the butter was scored by experts at different times. In every instance when the butter was scored a few days after making, the samples to which iron had been added scored lower than the butter made from cream which contained no iron. This held true in most cases on the second and third scoring, which occurred at intervals varying from 20 to 187 days. The most noticeable feature was the rapid development of bad flavor in the butter containing the iron. When both the control and the experimental butter became fishy it was noticed that the control butter was the last to become so. There was a marked oily flavor present in most samples that subsequently became fishy. Only a small proportion of the iron added to the cream was found in the butter, the remainder having been taken up by the buttermilk and wash water.

Butter was also made from cream which had stood in rusty cans, and in every case this butter had a peculiar taste and was easily picked out from all other samples. The buttermilk also had a decided metallic taste.

The influence of copper on the flavor of butter was studied in a similar manner, and it was found that copper, even in small quantities, seemed to cause more marked changes of flavor in butter than did the iron, with a decided tendency toward a fishy flavor in storage. Two experiments showed very plainly the harmful effect of using poorly tinned pasteurizers, even though the cream came in contact with the copper surface for only a few seconds, for, aside from this, all other conditions were exactly alike during the complete process of butter manufacture.

This work shows that if cream is kept in rusty cans or comes in contact with iron or copper at any time during the process of butter making it may take up iron or copper from rusty cans, exposed bolt heads, or other metal parts of pasteurizers or churns, in sufficient quantities to affect the flavor of storage butter. Though there is nothing to show that the nature of the flavor is appreciably changed, it does demonstrate very clearly that the rate of development of the undesirable flavor is greatly accelerated during storage by very small quantities of either iron or copper.

Variations in the Test.

Frequent experiments have shown that one single test of cow's milk is not reliable as an indication of what percentage of fat her milk norm. contains. A great many well known causes affect the test, also some causes that are unknown at present even by the closest students. This "variation in the test" is one of the puzzles of the cow's individuality, and because of these puzzling variations it is advisable to take composite samples at intervals so as to ascertain the average test.

Some recent painstaking investigations at one of the dairy research stations in England with seven cows for two days, even covering such details as a seperate test of eleven successive pints, three times a day, from the four quarters of the udder, show that while the average test with the cows giving thirty pounds of milk per day was 3.6 per cent, the variation was all the way from only six-tenths of one per cent. up to nine and a half percent. of fat.

This is clear proof of how misleading one single test may be. If the real earning capacity of each individual cow is to be computed, it must be on the basis of her annual production of milk and fat less the cost of feed; regular weighing and testing give that knowledge which every factory patron should have of each cow he keeps.

The Deadly Ptomaine.

With the advent of hot weather comes an enormous increase in the consumption of ice cream and with this consumption come the usual reported cases of ptomaine poisoning. Ice cream is a healthful product and one of our cheapest and most valuable foods and there is nothing dangerous in the consumption of ice cream provided proper conditions have been maintained in its manufacture. It must always be remembered that milk is an animal product and that in hot weather decomposition will set in in milk the same as in meat or any other animal product. In the decomposition of any animal product ptomaines are liable to be formed and if the product is then eaten, ptomaine poisoning results which often causes death and, in any event, very severe suffering.

There are two conditions under which ptomaine poisoning is liable to result in the manufacture of ice cream —one is caused by refreezing of cream that has once been frozen and returned. It is quite a common thing in many rural districts for ice cream to be furnished church socials with the understanding that cream not used can be returned next day. If this cream is refrozen, ptomaines are very liable to develop. The practice should be strictly prohibited. Dirty milk cans and dirty ice cream cans likewise, may develop ptomaines from the decomposition of old cream left in the cans. At nearly every railroad station can be seen ice cream cans that are being returned to the manufacturer, after the cream has been used and in nearly every case, the can is unwashed, and on opening the same the fearful stench of the decomposition of animal matter reaches the senses. A can in this condition when it reaches the factory is almost impossible to wash and sterilize and if any part of this old matter is left in the seams of the can, it is liable to inoculate new cream placed therein and ptomaines may generate and cause sickness and death. Every retail dealer of ice cream should thoroughly wash all empty cans before returning to the factory.

The last Michigan State legislature passed a law providing for a penalty of $100.00 for any person who reships ice cream or milk cans back to the factory without thoroughly cleaning them. This law will soon take effect and the Dairy and Food Departments proposes to vigorously enforce the same wherever ice cream cans are found unwashed at any station, prosecutions for the violation of this law will be instituted. —Jas. W. Helme, Michigan State Dairy & Food Commissioner.

Judging Butter.

Nearly every one thinks he can judge a sample of butter and it is true that all are able to compare butter from an individual standpoint. However, to judge butter for the commercial taste requires considerable experience. The standard used exclusively in this country for scoring butter is as follows:

Flavor	45 percent.
Body	25 percent.
Color	15 percent.
Salt	10 percent.
Style	5 percent.

Flavor is valued at nearly half the total. A judge must have a keen and sensitive taste and must also know the flavor that is demanded in the market. Some of the common faults in flavor are designated as "flat," "fishy," "rancid," "weedy," "old cream," "acid," and "stable." Flavor is due to the previous methods of handling the cream.

Body refers to the texture or grain of the butter. It should be firm and waxy. Criticisms of body are "greasy," "tallowy," "cloudy," "briskly," "salvy." Texture is determined by the methods of manufacture. That is, by the churning, washing, working and salting.

The color should be bright and even. The most common fault in the color of butter is "mottled" o butter. Most consumers can detect small differences of the salt content of butter. This is liable to be confused with flavor.

The amount of salt should be suited to the market and is not criticised in the judging as much as its condition in the butter. It should be thoroughly dissolved and entirely distributed.

Style refers to the clean and neatly finished appearance of the butter and its package.

New Zealand Dairying.

New Zealand butter is weekly shipped to Great Britain in enormous quantities, on which market it has for many years brought top prices, being beaten only by the Danish. It is graded by government dairy experts and is packed in boxes containing 56½ lbs., the extra half pound being allowed for evaporation; but as each box is lined with deodorized waxed paper evaporation must be infinitesimal. In no country in the world, excepting Denmark, is the dairy industry carried on so scientifically as in New Zealand. Milking machines are in general use and buildings are maintained in perfect order and cleanliness, as are the animals themselves, all being regularly inspected by the dairy officials, who, instead of being a bugbear to the farmer, are welcomed by him, the intelligent dairyman fully recognizing the value of the great assistance tendered in his interests by the government. Shorthorns are one of the favorite breeds, being well known for their good milking qualities and for their cheque-raising power as beef.

Keeping Milk in Hot Weather.

The chief factors that determine the keeping qualities of milk are: first, cleanliness, and, second, the temperature to which it is cooled and held. From the consumer's standpoint, cleanliness is the most important, and the one that he insists upon being observed; but the temperature to which milk is cooled and held is the one that mostly determines its keeping qualities.

KEEP UTENSILS IN A FLY-FREE PLACE.

To be of good quality, milk must be clean, and be handled under clean conditions. A large per cent. of the contamination occurs during the milking process by dirt, dust, hair and scales from the cow's flanks and udder. Those parts must be kept clean, and just before milking should be wiped with a damp cloth. Milk into apartially covered pail with an opening not larger than eight inches in diameter. Wash and scald all the utensils immediately after using, and keep them in a clean place, absolutely free from flies. The millions of bacteria that are conveyed into milk by dirt cannot be strained or filtered out, and as they are the sole cause of milk souring they should be prevented, as much as possible, from getting into the milk.

The milk-souring bacteria find their most favorable temperature at about eighty degrees Fanrenheit, and milk kept at this temperature will sour very quickly. At fifty degrees they grow but slowly, and at thirty-two degrees their growth ceases entirely. Experiments have been conducted which show the organisms held for twenty-four hours at fifty degrees multiplied seven times, while at seventy degrees they multiplied seven hundred times. The writer nas carried on experiments to determine the keeping qualities of the same milk held at different temperatures. Samples of clean milk were obtained and held at seventy, fifty and forty degrees. The average time milk kept at seventy degrees before souring was eight hours, at fifty degrees was twenty-four hours, and at forty degrees was thirty-six hours.

The method of cooling milk is the most difficult problem that confronts the milk-producer. The larger dairies and milk plants have, as a rule, some system of mechanical refrigeration, though some resort to the use of ice. By such methods the milk can be cooled to such degree that there is no danger of its souring before it reaches the consumer. The majority of producers, however, have not these devices, and to them the cooling of milk is a serious problem. The average well-water has a temperature of about sixty degrees, ranging from fifty-six to sixty-two degrees, while the average spring-water is about fifty-eight degrees. Most of the milk cooled by water is rarely cooled lower than sixty degrees.

Many types of water-coolers and aerators are on the market; some of these are very good, and some are worthless. The great trouble with the large ones is that they are hard to keep clean. Milk should be cooled within thirty minutes after milking.

Aeration of milk is a process by which milk is exposed to air by flowing over a broad cool surface or by

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agitating in the presence of pure air. This drives off the heat, gas and volatile odors. Aeration of milk is not recommended unless the air in which the operation takes place is pure. Many aerators I have seen were situated where the air was foul, dusty and full of bacteria. Where the air is pure, however, aeration is a very good thing, as it quickly drives off the animal heat and cools it to the desired temperature. A type of aeration consisting of coils where running water is forced through the coils and the milk flows over the outside is very efficient.

THE SMALL MILK-HOUSE.

Where a spring of running water is at hand a small milk-house for cooling purposes may be built to good advantage. This house should be dust-proof and screened to exclude the flies, and a tank should be constructed with strips across to hold down the cans. Deep setting cans are the best to use in this case, and catches should be soldered on to fit under the strips in the tank to hold the cans in place. The tank should have an outlet so that the water always stands within two or three inches of the top of the cans.

Another simple and practical method of cooling milk is to have a cooler enclosed in the pump-house, and all water that is pumped for the stock passed through. The construction of the cooler is the same as that for the spring-house, and deep setting cans are recommended. In both cases, the cans should have perforated covers to allow the heat and gas to escape.

A type of cooler has been used which is only a long narrow can about six inches in diameter; this is filled with cold water and inserted in to a common ten-gallon can of milk. The heat is driven to the outside. There are many other ways in which milk may be cooled without ice, such as hanging down a well or setting in a tub of cold water. In the dry arid section of the West, where cold water is not very plentiful, the following scheme has been devised: Two cans are placed one on top of the other, the lower contains the milk or cream, while the upper contains water; a cloth is placed over and around the cans with the upper end in the water; this acts as a wick, and the water is conducted down the sides of the can. With the rapid evaporation which occurs in such a dry climate, the temperature may be reduced to about sixty-five degrees. This temperature is not low enough to insure the keeping quality of milk for any length of time, but it has been used satisfactorily to some extent in cooling cream. Cream has better keeping qualities than milk, due to the fact that it contains more fat and less milk-sugar. For the same reason high-testing cream will keep better than low-testing cream.

The whole secret of controlling the keeping qualities of milk is to produce it clean, keep it clean, cool immediately and keep it cool until delivered to the consumer.—Wm. F. D.

Have a four-year-old cow that is subject to cold. About a month ago she had another attack and failed to get over it. She breathes very heavily and has a slight discharge from nose. Has good appetite and milking well. Might this be a sign of tuberculosis)—C. D. S.

Tuberculosis probably is present but to make sure it will be necessary to have her tested with tuberculin. Meanwhile keep her isolated and do not use her milk.

Thorough ventilation and an abundance of light in the cow barn are essential, owing to the fact that the dairy cow is confined such a large portion of the year.

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LIVE STOCK.

The Blowfly.

Mr. Blowfly is much to the fore again, and is causing untold annoyance and loss to sheepowners. The fly carries out its depredations at a most critical time, just when ewes are lambing and when it is most inadvisable to touch them. But a humane stock owner cannot stand by and see his ewes gradually being eaten alive by the maggots, so he has to chase and catch and roughly dress them even at the risk of losing the lamb and perhaps the ewe also by disturbing the unborn foetus. This being a good season and the ewes being stsong it takes a champion runner to catch them. Last season. which was one of drought, the fly did not make itself felt on well-crutched sheep, because there was no plant life for it to shelter under, and in dry times the ants are much more active, as they have a clear field, no impediments, such as fallen grass, stalks to climb over, or leaves of plants. Any fly that settles on the ground gets a nip from the ants that keeps him on the wing, and I have observed that if all carrion is properly destroyed in the paddocks the ants give the flies a bad time. I don't think they eat them, but they hunt them away from their feeding grounds, and the ants appear to be everywhere in droughts. I am firmly of the opinion that legislation will have to be enacted to deal with the trouble. The fly can only be dealt with in its breeding grounds; nothing should be left in a paddock, or anywhere else on a holding, in which the fly can deposit the larvae. The slaughter houses are a great hotbed for breeding blowflies; the blood and offal are in many cases just left to putrefy and breed maggots.

I have taken particular notice for the past two seasons that where owners keep everything that would harbour maggots well burned, the fly is not nearly so troublesome as where nothing is done to mitigate the evil. Some owners are so particular in this respect that the men attending on the sheep are each provided with a piece of strong calico about a yard or so square, and when they have to dress a sheep out in the open paddock they put the affected sheep on to it, so that when the sheep is dressed all the maggots that fall off can be either tipped into a fire or a small hole dug in the ground with a pocket knife and the maggots deposited into it, and some of the dressing fluid poured over them. This all helps to lessen the evil, but others, again, merely knock the maggots off on to the ground and then leave them, and they crawl under cover and turn into chrysales and become flies. I have taken a random lot of maggots, small and adult, and put them in a box. Those that looked unlikely to live grew and turned into the fly stage on an empty stomach, for as far as I knew they got nothing to eat, and nature intended them to eat continually. Even with care they take a great deal of killing with the strong preparations that are used. The stuff must be rubbed in as it were like spotting for scab, the skin being pushed up into a concave and filled with liquid and then shaken backwards and forwards so that every part that the maggot has reached may come in contact with the dressing. It is a very unpleasant job, but there can be no "bucking" at it. Where these careful methods are adopted the percentage of stuck sheep is nothing like as high as where the work is only half done, or not done at all. The careful man is severely handicapped if he has a neighbor who will neither clean up fly-breeding places or properly dress his sheep. His dead sveep are left perhaps almost along the boundary fence of the clean man, and to make fly mitigation effective it must be compulsory on all alike. The Merino sheepman suffer the most, as flies don't blow cross-breds as badly, because there is less shelter for the eggs or grubs in their first stages, but I expect, like all other plagues with which the sheepowner is beset, that they will adapt themselves to the crossbred, as the Merino gets scarcer, and will strike them at the back of the neck or on top of the shoulder, where the wool is denser and holds moisture longer. I do not think there has been any parasite found that will kill the blowfly, although I have repeatedly come across an odd sick fly with a kind of mould or fungus on its back, but it may have been pollen from some flower near where the fly had been resting.

I have been for a long while waiting to capture one to send to Mr. Froggatt for indentification, &c., but like all things, just when one wants them they are not to be found; but while experimenting is going on the sheepowner should be helping by lessening the breeding places, and not do as many did in regard to rabbits, wait for the rabbit to kill himself, while their sheep were dying with starvation because of a rabbit drought.—Pastoralists Review, Australia.

The Care of the Bull.

A neighbor expressed his astonishment at seeing a collection of broken bull-rings in my stable. He had not known that a bull's nose would withstand the strain required to break a ring, especially the steel ring that had broken twice, says W. C. Jeffries in the Ohio Farmer, Cleveland. An article in the Farmer recommends the use of a rope on the bull's horns as a means of contsolling him, but the editor very properly suggests the use of a ring in the nose; the advice would have been all the better if a steel ring had been recommended instead of a copper one, as it is well known that a copper ring will break like glass if the bull takes a notion that way. In fact, an ordinary steel ring, although much better than copper, is not equal to the strain that at times will be brought to bear upon it. In some of the larger herds where several bulls are in use and where of course the excitement is greater than in an ordinary farm herd. I have seen what appeared to be excessively heavy steel rings in use, and it was the provoking, and at times dangerous, experience of the owner with lighter rings that caused the adoption of the heavier ones.

A large herd was until recently owned and kept in the city of Milwaukee. Four bulls were necessary and when one bellowed they all bellowed. The presence of strangers is particularly objectionable to a bull, and there were plenty of strangers visiting this herd. Strange voices, bellowing bulls, and the clanking of their heavy chains, reminded one of a menagerie and was anything but agreeable to those who were inclined to be timid. The heavy rings were masters of the situation and will continue to be so until the bull tears off the end of his nose, which he has been known to do. Timid, flighty bulls are the ones that break the most rings and chains; at least, that has been the case in the writer's herd, as I have never owned a cross bull. I used to keep the bull near the horses, and if perchance a horse would get loose and put his head behind the bull it would so frighten him that something had to break. There are many sights and sounds that will cause an ordinarily quiet bull to break something.

Some bulls are not ringed simply because their owners dislike the rather disagreeable job of doing the ringing. I remember my first experience at the work. The bull had found his way to a neighbor's herd. He was driven nearly home when he went back to the neighbor's barn. A halter was put on him and tied to a post. A pocket knife put a hole in the nose, but having no ring a piece of heavy wire was made to take its place, and the bull was led home and a ring inserted. There are instruments made especially for ringing bulls, but they are not an absolute necessity. Ringing a bull is neither difficult nor dangerous although not altogether bloodless.

Why are my bulls never cross? Possibly it is good luck in great measure, although their general management doubtless has something to do with it. They are never overfed. A bull that is constantly in high flesh may attract the admiration of beholders, but his temper will be something like that of an overfed child. High feeding coupled with idleness has caused more bulls to become unmanageable than anything else, although ill-treatment, worrying by dogs, the presence of strangers, pasturing horses in the same field, timid managers, inherited disposition, and the particular breed of cattle, all have their influence.

The problem of furnishing exercise for the bull is a perplexing one. In some resperts he would do better in the field, if it were not for his breedy disposition, Some breeders report splendid success by blindfolding with a piece of heavy leather through which horns and ears protrude; or in case the bull has no horns the hood is fastened to a strong halter. He may occasionally become lost from the herd, but he will be found somewhere in the proper field. Others use the bull two or three times a day in a tread-power. This method not only gives the bull an opportunity to work off some of his superflous energy but also to pay at least a part of his boof his board bill by running machinery of various kinds. A good plan is to stretch a wire rope between two trees and tie the bull to a ring that slides upon the rope. My present method of controlling the bull is by the use of a long rope—the bull at one end, an apple tree at the other. He is a great big, good-natured Holstein and enjoys his trips to water and his new location under a different apple tree as occasion requires. He gets no food but grass to which he helps himself, requires no bedding but tne great earth, hauls out and spreads his own manure, seems to know that he is a son of a noble mother, and that he himself is a well-behaved, law-abiding citizen.—Breeders' Gazette.

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Fitting Sheep for Fall Fairs.

Before starting to fit his breeding flock or portion thereof for show purposes, the amateur breeder and fitter should become thoroughly familiar with the breed type and conformation of the sheep he is handling. The breeder should make certain that all the sheep that he intends to exhibit in the pure-bred classes are properly registered and that the certificates can be produced because most fair associations make the provision that the judge can call for registry certificates. Once in a while grades are shown in pure-bred classes, but this is a practice not to be encouraged as such methods will be surely discovered sooner or later.

In showing a mutton sheep, mutton conformation is desired. The animal must possess the type characteristic of that particular breed. For example in the Shropshire we want a sheep possessing the typical Shropshire head; there must be no horns or scurs on the Shropshire as the best specimens are without them. Good judges will place Shropshires possessing scurs at the bottom of the class. Every mutton sheep no matter what breed, the desired points are the clean cut head denoting quality; short, thick neck, length of body, wide, thick loin, strong back, carried well out to tail head; thighs well filled and wide, low in twist, straight and fine dense fleece.

There can be no set rule as to the proper time to start fitting breeding sheep for show purposes. It depends upon the keenness of the competition; the condition of the sheep at the beginning and also the ability of the owner or shepherd to fit sheep.

In fitting for exhibition for our largest shows, considerable time is taken for this purpose, the period generally extending through the summer and early fall months. This kind of fitting does not necessarily apply to small flock owners as there are most likely very few flocks in this section of the country that are exhibited at the larger fairs in the west and central west.

In New England the shepherds should provide good pasture with fresh water and sufficient shelter to shade the flock during the hot summer days. Of course, in New England most of the pastures have at least a few trees that offer a cool, shady resting place for the flock.

WEAN EARLY.

If you are planning or showing breeding ewes at the fall fairs the lambs should be weaned early so that their mothers can be rounded into good condition. The ewes will not make satisfactory gains while sucking their lambs. "Flushing the ewe" is a common word among sheep men and it means nothing more than putting the ewe on to good feed and bringing into good condition before being bred again. Rape is an excellent food for bringing about this result and no sheep grower should be without a rape patch.

Some grain can be fed to advantage in fitting the breeding flock for show but the flockmaster must be careful not to bring about the desired result in too short a time as some of the sheep are quite likely to become soft and flabby which is a very undesirable condition, judging from the breeders point of view. The fitter should handle his sheep and notice any indications of overfitting. One of the first indication of a condition is the softening and puffing up distention of the flesh over the ribs, just back of the shoulder.

A limited grain ration will help to make a wonderful improvement in the condition of the breeding flock. The most common concentrated feeds used for this purpose are oats, bran, oil meal and ground corn. The latter is heating and should not be fed only in very meagre quantities during the hot summer periods.

FITTING LAMBS FOR RING.

In bringing the lambs into show condition the same general suggestions as were applied to the breeding ewes may satisfactorily be followed in this case. The lambs in order to do their best must be kept in good condition from birth. They should be given access to a good rape patch early in the summer and in addition be fed a limitation ration of oats, bran and oil meal.

It will not be difficult to fit the rams for show if they have had the run of a good pasture. A small amount of grain may be added to their ration a few weeks before the first fair if they are not in good show condition. Remember that the rams should be in a good strong, triving condition but should not be overfat and sluggish and barely able to move. In the ram an active and strong specimen is desired and in bringing about this condition the show sheep must all receive the proper exercise or else their flesh will become soft and bunches or rolls will develop on the sides, indicating overfitting.

Wethers which are fitted for show are supposed to be finished and ready for the block. A somewhat more lengthy period is required for fitting this class, but the general principle is the same. Exercise is essential and the added flesh should be firm and evenly distributed.

The shepherd should handle his flock gently at all times and they will always come at his gentle call rather than run when they see or hear him.

The show sheep should be handled before being put in the show ring because the sheep which stands with all four feet directly under it and with the head carried well will offer a much more pleasing general appearance to the judge than the one standing with its legs outstretched and continually in an effort to free itself from the attendant. Then again the weak points are much more in evidence when the animal is standing in an unnatural position.—N. G. Homestead.

Pitfalls of Inbreeding.

There are a lot of vague and foolish notions entertained on this subject. Like everything else in the world, that is good for anything, it is capable of evil as well as good results. Knives have been used to stab people, ropes to hang them and water to drown them; yet no man of common sense would fail on that account to make a right use of knives, ropes and water. The safest way of inbreeding, so far as our observation goes, is from sire to daughter. There is one rule that should always be watchfully observed:

Never inbreed heifer or cow that shows a lack of constitutianal vigor.

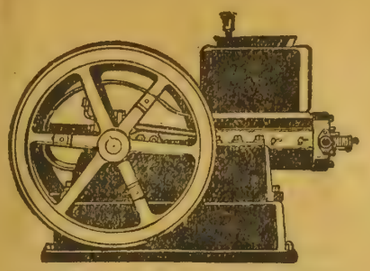
Keep that idea foremost. Also with like pertinency, never inbreed to a sire who shows any signs of lacking in constitutional vigor. Now, within those two road fences it is safe, and very often advantageous, to breed a daughter back to her sire. This should be practiced in breeding grade cows a great deal more than it is done, with close observance of the foregoing rules. It should always be remembered that inbreeding is an intensifier. It intensifies a weakness just the same as it may intensify strength, talent, capacity in any given direction.

Now suppose we start with a pure-bred bull and a herd of cows of mixed breeding. The heifers got by that union inherit 50 per cent. of the straight blood of the sire and an equal amount of the undesirable blood, tendencies and scatteted heredities of their mothers.

When you come to breed these heifers, if you go outside for a sire, the scrub blood they inherited from their mothers is just as prepotent and often more so that the purebred blood of their sire. But breed them back to their sire—if he is a good one—and the heifers from that union will contain 75 per cent. of the blood of the sire. In other words, they are three-quarters inbred. This inbreeding makes them answer back in all subsequent breeding a great deal stronger than if they were bred from another sire even if in the same line.

We should breed our cattle as to concentrate, as far as it is safe, the best heredity we can obtain. Starting with the blood of a very desirable bull the universal practice is to dilute and diffuse that valuable heredity. The consequence is that the valuable qualities of the original bull are very soon so widely scattered as to be of small account.

Skilful breeders like Dauncey with his Stoke Pogis herd of Qerseys so managed his intense inbreeding as to increase size and strength of constitution. It can be done if sufficient care is had at every step in the way to build on constitutional vigor. Without that, our cattle are failures anyway.



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Entries close in all classes August 16th.

The Horse's Pulse.

The veterioary editor of the London Farm and Home gives a valuable article that horsemen and stockmen should know about the pulsations of the horse, which is here reproduced:

What is the number of pulsations of the horse? suggests the holding of the popular notion that acceleration is taken into serious consideration when the indications of the pulse are considered as an aid to diagnosis in disease. The knowledge that in the horse, or for the matter of that, any other domesticated animal, the pulsations in health average so many per minute is not likely to be very useful to the farmer or horse-owner— indeed it may lead the amateur veterinary surgeon astray, unless at the same time he appreciated the importance of character in the pulse. He may see the doctor lightly grasping the wrist of his patient with the finger of the hand, while holding his watch in the other, in his best bedside manner; or the veterinary surgeon standing on the near side of his patient with his left hand on the horse's nose, and pressing the sub-maxillary artery against the lower jawbone with the fingers of his right— looking very serious and very wise—and assume that they are counting all the time; but they are not. Each takes some note of number, but at the same time, the manner in which the blood is propelled through the artery is receiving the more serious consideration. There are several things that influence the number of pulsations, even in the healthy animal, * including breed, age pregnancy, warmth, plethora, etc., and thus there is a good deal of room for discrimination, even if there were anything in the popular notion that acceleration in speed is inseparably connected with disease.

For example, if we take two horses, say a very common-bred carting animal and a well-bred hunter, it will be found that so far as the number of pulsations per minute is concerned, there may be a difference of eight or ten beats. At the same time the animal with the faster pulse may be in better health than the other. The same difference is to be observed in bovines as regards age and between an elderly cow and a yearling heifer there may be a difference of from ten to twenty pulsations; in fact, the pulse, as well as the respiration, is always faster in all young animals, while the internal temperature, as indicated by the clinical thermometer is always higher. Nervous animals roughly handled show increased frequency, the excitement producing such an impression on the nervous system as to cause the action of the heart to be greatly quickened. The number of pulsations at any point of an artery simply represent the number of contractions of the left ventricle of the heart in a given time, and if mere number is all we want to know, we need not trouble about taking the pulse of an artery at all. If the ear, or even the palm of the hand, is placed against the chest on the near side, the number of heart beats can be correctly counted, and it will tell just as much as if pulsations are counted at a distant artery. It is, of course, desirable to know that the pulse of the horse is normally 32 to 36, or 34 to 40 in well-bred animals, that in the ox the average is 46, that it is faster during rumination (70 to 80) and faster in the young animal (55 to 65) than in the adult; that in the sheep it is from 60 to 90, in the pig 55 to 75, and in the dog 70 to 90; but when this has been learned, we are only on the threshold of the subject, for it is on character that reliance has to be placed for the indications of disease. The different kinds of pulsations, or characters of pulse, have received different names to distinguish them and in technical pathological descriptions we meet with such terms as full, small, soft, hard, oppressed, unequal, confused thready, imperceptible, intermittent, diacrotonous, cordy, wiry and several others, as applied to the state of the pulse. It is hardly to be expected that the amateur will be able to understand all the finer distinctions, but an appreciation of at least the more important of the characteristics is not difficult to acquire; indeed, is absolutely necessary to the proper understanding of the value of pulse indications in their relationship to departures from health. A slow pulse is when the number of beats is below the normal per minute, and it indicates defective nervous energy such as would arise in certain brain troubles. A weak pulse denotes feeble heart action, and is expressive of debility. An irregular or intermittent pulse indicates heart disease, and is due to arrest of the heart's action at either regular or irregular intervals. A hard pulse is indicative of inflammation or fever, the hard, jerk- pulse of inflammation of the bowels is an example. It is necessary also to be able to distinguish between frequency and quickness, since they are not by any means the same thing. A pulse may be described, say, as frequent, small and quick. This means a frequent beat of the heart, a quick contraction, and a small quantity of blood sent out at each beat. When the blood vessels are much distended, we have the oppressed pulse, in which the beat is prolonged, and not very marked. This indicates congestion, say, of the lungs and owing to obstruction, the blood is with difficulty forced along.

Where to take the pulse is another common question, and one on which

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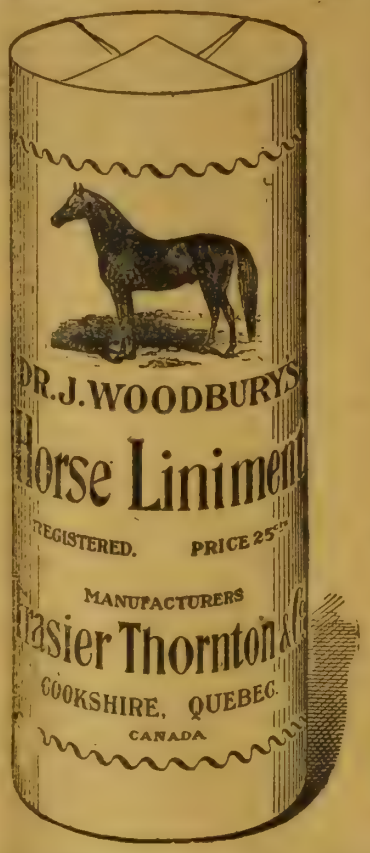

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the reader requests information From what has already been said, it will be readily understood that for indications other than that of number, which can be obtained by listening to the heart, it is necessary to take the pulse at an artery, the size and degree of contraction of which shows the hardness, softness, fullness, smallness, etc. With every beat of the heart the blood is propelled through the vessels called arteries, which have a degree of elasticity that enables them to adapt themselves to the volume of the stream. The force with which the blood is propelled from the heart diminishes as the distance from the centre of circulation is increased, but is palpable to the remotest extremity. Owing to this diminution of the force, it is desirable to select a vessel of considerable size, and as near to the heart as possible. It must be superficial, and so situated that it can be pressed against some hard body, such as bone. There are several arteries that permit of this being done, and different vessels are utilized for taking the pulse in different animals by different practitioners.

In the horse the sub-maxillary artery is invariably employed. The vessel is situated at the lower jaw, and the method usually adopted is to take up a position quietly on the near side of the animal, and to soothe and pat it to allay any fear or excitement. Then place the left hand lightly on the nose, and find the artery with the fingers of the right, pressing the vessel gently against the jaw-bone, so as to ascertain the manner in which the blood is flowing through it. The number of pulsations per minute are counted while their character is noted. There is no point at which the equine pulse can be taken so conveniently as at the jaw, although there are, of course, other vessels which can be employed. It is safest, as well as most convenient.

Colic in Horses.

The season of the year is now approaching when we may expect the usual abundant crop of colic cases among horses, particularly among farm horses, that arises out of food changes, for the green meat season is in sight. Green meat in summer and hay in winter are the staple foods of the agricultural horse; the average farmer rarely falls into the error of giving too much grain. Grass is, of course, the natural food of the horse and there would be little or no trouble with this material, or with the various green fooder crops grown specially for horse keep in spring and summer, if they were cautiously introduced and fed with judgment. Horses turned out to grass to walk for their living on a not too luxuriant pasture rarely suffer from gripes, but the trouble is all too common when a sudden change is made from dry to green and succulent food, and the animals have to continue to work. Colic also results from the injudicious use of green meat in two ways; too free use is made of the crop because it is considered cheap, and the carter is credited with a discretion in its use that he too frequently lacks, and its free use is continued after the crop gets old, especially in the case of tares. There are some horses which seem possessed with the idea that it is their bounden duty to consume everything offered, and that spend the greater part of the night in putting away the vast pitches of green stuff with which the carter loads their racks before leaving them; and when this is preceded by a free feed of half-dried grass gathered in the hayfield during the day, the consequences are often disastrous. Old green meat becomes more or less indigestible, and when tares become full-podded the effect is much the same as with an unlimited allowance of new beans. To avoid colic, green stuff should be introduced gradually by chaffing a proportion of it with the hay and very gradually decreasing the usual winter allowance of oats and hay, while increasing the green meat. This renders the horse less greedy of the new food, and gradually accustoms the digestive organs to the change. This precaution is especially necessary where the winter feed has been entirely dry and carrots or other roots have not entered into the diet. A capital means of introducing green food is to have a small breath of rye for conversion into chaff with the hay. This is a practice to be commended, particularly if the crop is not allowed to get too old before it is started on, and it is not continued after the straw has acquired the "steely" hardness characteristic of rye straw. On most farms in my district, where rye is grown as a forage crop for horses, a start has already been made with its cutting for conversion into chaff with hay.—West Sussex, in Farm and Home, England.

Horse Notes.

A stallion is valuable in proportion to the quantity of good produce he gets.

There is no use trying to breed valuable stock if the sire is selected at haphazard.

Long fasts followed by heavy feeds is a sure way to bring on colic and inflammation of the bowels.

The horse that is being fed to get into condition should be fed a little at a time, but frequently.

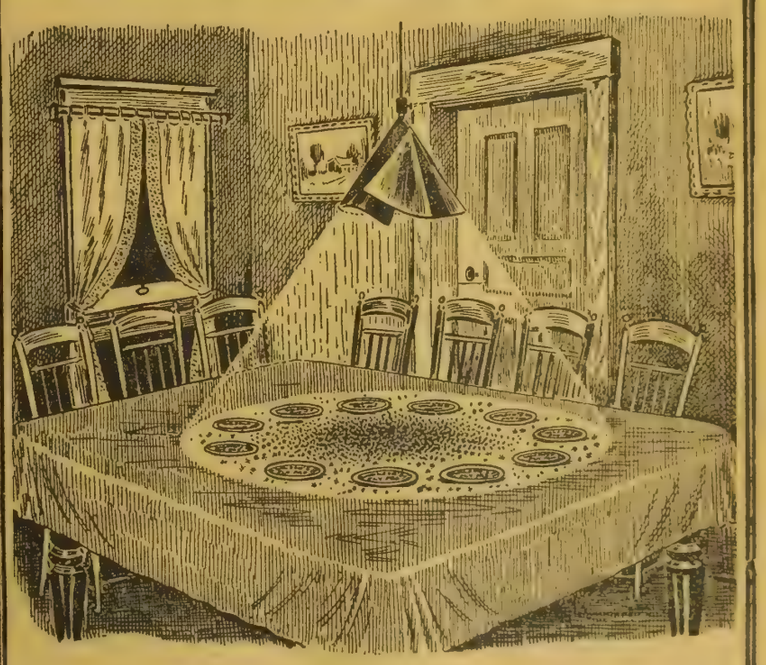
While it is important with growing colts to maintain a steady growth from birth to maturity, there is less real need of feeding for early maturity with any other class of stock.

To develop a horse means to increase his speed or his strength, as the case may be, to strengthen the weak points and to perfect the animal in any directions whatever by judicious handling and careful conditioning.

The best remedy for scratches is prevention. Keep the feet and legs of the horse clean. When they come in at night, wash them clean and rub them dry. The latter is as important as washing, as allowing them to stand with their feet and legs wet is injurious. A little care as regards cleanliness will avoid much trouble and loss.

Horses should always be watered before feeding, and never immediately after. It is more injurious to digestion, and is often the cause of colic to allow a horse to drink heavily on a full stomach of grain.—Horn and Hoof.

The Grand Trunk Railway system have received a communication from the Barnum & Baily circus in connection with the handling of their four trains over their lines in Canada, which reads as follows:—"We have pleasure in stating that your service in handling our shows has been most satisfactory; we also speak a word for your employees with whom we came in contact. They all seemed to do their utmost to make it pleasant for us, and I assure you it was greatly appreciated by our people."



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POULTRY.

Advantage in Using Trap Nests.

If the trap nest was used for no other purpose, it would be worth the attention it requires to thus separate the idlers from the industrious. The most beautiful and best marked Light Brahma hen on our farm laid only 11 eggs during the year when a yearling What she laid as a pullet we do not know, as we did not use trap nests all that time. It certainly would not be profitable to keep such a hen, and yet she was good enodgh to put in a show room. The first year we used trap nests we discovered that about one-fourth of our flock were not worth breeding from. The next year we secured twenty per cent. more eggs with twenty-five per cent less hens — we bred only from the cream. In other words, we got more eggs for less expenditure for feed or labor.

When the demand grew for brown eggs of the White Wyandotte breed, we discovered that about one-fourth laid white eggs and one-half gave us tinted eggs. One hen in particular laid a rich brown egg.

We set all the brown eggs and then started to pick out the brown egg layers. The trap nest caught them for us. To our surprise all these brown egg layers were among our poorest layers, while the best layers gave us a pure white egg. Here we were confronted with a problem; "which would be the wisest— breed from the hens merely for color of shell, and ignoring their egg record or breed, for quantity of eggs regardless of color of shell?" We determined to work for the brown color first, as the call was greater for them, and then annually pick out the best layers in that lot and work for higher records.

The trap nests have always taught us which hens lay the best-shaped eggs, which the largest-sized eggs and which the best fertilized eggs. It is a remarkable fact that three hens in a flock that never give as good fertility and again there are others that are very strong in that particular.

Another great secvice that the trap nest performs is to arrest the egg eater. If you have reason to suspect that a certain hen (which is found quite frequently upon the nest and apparently never lays) is guilty of eating her eggs, give her an egg while she is on the nest. If it is not there when you look again, you have pretty good evidence that you have caught the right party. Decapitation should be the sentence.

You cannot always tell your good layers from the number of times you find them on the nest. It is remarkable how often a hen will go on the nest and not lay. The trap nest will point out all such. The trap nest, too, will tell you which are your best winter layers, which pullets begin the laying early in the season, the number of eggs they lay in succession, the number of times they become broody during the year, and many more facts which can be obtained in no other way.

Objection has been made to the trap on account of the time required to attend the same. We find very little time need be spent in hens if a regular system is adopted. Every hour the attendant makes the rounds. He stops at only the closed nests. He opens the little door, and if the hen is sitting on the nest the door is closed until the next round. If the hen has laid the egg she will be standing up, waiting to be taken out. Five minutes each hour will be all the time necessary to attend to fifty nests, or about one hour's time during the day. No hour during the day could be put to more practical use.

The claim has been made that hens are apt to break the eggs in the trap nest in their work to get out. The truth is, we have only four eggs broken the entire year, and they were rather tain-shelled. We had fully that many broken daily before we used the trap nests.

Trap nests make tame hens. At first they object to being caught, but after a while they take the matter more pleasantly, and there is no trouble. We have our hens so tame that when we open the door they stand ready to be taken up so we can ascertain the number on their leg bands.

French Poultry Methods.

For fattening poultry, the French poulterer favors the epinette plan. This consists of rows of cages, with a separaate compartment for each bird. These cages measure twenty inches square and open at the top, no place being allowed for movement. The bottom of the cage is in open work, and below a moveable board strewn with ashes or sawdust to receive the droppings. In front is placed a trough for food and an earthern vessel for water. The cellar or fattening house is kept warm, and the light gradually diminished till total darkness is secured on the fifth day. Only when being fed is daylight readmitted, and many prefer to employ a lamp.

The French poulterer kills his fowls by dislocating the neck with a swift back chuck, given close to the head. At once dressing begins so it may be completed before the body cools. The legs and wings are tucked close to the body, which is placed breast downwards against a board. A moist cloth is spread on the back to impart a fine grain appearance to the flesh. A weight is next applied thereon to secure the required market flatness, and when thoroughly cold the birds are removed, packed carefully and closely, in crates or cases, as they are intended for the home or foreign market.

The French are naturally an economical people, and after their fowls are killed and dressed they are by no means through with the treatment of the subject. The waste products are scrupulously saved. The feathers are carefully collected and sorted, and when well dried are sold to dealers. The intestines are boiled, the fat skimmed off, minced as food to poultry, and the liquid fed to pigs. The combs and kidneys are sold to pastry cooks, the first for decorating purposes, and the the latter for pigs. The head, neck and feet are sold to hotels and restaurants for flavoring sauces, or are boiled down to make chicken jelly.

The French method of preparing poultry for market is acknowledged, in some respects, superior to others. The birds are made very plump and fat, and are manipulated to increase plumpness. A few feathers are left on tail and neck. The skin is white and delicate. Each carcass is tied with a ribbon, and is shown back uppermost, instead of breast up, according to American and English usage.

The late M. Barral, of France, laid down the rule that in every case the food given should be in proportion to the weight of the birds, taking into consideration their active nature and such accessory products as eggs and feathers. Generally speaking, an average hen will consume three ounces of grain per day, or over a bushel in the course of a year, but the weight of gallinaceous birds varies considerably, and hence no really definite idea can be formed of what they are capable of consuming to the best advantage.

Keep the Roosters Separate.

Investigation and experiment having demonstrated that fertile eggs do not keep in usable condition very long unless in cold storage or otherwise preserved, and that under ordinary conditions they begin to deteriorate in quality in a few days, the best poultry practice of the present time is to keep roosters out of the laying flocks, and there is considerable teaching and agitation along this line by those who are working for better conditions, more perfect product and larger profits in the poultry business.

Following an ingenious line of argument by G. E, Chapman, poultry specialist of the University of Minnesota Farm, let us suppose that during the hatching season there were produced an average of five roosters on the 60,000 farms. What shall be done with these 300,000 roosters? If they are allowed to run, the eggs laid by the hens will likely be fertile and will be spoiled by the development of chicks or by the naturally quicker rotting of fertile eggs caused by hot weather.

Mr. Chapman estimates that the loss through changes in fertile eggs during the four summer months will be half as much as the roosters will be worth in the fall. Whether these conditions would be the same in Maine as in Minnesota, we can only suppose. Mr. Chapman also estimates that if the roosters were kept by themselves, it would cost five cents a month beside the labor. This would aggregate for the four months, $60,000. If sold at ten cents per pound and they averaged six pounds in weight, they would bring $180,000. Mr. Chapman thinks that this money in the pocket-books of the farmers would be much better than the roosters in the poultry yards. Mr. Chapman says:

"If you have a standard-bred bird, healthy and vigorous, keep him if you wish, but don't let him run with the laying flock. We want to establish the reputation and maintain the quality of Minnesota eggs. Our eggs should command the same premiums in the markets as does our creamery butter, but they never will with 750,000 roosters on the farms during the next four months. It is simply a question of roosters versus reputation."—Exchange.

Prevention.

A successful poultryman says that he prevents much sickness in his poultty yards by furnishing shade, exercising, pure food, fresh water, variety of diet. He avoids drafts, is regular in feeding, avoids overfeeding, gives charcoal twice a week, avoids overcrowding, has cool houses in summer, cleans up the droppings daily, and uses plenty of disinfectants. He doctors the slight ailments, but kills off all cases of contagious disease. He feeds green cut bone twice a week, makes new nests once a week, has a constant supply of sharp grit within reach of the fowls. He scalds out clover hay in winter for bulky food, does not feed any heating food in summer. He plows up the runs several times a year, keeps fowls indoors during bad weather, burns sulphur in the houses once a month, kerosenes the roosts and nest boxes once a week, separates the males from the females during molting, and once a week scalds out the drinking vessels.

Sneezing in fowls belongs to distemper or a cold in the head, and in itself is only a slight ailment. In quite young chicks the trouble is best

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treated by putting four drops of tincture of aconite in a half pint of drinking water. Use the homeopathic aconite. For older chicks, tie a piece of asafoetida about the size of a hazelnut wrapped in a piece of muslin and fastened in the drinking fountain or vessel so that the fowls cannot pull it out.

Fancy Market Eggs.

The idea of attractive packages for eggs which are going to market, such as cartons for each dozen eggs, is receiving a good deal of a boost these days, when there is being so much said about the advantages of a good pack in the marketing of farm produce, and when the high cost of living is being boosted in every way possible.

Packages for eggs are mighty nice things, when eggs are going to a fancy sort of tsade that will be willing to pay the extra price. The extra price is well deserved, by the way, and it surely is a good plan for any farmer who can find a fancy market to put a high-class product into a high class package and send it to that market. That it will pay and will pay well, has many times been demonstrated.

The Connecticut Farmer recently said, in regard to an instance of fancy egg marketing:

"One of the largest fancy grocery stores in New Haven advertises Rollwood Farm eggs sealed with the seals of the Connecticut Poultry Association. As the price is considerably above the average market price for fresh eggs, it must pay the Rollwood Farm to use extra in putting up its eggs."

The sealing of eggs of this quality whirh are going to a fancy market, is a mighty fine idea. In Connecticut a plan has been worked out by the Connecticut Poultry Association to furnish gum label seals, bearing the name of the Association, to the members of the association at cost, each box of a dozen eggs to be sealed with one of these labels, to prevent the eggs being tampered with in shipment or in distribution, and furnishing a sort of guarantee of quality.

Pin Feathers.

Never send a fowl to market that has a full crop.

Common field peas are an excellent egg-producing food, owing to the large amount of nitrogenous substances contained in them.

Green ducks are shipped to market undrawn, and with heads on. They are picked down one-half of the neck, and to the first wing joint.

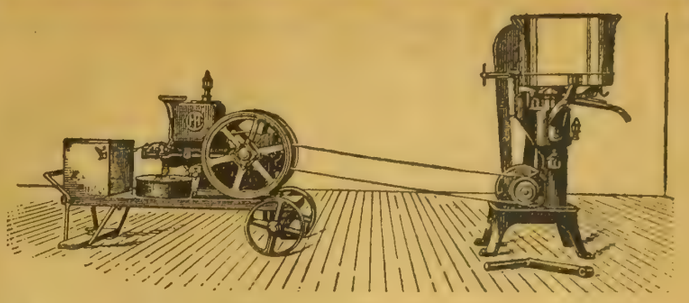
The Muscovy duck has to be from two to four weeks older than the Pekin before it can be dressed, and is sometimes four months old when killed.

A very good block for decapitating fowls is made by driving two spikes or nails along one side of a heavy block of wood, far enough apart to allow the fowl's neck to slip between them. This holds it in place and makes it easy to complete the work at one blow.

Dry-picked poultry will stand longer shipment than those that are scalded.

In dry-picking, pluck the feathers while the body is still warm.

Shippers of live stock poultry should never use coops which are too small to carry the poultry properly. Poultry arriving in a cramped and wretched condition will not command satisfactory prices, and, furthermore, the commission man is apt to get himself into serious trouble with the Society for the Prevention of Cruelty to Animals unless the stock is removed immediately into other coops, and these are not available at all times.



Look This Square in the Face

LET a man ask you six months after you buy an I H C outfit, "Why are you using a cream separator? Is it making money for you?" and the question will sound as sensible to you as though he had asked why you used a binder.

The outfit pictured above will give you more cream from your milk, saving from $5 to $15 per year for each cow you milk; separator skim milk, sweet, warm, and wholesome, will give you healthier, fatter pigs and calves, and this again means more milk and increased soil fertility. Many more things an

I H C Cream Separator
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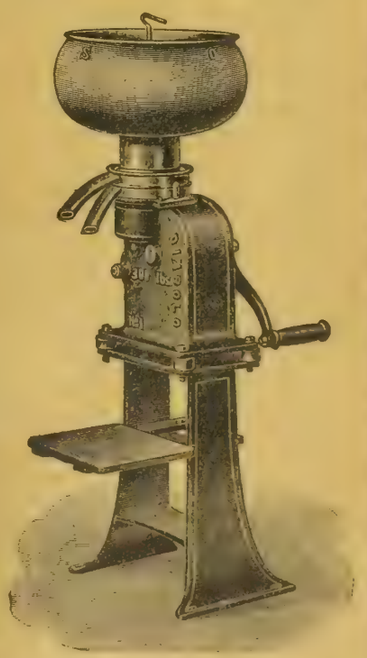

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THE FARM HOME.

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David Copperfield.

By Charles Dickens.

(Continued from last issue)

My rescue from this kind of existence I considered quite hopeless, and abandoned, as such, altogether. I am solemnly convinced that I never or one hour was reconciled to it, or was otherwise than miserably unhappy; but I bore it; and even to Peggotty, partly for the love of her and partly for shame, never in my letter (though many passed between us) revealed the truth.

Mr. Micawber's difficulties were an addition to the distressed state of my mind. In my forlorn state I became quite attached to the family, and used to walk about, busy with Mrs. Micawber's calculations of ways and means, and heavy with the weight of Mr. Micawber's debts. On a Saturday night, which was my grand treat, —partly because it was a great thing to walk home with six or seven shillings in my pocket, looking into the shops and thinking what such a sum would buy, and partly because I went home early,—Mrs. Micawber would make the most heart-rending confidences to me; also on a Sunday morning, when I mixed the portion of tea or coffee I had bought over-night, in a little shaving pot, and sat late at my breakfanst. It was nothing at all unusual for Mr. Micawber to sob violently at the beginning of one of these Saturday night conversations, and sing about Jack's delight being his lovely Nan, towards the end of it. I have known him come home to supper with a flood of tears, and a declaration that nothing was now left but a jail; and go to bed making a calculation of the expense of puting bow-windows to the house, "in ase anything turned up," which was is favorite expression....And Mrs. Micawber was just the same.

A curious equality of friendship, orginating I suppose, in our respective circumstances, sprung up between me and these people notwithstanding the ludicrous disparity in our years. But I never allowed myself to be prevailed upon to accept an invitation to eat and drink with them out of their stock (knowing that they got on badly with the butcher and baker, and had often not too much for themselves), until Mrs. Micawber took me into her entire confidence. This she did one evening as follows:

"Master Copperfield," said Mrs. Micawber, "I make no stranger of you, nd therefore do not hesitate to say hat Mr. Micawber's difficulties are oming to a crisis."

It made me very miserable to hear t, and I looked at Mrs. Micawber's ed eyes with the utmost sympathy.

"With the exception of the heel of a Dutch cheese—which is not adapted to the wants of a young family"—said Mrs. Micawber, "there is really not a scrap of anything in the larder, I was accustomed to speak of the larder when I lived with papa and mama, and I use the word almost unconsciously. What I mean to express is, that there is nothing to eat in the house."

"Daer me!" I said, in great concern.

I had two or three shillings of my week's money in my pocket—from which I presume it must have been on a Wednesday night when we held this conversation—and I hastily produced them, and with heartfelt emotion begged Mrs. Micawber to accept them as a loan. But that lady, kissing me, and making me put them back in my pocket, replied that she couldn't think of it.

"No, my dear Master Copperfield," said she, "far be it from my thoughts! But you have a discretion beyond your years, and can render me another kind of service, if you will; and a service I will thankfully accept of."

I begged Mrs. Micawber to name it.

"I have parted with the plate myself," said Mrs. Micawber. "Six tea, two salt, and a pair of sugars, I have at different times borrowed money on, in secret, with my own hands. But the twins are a great tie; and to me, with my recollections of papa and mama, these transactions are very painful. There are still a few trifles that we could part with. Mr. Micawber's feelings would never allow him to dispose of them; and Clickett"—this was the girl from the workhouse—"being of a vulgar mind, would take painful liberties if so much confidence was reposed in her. Master Copperfield if I might ask you"—

I understood Mrs. Micawber now, and begged her to make use of me to any extent. I began to dispose of the more portable objects of property that very evening; and went out on a similar expedition almost every morning, before I went to Murdstone and Grinby's.

Mr. Micawber had a few books on a little chiffonier, which he called the library; and those went first. I carried them, one after another, to a bookstall in the City Road—one part of which, near our house, was almost all bookstalls and bird-shops then—and sold them for whatever they would bring. The keeper of this bookstall, who lived in a little house behind it, used to get tipsy every night, and to be violently scolded by his wife every morning. More than once, when I went there early, I had audience of him in a turn-up bedstead, with a cut in his forehead or a black eye, bearing witness to his excesses over night (I am afraid he was quarrelsome in his drinking) and he with a shaking hand, endeavouring to find the needful shillings in one or other of the pockets of his clothes, which lay upon the floor, while his wife, with a baby in her arms and her shoes down at heel, never left off rating him. Sometimes he had lost his money, and then he would ask me to call again; but his wife had always got some—had taken his, I daresay, while he was drunk—and secretly completed the bargain on the stairs, as we went down together.

At the pawnbroker's shop, too, I began to be very well known. The principal gentleman who officiated behind the counter, took a great deal of notice of me; and often got me, I recollect, to decline a Latin noun or adjective, or to conjugate a Latin verb, in his ear, while he transacted my business. After all these occasions Mrs. Micawber made a little treat, which was generally a supper; and there was a peculiar relish in these meals which I well remember.

At last Mr. Micawber's difficulties came to a crisis, and he was arrested early one morning, and carried over to the King's Bench Prison in the Borough. He told me, as he went out of the house, that the God of day had gone down upon him—and I really thought his heart was broken and mine too. But I heard, afterwards, that he was seen to play a lively game of skittled, before noon.

On the first Sunday after he was taken there, I was to go and see him, and have dinner with him. I was to ask my way to such a place, and just short of that place I should see such another place, and just short of that I should see a yard, which I was to cross, and keep straight on until I saw a turnkey. All this I did; and when at last I did see a turnkey (poor little fellow that I was!), and thought how, when Roderick Random was in a debtors' prison, there was a man there with nothing on him but an old rug, the turnkey swam before my dimmed eyes and my beating heart.

Mr. Micawber was waiting for me within the gate, and we went up to his room (top story but one), and cried very much. He solemnly conjured me, I remember, to take warning by his fate; and to observe that if a man had twenty pounds a year for his income, and spent nineteen pounds nineteen shillings and sixpence, he would be happy, but that if he spent twenty pounds one he would be miserable. After which he borrowed a shilling of me for porter, gave me a written order on Mrs. Micawber for the amount, and put away his pocket-handkerchief and cheered up.

We sat before a little fire, with two bricks put within the rusted grate, one on each side, to prevent its burning too many coals; until another debtor, who shared the room with Mr. Micawber, came in from the bakehouse with the loin of mutton which was our joint stock repast. Then I was sent upsent up to "Captain Hopkins" in the room overhead, with Mr. Micawber's compliments, and I was his young friend, and would Captain Hopkins lend me a knife and fork.

Captain Hopkins lent me the knife and fork, with his compliments to Mr. Micawber. There was a very dirty little lady in his room, and two wan girls, his daughters, with shock heads of hair. I though it was better to borrow Captain Hopkins's knife and fork, than Captain Hopkins's comb. The Captain himself was in the last extremity of shabbiness, with large whiskers, with an old, old old brown greatcoat and no other coat below it. I saw his bed rolled up in a corner; and what plates and dishes and pots he had, on a shelf; and I divined (God knows how) that though the two girls with the shock heads of hair were Captain Hopkin's children, the dirty lady was not married to Captain Hopkins. My timid station on his threshold was not occupied more than a couple of minutes at most; but I came down again with all this in my knowledge as surely as the knife and fork were in my hand.

There was something gipsy-like and agreeable in the dinner, after all. I took back Captain Hopkins's knife and fork early in the afternoon, and went home to comfort Mrs. Micawber with an account of my visit. She fainted when she saw me return, and made a little jug of egg-hot afterwards to console us while we talked it over.

I don't know how the household furniture came to be sold for the family benefit, or who sold it, except that I did not. Sold it was, however, and carried away in a van; except the bed, a few chairs, and the kitchen-table. With these possessions we encamped, as it were, in the two parlors of the emptied house in Windsor Terrace; Mrs. Micawber, the children, the Orfling, and myself; and lived in those rooms night and day. I have no idea how long, though it seems to me for a long time. At last Mrs. Micawber resolved to move into the prison, where Mr. Micawber had now secured a room to himself. So I took the key of the house to the landlord, who was very glad to get it; and the beds were sent over to King's Bench, except mine, for which a little room was hired outside the walls in the neighborhood of that Institution, very much to my satisfaction, since the Micawbers and I had become too used to one another, in our troubles, to part. The Orfling was likewise accommodated with an inexpensive lodging in the same neighborhood. Mine was a quiet back-garret with a sloping roof, commanding a pleasant prospect of a timber-yard, and when I took possession of it, with the reflection that Mr. Micawber's troubles had come to a crisis at last, I thought it quite a paradise.

All this time I was working at Murdstone and Grinby's in the same common way, with the same common companions, and with the same sense of unmerited degradation as at first. But I never, happily for me no doubt made a single acquaintance, or spoke to any of the many boys whom I saw daily in going to the warehouse, in coming from it, and in prowling about the streets at meal-times. I led the same secretly unhappy life; but I led it in the same lonely, self-reliant manner. The only changes I am conscious of are, firstly, that I had grown more shabby, and secondly, that I was now relieved of much of the weight of Mr. and Mrs. Micawber's cares; for some relatives or

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friends had engaged to help them at their present pass, and they lived more comfortably in the prison than they had lived for a long while out of it. I used to breakfast with them now, in virtue of some arrangement of which I have forgotten the details. I forget, too, at what hour the gates were opened in the morning, admitting of my going in; but I know that I was often up at six o'clock, and that my favorite lounging-place in the interval was old London Bridge, where I was wont to sit in one of the stone recesses, watching the people going by, or to look over the balustrades at the sun shining in the water, and lighting up the golden flame on the top of the monument. The Orfling met me here sometimes, to be told some astonishing fictions respecting the wharves and the Tower; of which I can say no more than that I hope I believed them myself. In the eveining I used to go back to the prison, and walk up and down the parade with Mr. Micawber; or play casino with Mrs. Micawber, and hear reminiscences of her papa and mama. Whether Mr. Murdstone knew where I was, I am unable to say. I never told them at Murdstone and Grinby's.

Mr. Micawber's affairs, although past their crisis, were very much involved by reason of a certain "Deed" of which I used to hear a great deal, and which I suppose, now, to have been some former composition with his creditors, though I was so far from being clear about it then, that I am conscious of having confounded it with those demoniacal parchments which were held to have, once upon a time, obtained to a great extent in Germany. At last this document appeared to be got out of the way, somehow; at all events it ceased to be the rock ahead it had been, and Mrs. Micawber informed me that "her family" had decided that Mr. Micawber should apply for his release under the Insolvent Debtors' Act, which would set him free, she expected, in about six weeks.

"And then," said Mr. Micawber, who was present, "I have no doubt I shall, please Heaven, begin to be beforehand with the world, and to live in a perfectly new manner, if—in short, if anything turns up."

By way of going in for anything that might be on the cards, I call to mind that Mr. Micawber, about this time, composed a petition to the House of Commons, praying for an alteration in the law of imprisonment for debt. I set down this remembrance here, because it is an instance to myself in the manner in which I fitted my old books to my altered life, and made stories for myself, out of the streets, and out of men and women; and how some main points in the character I shall unconsciously develop, I suppose, in writing my life were gradually forming all this while

There was a club in the prison, in which Mr. Micawber, as a gentleman was a great authority. Mr. Micawber had stated his idea of this petition to the club, and the club had strongly approved of the same. Wherefore Mr. Micawber (who was a thoroughly good-natured man, and as active a creature about everything but his own affairs as ever existed, and never so happy as when he was busy about something that could never be of any profit to him) set to work at the petition, invented it, engrossed it on an immense sheet of paper, spread it out on a table, and appointed a time for all the club, and all within the walls if they chose, to come up to his room and sign it.

When I heard of this approaching ceremony, I was so anxious to see them all come in, one after another, though I knew the greater part of them already, and they me, that I got an hour's leave of absence from Murdstone and Grinby's, and established myself in a corner for that purpose. As many of the principal members of the club as could be got into the small room without filling it, supported Mr. Micawber in front of the petition, while my old friend Captain Hopkins (who had washed himself to do honor to so solemn an occasion) stationed himself close to it, to read it to all who were unacquainted with its contents. The door was then thrown open, and the general population began to come in, in a long file: several waiting outside, while one entered, affixed his signature, and went out. To everybody in succession, Captain Hopkins said: "Have you read it?"—"No." "Would you like to hear it read?" If he weakly showed the least disposition to hear it, Captain Hopkins, in a loud sonorous voice, gave him every word of it. The Captain would have read it twenty thousand times, if twenty thousand people would have heard him, one by one. I remember a certain lucious roll he gave to such phases as "The people's representatives in Parliament assembled," "Your petitioners therefore humbly approach your honorable house," "His gracious Majesty's unfortunate subjects," as if the words were something real in his mouth, and delicious to taste; Mr. Micawber, meanwhile, listening with a little of an author's vanity, and contemplating (not severely) the spikes on the opposite wall.

As I walked to and fro daily between Southwark and Blackfriars, and lounged about at meal-times in obscure streets, the stones of which may, for anything I know, be worn at this moment by my childish feet, I wonder how many of these people were wanting in the crowd that used to come filing before me in review again, to the echo of Captain Hopkin's voice! When my thoughts

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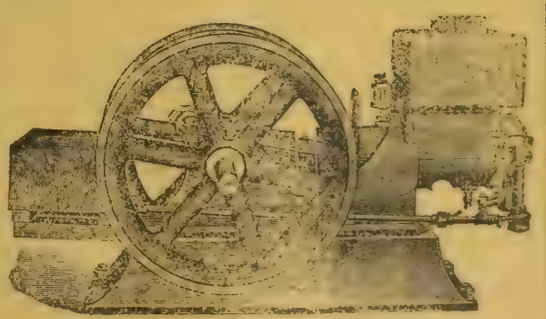

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go back now, to that slow agony of my youth, I wonder how much of the histories I invented for such people hangs like a mist of fancy over well remembered facts! When I tread the old ground, I do not wonder that I seem to see and pity, going on before me, an innocent romantic boy, making his imaginative world out of such strange experiences and sordid things.

(Continued in next issue)

The Fine Art of Visiting.

Visiting is certainly a fine art, an art both for the visitor and for the one receiving the visit.

You receive word that a certain dear friend is coming to make you a visit. It may be a near and well-be-loved relative. You look forward with pleasure to the visit; you do many things for the comfort of your guest; you work hard that you may have more leisure with your friend. She comes; you find that you love her just as much as ever and that she loves you, but, if you will allow youself to confess the truth, you are relieved and glad when the visit is all over. Who has not, sometime in her life, had just such an experiment?

This is wrong; a visit between those who are dear to each other should be a joy and if it is not one or the other has failed in the fine art of visiting.

It may be that the hostess, let us call her Mary, in her desire to have everything as nice as possible has over-reached herself. She plans more elaborate meals than usual; they are served more elaborately. It may be that she breaks into the usual routine in other ways that increase the work. All this, taken with the additional work which a guest invariably makes, means that Mary is tired most of the time and lacks leisure and a free mind. She never, somehow, gets down to that real communion with her friend that is the most precious part of a visit.

It is the old story. We take the husks and leave the kernel; we busy ourselves with the show and let the real, the vital things slip from our grasp.

Does this friend love you? Then she would be infinitely happier if she were allowed to slip into your family life as if she were one with you. Could you pay her a higher compliment than to allow her to do that? What are elaborate dinners with a tired hostess in comparison with such hospitality.

If your friend does not love you enough to appreciate such treatment, it is best that she should go to anhotel.

But there is another side to the question: Mary might not be the one at fault.

Let us put it in cold, hard words. It may be that her friend, though she loves Mary, is selfish and lazy. She really does not like to work and is not unselfish enough to be really helpful, whether she likes it or not, especially as Mary in the kindness of her heart's protest against the help. Somehow, when any real work is on hand, she is writing letters or otherwise engaged and even for the daintier kinds of work her offers of help are half-hearted or properly times—that is, to late. For such qualities in a guest no one can have anything but contempt, however much one may admire them in other respects. However, the lack of appreciation, helpfulness, and even kindliness, which this state of mind indicates strikes pretty deeply into the roots of character.

Contrast the young woman who comes into your home with the real desire to avoid making work and to be helpful in any possible way. She is welcomed and loved wherever she goes. She, however, must be on guard lest she go to far and therein comes the fine art of visiting. She must have the judgement and tact to see when Mary does not want help, for there are such times. It is possible to worry a hostess with offers of help, but this mistake is rare and easily pardoned when the motive is considered. After all the Golden Rule is just as reliable in visiting as in the other affairs of life.

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Slightly moisten the straw in which china or glass is packed. It will prevent slipping. Always put the heaviest at the bottom.

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My 86- page illustrated booklet (pocket size) was compiled by me to answer fully and correctly those questions which are asked privately by any man needing new strength and who seeks personal advice pertaining to the ailments and weaknesses he wishes to overcome. The book, fully illustrated, with photo reproductions contains much that a single or married man should know. It also fully describes my HEALTH BELT and tells how you may secure one to use in your own case, should you decide you want to use one. Remember the book is sent absolutely free, in plain, sealed envelope. Why not write for a copy today?

DR. M. F. SANDEN,
14 Yonge St., Toronto, Ont.

Dear Sirs—Please forward me your book as advertised, free.

NAME.....

ADDRESS.....

Have you talked with your neighbors about subscribing for THE MARITIME FARMER? Why not do it now? Make up as large a club of subsbribers as you can and sena them in

irons will be pushed the same way as the design is woven in the cloth. By following this method (ironing with the grain of the cloth) you will get a much higher polish.

When cleaning upholestered furniture it is often either impoesible or inconvenient to move it out-of-doors. When this is the case, place a damp cloth over the upholstery and use the clothes beater over the cloth, changing it several times during the process. The dust will adhere to the cloth and not fill the room.

When lemonade is made with cold water much of the sugar lies undissolved at the bottom of the pitcher or glass. This can be prevented by pouring a little boiling water over the sugar. When it dissolves add the lemon juice and then fill up with cold water and ice.

An ironing blanket for embroidered articles and laces may be made from a squgre of white outing flannel, and one of Turkish toweling, neatly bound together. The Turkish side is used for laces and insertions, as the loose threads in ironing are forced up through the lace, while the other side is used for embroideries.

Spots of iron rust which are so likely to be found on white dresses and aprons may be easily removed in the following way: Place a small lump of cream of tartar on the spot of iron rust, and tie up the dress goods so as to hold the cream of tartar on the spot. Do the same to all the spots of iron rust and put the clothes into the boiler. After boiling, the clothes will be perfectly white and free from spots.

Flies dislike the smell of oil of lavender, and a few drops on a bit of cloth placed in a saucer of boiling water will drive them away. Try a tin can of the mixture, or a rag with a few drops on it, hung near the top of a screen door on which the flies like to collect and see how quickly they leave.

Personal Cleanliness.

Bathing is not only a means of attaining cleanliness, but it is likewise a promotor of health and an important factor in the preseveration of beauty. It is absolutely essential to good health and good looks to keep the pores of the skin open and active so they can expel the waste matter. To brush the teeth after each meal is to follow a good rule, but with many it is not always convenient; however, nothing should interfere with the morning grooming and the thorough brushing just before going to bed. Neglect will not only cause the teeth to decay, but will make the gums weak and unhealthy. It is an excellent practice to wash the face and hands at night just before going to bed, then the face is cleaned of floating dust and particles that might cause blackheads and pimples, and the eyes are cooled and strengthened by this practice. An excellent way is to wash the face and hands with hot water and good toilet soap, then rinse with cold water in which a little borax is dissolved, as the rinsing gets rid of all suds and leaves the skin soft and white. Every morning sponge the body with tepid water to which a handful of salt and a tablespoonful of borax have been added. Use an ordinary wash-bowl, moistening a wash cloth with the borax and salt water, and dry immediately. The addition of borax will not only make the bath more thorough in its cleaning process, but has a healing effect upon the skin and helps to keep it firm and free from blemishes. This bath should take no longer than 10 minutes at most, as it must not be a scrubbing, else there will be no stimulating effects. Beginning with the morning bath, the hands should receive their first attention, and after washing and drying them carefully, press back the cuticle from the finger nails, using an old soft linen towel for the purpose, and no greater indication of refinement and gentility can be given by women than the possession of clean, well-kept hands, with pretty shaped nails and fingers.—

Dalhousie University.

HALIFAX, - Nova Scotia

FACULTY OF ARTS AND SCIENCE.
Courses leading to degrees in **Arts, Science, Music** and **Pharmacy.** Two year course in **Engineering.** Offers at Matriculation examination in September, **Mackenzie Bursary** (**$200**), and twelve **$50.00.**

SCHOLARSHIPS,
Two nominees of High Schools and Academies. Nominates every second year to **Rhodes Scholarship,** £300 annnally for three years, and in alternate years to the 1851 Exhibition Science Research Scholarship, £150 annually for two or three years.

FACULTY OF LAW.
Three year course for LL.B degree

FACULTY OF MEDICINE.
(Halifax Medicine College.)
Five year course for M. D., C. M. degree.

FACULTY OF DENTISTRY.
(Maritime Dental College)
Four year course for D. D. S. degree.

For Calendars and information apply to the Secretary of the Faculty in question.

An Important Bath Room.

Last week I saw an improvised bath room that interested me greatly. A college student had been enjoying the shower baths at the gymnasium, and when vacation came and he returned to the farm, the one thing he most missed was the bath. He plunged at once into the heavy work, and when his first day ended, tired and sweaty, he realized that a good shower and clean clothes would be more refreshing than four hours' rest in the garb wore when he left the field.

There happened to be a force pump in the well at the barn, and his urgent need sharpened his wits, and the rest was a bath room that will meet every need for the summer. And this was the way of it: a scaffold ten feet high, of old timber, on which he placed a barrel fitted with a faucet to which he attached a short piece of hose about three feet long. He took the sprinkler from a leaky sprinkling can and fastened it firmly in the end of the hose. With rough boards he built a floor and a screen on the other three sides and he fills the barrel by the hose and the force-pump. A barrel of water is enough for six good baths. As all his materials were found on the place, there was practically no expense, and the whole affair took less than half a day's labor.—N. E. Farmer.

Summer Excursion Fares via the I.C.R.

Facts and figures regarding summer vacation tours are always interesting to those who are on travel bent; and these are to be found in the booklet "Summer Excursion Fares" just issued by the Intercolonial Railway. The details of special round trips through Quebec and the Maritime Provinces are given, routes are defined and rates quoted in a systematic and comprehensive manner. The booklet will be mailed free to those who write the General Passenger Dept., Moncton, N. B.

The Way of the Quitter.

The world has little use for a quitter. The fellow who starts and backs out because the creek is up. The fellow that promises to saw wood for you Wednesday, discovers about nine o'clock there is a screw loose in the end of his saw, and sends you word Saturday that he could not come. The fellow who starts to trim the hedge, blisters his hands and decides to let it go until spring.

The boy who goes racing through his school books until he strikes participles and compound fractions, then wants to quit school and get a job. The girl who starts out to be a great musician and learns just ugh to play rag-time to beguile the fancies of some young saphead.

There is a big family of these quitters, but they are all a sorry lot. They never want a job that takes time and patience.

With the qualifications of a bill poster, they would like to earn the salary of a railroad president. Their ideal is a job that requires only two hours of easy labor each day, with Saturdays and holidays off.

You will find them scattered all up and down the road of human failure, always turning back from the handle of the plow, always complaining of their lot and the unfairness of the world.

They are clogs in the wheels, broken rails on the road, time killers, patience killers.

The only people who accomplish things in this world are those who qualify themselves in spite of bad crops, high water and measles. Who hang on to their work until failure turns to victory, whose courage rises as difficulties thicken, and whose faces are forever toward the rising sun.

It was not a bad plan, that of the Indians flinging their boys into the river, where they had to swim or drown. The best thing any parent can do for his child is to compel him to finish what he undertakes. Keep him at it, and no matter how much he cries and objects, make him do the thing he started to do. And the best thing any boy or girl can do is to do this very thing without being made to do it.

Success is a good deal in habit. There is not much difference between failure and success. Simply one quits and the other does not.

Lifters and Leaners.

There are two kinds of people on earth today;
Just two kinds of people, no more, I say;
Not the rich and the poor, for to count a man's wealth
You must know the state of his conscience and health.
Not the humble and proud, for in life's little span
Who puts on vain airs is not counted a man.
Not the happy and sad, for the swift flying years
Bring each man his laughter and each man his tears.
No! the two kinds of people on earth I mean
Are the people who lift and the people who lean.
Wherever you go you will find the world's masses
Are always divided in just the two classes.
And, oddly enough, you will find, too, I wean,
There's only one lifter to twenty who lean.
In which class are you? Afe you easing the load
Of overtaxed lifters who toil down the road?
Or are you a leaner, who lets others bear
Your portion of labor, and worry and care?

—Ella Wheeler Wilcox.

A Vital Question

What would you pay for your fence, if it were not for The Sarnia Fence Company and its Direct From Factory to Farm Method of Selling Wire Fence?

4,000,000 rods of Sarnia Fence have been sold direct to the farmers of Canada this year. If you are not a supporter of our Direct Policy you should be. Mail us a card today and we will tell you "why."

THE SARNIA FENCE CO., LIMITED
SARNIA :: CANADA

Consult the Farmer when you want to buy anything for the Farm or Dairy. . . . . .

Dr. Morse's Indian Root Pills

are just the right medicine for the children. When they are constipated —when their kidneys are out of order —when over-indulgence in some favorite food gives them indigestion —Dr. Morse's Indian Root Pills will quickly and surely put them right. Purely vegetable, they neither sicken, weaken or gripe, like harsh purgatives. Guard your children's health by always keeping a box of Dr. Morse's Indian Root Pills in the house, They

Keep the Children Well

Thou Shalt not Scold.

Scolding is often the angry setting forth of truth. Therein lies its temptation. Scolding often says something that ought to be said, but in a way in which it ought not to be said. It is true word unfitly spoken, and so is like gold apples in baskets of rough wicker-work.

Scolding is egotistical. When the Sunday school teacher scolds, he is thinking of himself, of his offended dignity, of his wounded self-love, of his wasted time and pains, of his unappreciated talents. He is not thinking sorrowfully of the harm the children are doing to themselves, their spoiled characters and the peril to their futures.

Sunday school teaching affords many provocations for scolding, because the teachers are given little authority, because the discipline is therefore ineffective, because the school room is usually crowded and poorly ventilated and because the pupils have usually made poor preparation or none at all and so are hard to interest. It is little wonder that they are often restless, mischievous, and indifferent, and deserve, if not a scolding, at least some strenuous disciplinary attention.

Scolding grows on one. In this it is like all other bad habits. It becomes easier to scold and harder to praise. It becomes easier to frown and harder to smile. It becomes easier to hold aloof from the pupils and harder to get close to them. If you want these things to happen to you, scold, and keep on scolding.

Scolding is to be avoided because it does no good. Where the matter of what is said is right but the manner wrong, it is always the manner that makes the impression rather than the matter. This is because the matter comes from the head and the manner from the heart, and everybody instinctively realizes that the heart is a truer witness than the head.

Scolding prevents the right setting forth of the truth that ought to be told. No scolder can go back to the event alone. Memory always goes with him. The pupil's sense of your injustice obliterates all sense of his own wrong-doing.

The unfailing rule for all admonition is this. Never correct save in the spirit of love. This usually means the postponement of the correction. 'John I want to see you after school.' John will spend the rest of the session wondering uneasily what the teacher is going to do. He will behave for the rest of the session and that is clear gain. You will find him in a more contrite frame of mind. There is the disgrace of being "kept" Then, he is alone with you, not bolstered up in his wrong-doing by his comrades, or impelled to defiance in order to be a hero in their eyes. If you find that even then you cannot talk with John in a spirit of love, say that it is a too serious matter, you cannot talk about it now. and arrange for John to call at your home to talk it over. If he does not come then go to his home. This postponement will still further emphasize what you finally say to John.

Scold and cold—there is a difference of only one letter. Scolding women used to be tied in a "ducking stool" and dipped into a cold pond. Scolding teachers are dipped in a bath of their pupil's cold indifference. If the children do not run after you, do not plainly admire you and love you, take warning!

One more letter off, and scold becomes old. If you scold, it is because you are in touch with young life. Get a heart of youth, and you will never scold.

Shakespeare in "The Taming of the Shrew" pictures a scold conquered by a greater scold, an obstinate woman subdued by a man of greater obstinacy. If you have a tendency to scold you probably cannot find some one to effect this cure obligingly for yo but you can cure yourself. You can persist in making all excuses you can for the culprit before you scold him. Look through his eyes first. And then and during it all, you can look through the eyes of the loving, forgiving Christ.

Summer Recipes.

String Beans, German Fashion — Remove the strings from one quart of beans. Cut each pod through twice lengthwise, then cut into two-inch lengths. After parboiling, put into the stewpan an ounce of butter, a teaspoon sugar, pepper and salt to taste. Saute a few minutes till the butter is absorbed, then add a very little stock of water, a little lemon juice, and simmer until perfectly tender.

String Beans—Snap, rather than cut with a knife, into pieces one-half inch long. Unless they are very fresh, they will be improved by lying in ice-cold water an hour or more before cooking. Throw into fast boiling water and cook rapidly, uncovered, for an hour at least; they will generally need much more Change the water at the end of the first half hour and they will season better if an ounce or two of fat salt meat is cooked with them. The water should be allowed to nearly all cook away and the remainder may be used to make a drawn butter sauce to pour over them; or they may be seasoned with only butter and salt. If the water is very hard, a bit of bicarbonate of soda as large as a pea will make them more tender.

Tomatoes, Baked or Stuffed. — There are great possibilities in the way of baked or stuffed tomatoes; they may be varied infinitely by the use of different fillings, such as corn, eggs, macaroni, rice, chopped meat; chopped celery, tomato pulp and bread crumbs make a good filling.

To stuff tomatoes with corn, choose medium, firm tomatoes, cut off the stem and scoop out most of the pulp. Cut some tender young corn from the cob, and to each cupful add one tablespoonful of butter, and salt and pepper to taste. Fill the tomato cups with this seasoned corn; place close together in a buttered baking dish and bake in a moderate oven.

Huckleberry Pudding.— One pint molasses, one tablespoon cinnamon, one teaspoon cloves, three pints berries, a little salt, one teaspoon soda dissolved in hot water, and stir into the molasses and berries till it is very light. Add flour enough to make a very stiff batter. Then add the other ingredients and steam three hours.

"I was cured of diarrhoea by one dose of Chamberlain's Colic, Cholera and Diarrhoea Remedy," writes M. E. Gebhardt, Oriole, Pa. There is nothing better. For sale by all dealers.

BACK of EVERY LOAF

You put in the oven, must be good flour or your bread will be a failure.

REGAL FLOUR

is your best guarantee of success in bread making, and if you see to it that every barrel of flour you buy bears the *REGAL* brand, you can be sure you have the *one* flour that excels in every good quality.

Buy a barrel today. try it, and if it isn't satisfactory we'll give you your money back.

The St. Lawrence Flour Mills Co., Ltd.
Montreal

Ford
THE UNIVERSAL CAR

If there were no Fords, automobiling would be like yachting--the sport of rich men. But by centering his effort upon the production of one good car, Henry Ford has brought the price down, within reason--and the easy reach of the many.

Here's the test: 300,000 Fords now in service. Runabout $675; Touring Car $750; Town Car $1000—f.o.b. Walkerville, Ont., with all equipment. Get catalogue and particulars from Ford Motor Car Company of Canada, Limited

Don't Shiver Next Winter

Have A Warm House

A COLD HOUSE cannot help being a damp house. Muscular rheumatism, la grippe, pneumonia and neuralgia are often caused by continued exposure to a cold, damp atmosphere. Install a McClary's Sunshine furnace in your home this summer and next winter you can defy the zero days. A Sunshine furnace will make your home worth living in—warm, cozy, comfortable and healthful.

The Cost of a Sunshine

The cost of a McClary's Sunshine furnace is no more, or as much, as you have often paid for an agricultural implement. Yet no agricultural implement is one half so important to your health and to the welfare of your family. A Sunshine furnace is the cheapest protection against winter sickness that you can invest your money in.

Requires Little Attention

As far as taking care of a Sunshine furnace, it's almost no trouble at all. It only takes a minute to open the wide, double feed doors and throw in two or three shovels of coal—or a big chunk of wood if you have any you wish to burn up.

Then it requires only another minute to fill up the water pan, which is conveniently and correctly placed over the feed doors. By so locating the water pan, the moisture, as it is evaporated, takes the short, direct route to the rooms and the proper humidity of the atmosphere is obtained.

No old-fashioned, back-breaking shaking to McClary's Sunshine, either. You simply "rock" a handle, to and fro, about six times, and the ashes fall into the ash pan. Then to take out the ash pan and empty is a small chore. Taking care of a Sunshine furnace requires less work than one ordinary heating stove.

And, mind you, when rocking down the ashes, no dust escapes to go up into the house and settle on and injure the furnishings. It all goes up a sure-acting dust flue, and thence up the chimney. McClary's experienced furnace builders have simply thought of every little, as well as every big thing, to make the Sunshine the cleanest, most convenient, healthful, durable and economical furnace in the world.

Fire Under Control From Upstairs

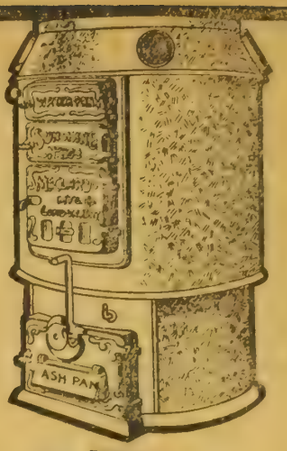
The fire, for instance, is always under control without going down cellar. By merely pulling up a chain from, say the hall on the ground floor, you can make the fire burn up briskly in a few minutes. If too warm another chain will check the fire. The only time you need go down to the Sunshine is to put in two or three shovels of coal night and morning.

Very Economical on Fuel

McClary's Sunshine is very economical on fuel. Hundreds of Sunshine owners say the Sunshine burns fully a third less coal than other furnaces they have used. Certainly, it will heat your house to your satisfaction! We, the largest stove and furnace makers in the British Empire, guarantee it.

Our installation experts will also help you and the McClary agent in your locality to plan the arrangement of your heating system. They will also co-operate in other ways to insure the proper installation of your Sunshine furnace.

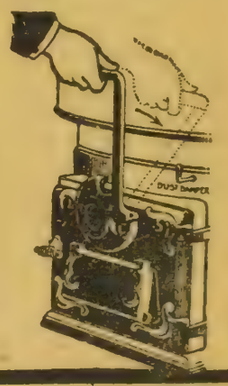
Drop a line to our nearest office for a Sunshine furnace booklet. It contains particulars about many other features of the Sunshine furnace that we could not cover in this advertisement.



Big Double Feed Doors

Filling Water Pan

McClary's Sunshine Furnace



"Rocking Down" the Ashes

LONDON TORONTO MONTREAL WINNIPEG VANCOUVER
327 ST. JOHN, N.B. HAMILTON CALGARY SASKATOON EDMONTON

FLORICULTURE.

Be careful when smoking your conservatory to take out all tender foliage that would be affected by the smoke. A plant thus abused will take a long time to recover from the shock.

The hardy roses are now blooming freshly; watch the foliage for the green slug that appears about this time and apply hellebore freely, one tablespoonful to two gallons of water. I have had several inquiries this week regarding these pests and the above is the best remedy that I know

I have been asked for a remedy for the worm that rolls up the leaves on roses and some varieties of small fruits. I know of no effective one except hand picking. Kerosene emulsion is a good thing, if you could get at the worm, but they are all so enveloped in the fine silk shat it is difficult to do so.

From now on until autumn careful attention should be given to all plants you wish to bloom in winter. As a rule they should be all kept in a vigorous growing condition and if grown through the summer in pots, should be repotted as often as the roots of the plants are matted around the ball of soil. Another important point is to keep them disbudded, i. e., pick off all flower buds as soon as they can be seen, for if you allow your plants to bloom in summer they will so exhaust their vitality that they will give few or no blooms in winter. This applies especially to roses and Carnations. Carnations intended for winter blooming, (and if given a cool and sunny position, they are one of the best plants for that purpose) should from now on until September, have every flowering shoot that runs up promptly pinched off. This induces a new vigorous growth at the base of the plant, keeping it in compact form, and it enables the plant to store up the necessary vitality for free blooming in winter. Until recently we have depended on the Italian Carnation for winter blooming, but since the introduction of the new Marquette Carnation we find that with the same treatment they bloom almost equally well in winter, but must be kept cooler.

Your Chysanthemums are now making strong growth; watch them carefully and pinch out the tender ends, As a rule never give stimulants to plants during a dry condition of the soil, whether they are growing either in open ground or in pots.

I observed this morning one plant in one of my borders showing five distinct colors of bloom on the same plant. All broken species of plants will sometimes thus sprout and some of our finest varieties are thus procured.

Blueberry Jam

A novel preserve is made by washing, weighing and thoroughly draining fresh ripe blueberries, adding to every pound of berries half a pound of sugar and half a naval orange, sliced thin, skin and all. Cook till it is a thick jam, stirring constantly to prevent burning.

Mr. W. S. Gunsalus, a farmer living near Fleming, Pa., says he used Chamberlain's Colic, Cholera and Diarrhoea Remedy in his family for fourteen years, and that he has found it to be an excellent remedy, and takes pleasure in recommending it. For sale by all dealers.

WAS TROUBLED WITH INDIGESTION FOR TEN YEARS.

Almost Despaired of Ever Getting Well.

BURDOCK BLOOD BITTERS CURED HER.

MRS. MARY MACKAY, Hunter's Mountain, N.S., writes:—"I was troubled with Indigestion for more than ten years. I tried several doctors' medicine, claiming the power to cure, but all without success. Having heard of the many cures effected by Burdock Blood Bitters, I decided to give it a trial. After taking two bottles, I was completely cured. My appetite which was very poor, is now good, and I can eat most everything without any disagreeable feelings. I can strongly recommend B.B.B. to anyone suffering from Indigestion."

BURDOCK BLOOD BITTERS is the best known remedy for all Stomach Troubles. It has been on the market for thirty-nine years, and is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

HIGH CLASS

JEWELRY

18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....**68 cents**

18k Rolled Pendants, worth $3.00, our price..... ....**99 cents**

Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....**$1.36**

Boys Watch..... .....**69 cents** nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
Box D.
Sussex, New Brunswick.

Dates to be Remembered

Nova Scotia Provincial Exhibition, Halifax, N. S., September 3 to 11, 1913.

Miramichi Exhibition, Chatham, N. B., September 23-26.

Fredericton Exhibition, Fredericton, N. B., September 15 to 20, 1913.

P. E. I. Provincial Exhibition, Charlottetown, P. E. I., September 23 to 26, 1913.

Canada Eastern Exhibition, Sherbrooke, Que., August 30 to September 6, 1913.

Canada National Exhibition, Toronto, Ont., August 23 to September 8, 1913.

Central Canada Exhibition, Ottawa, Ont., September 5 to 13, 1913.

Maritime Winter Fair, Amherst, N. S., December 8 to 11, 1913.

Fredericton Poultry Show, Fredericton, N. B., February 17 to 19, 1914.

Dominion Exhibition, Brandon, Man., July 15 to 25, 1913.

Yarmouth County Exhibition, Yarmouth, N. S., October 1, 2, 3, 1913.

Charlotte County Exhibition, St. Stephen, N. B., September 9-12, 1913.

Cape Breton Exhibition, Sydney, N. S., September 30th to October 4th, 1913.

Summer Pruning.

(Continued from page 759)

they may be just tipped to stop them. They will probably throw out a few side shoots near the top as a result, but these will be removed when the shoots are shortened in Winter.

Summer pruning is concerned chiefly with side shoots. Any of these that would be spurred back in winter may now be cut off about 4 in. or 5 in. from their base, leaving them with about five leaves. They will then be spurred back in winter. It would not be safe to spur them now, as they might start again into growth, which would spoil them for spur-making. If cut to the length suggested, it does not matter if they do grow out a bit from the end buds, as they are to be cut back in winter. Some very prolific varieties, which habitually overfruit, make quite enough natural spurs, and it may not be deemed advisable to add to their number artifically. In that case these side shoots may be cut clean out now. At any time in the summer it is permissable to cut undesirable wood clean out. Plenty of shoots will be found crowding the middle of the tree, where we do not want spurs, and these are best taken right out.

Examine particularly the leaders at the point where last year's wood was cut back last winter. In some varieties several strong shoots start from the last three or four buds. This is annoying, as it results in mop-headed branches. We want one leading shoot growing in the right direction from the end bud. The rest should be shortened ready for winter spurring as described above. When thus shortening side shoots in summer pruning, there is no need to be careful about cutting to any particular bud, as in winter pruning. Most gardeners, in fact, simply break the brittle young shoots over the blade of the knife, as this is quicker than cutting.

RESTRICTED TREES.

If the grower has any restricted trees, cordons or espaliers, he has, of course, no choice but to summer prune, as these are always crowded with such a forest of shoots as almost to obscure the fruit and prevent its colouring. These are very easily and quickly dealt with. All that is necessary is to shorten all the side shoots to about five leaves. The leaders must not be cut at all, but should be tied or nailed in the right direction.—E. Mayhew.

Quality, Style Finish and Efficiency

is what you get when you buy

A RECORD PLAIN RANGE

(Record Plain Range with Reservoir and Cast High Shelf)

Why Plain Ranges are Kitchen Favorites

Plain Ranges are made from cast iron, the quality of which cannot be surpassed for smoothness. The large flues, the corrugated top oven and a fire bridge for clearing smoke provides a large and efficient heating surface for the oven. The oven damper is placed in the smoke box and operated direct from the top of the stove. The reservoir damper is so arranged as to send the heat direct to water tank.

A range with a large fire box is economical of fuel and requires a minimum amount of attention from the busy housewife. A collar and damper is provided on the back of the oven so that a hot air pipe can be attached to the oven; and heat conducted to bathroom or chamber above.

Dyplex or flat shifting and dumping coal grates or wood grates as desired. In appearance the "Record Plain" is not excelled by any other range on the market. Tops are polished smooth which combine with the nickle trimmings to make an ornamental as well as useful addition to every kitchen in which they are installed.

Before buying elsewhere see the RECORD PLAIN

Record Foundry & Machine Co., Moncton,N.B.

Bees

Up to quite recently it was considered that in a well-ordered apiary the hives should be stood side by side and qpon the level. Recent experiments, however, tend to show that the better plan is to stand the hives at different levels. It is said that the bees have a strongly developed sense of height, and find their hives all the quicker when the hives differentiate in the matter of height of entrances. Although a level site has usually been considered the ideal, some beekeepers have had to work upon unlevel ground, and have yet been fully successful, which, although it does not prove the theory recently advanced, shows, at any rate, that a level site is not imperative.

When a prolonged wet spell occurs it will prove how necessary it is that the hives should stand upon a dry site. Hives may stand upon the bare soil—they should not be stood upon herbage of any sort—but the best surface, so far as concerns rains, is that of cinders made properly firm.

THE QUEEN BEE.

Although every sort of bee has its indispensable place in the economy of the hive, by virtue of her egg-laying the queen bee is by far the most important insect of the apiary. The less bees are handled the better, consistent with proper management, and this is true with regard to the queen, which differs from the drones and the workers in that she has sometimes to be handled individually. When the queen has to be picked up, however, she should be handled in a manner the least ,ikely to do her injury, using the thumb and forefinger and lightly, but firmly, grasping the thorax, or "shoulders."

Lift the brood frames up one by one when the qkeen is wanted. She can readily be found by the practised eye, being longer and slimmer than her subjects.

When brood foundation is fitted to frames, it should always be wired, to prevent its sagging or breaking. There are many methods of wiring in vogue.

The frames should be wired before placing in the foundation. To hold the wire, small screw-hooks may be used. These cost about twenty-five cents per gross, and are made of brass. String the wire from one to the other, according to pattern favoured. Use No. 30 wire, which may be bought in reels.

Buy good foundation, cut to size, and insert it in the frame against the wire, and embed the wire into the foundation by the use of the spur embedder, a small appliance to be heated and run along the wire as it rests against the foundation. The embedder should be hot enough to do its work, but not hot enough to melt through the foundation, a little practice soon making easy the happy medium.

During dry weather, unless water is provided by the bee-keeper, the bees may have to make special quest for water, which wastes time that could with advantage be turned to more profitable use. An excellent plan of providing water is that of fixing up a bucket or small barrel, keeping it filled, and by means of a tap permitting the water to drip—the more slowly the better, so long as regularly—upon a tile or a piece of sand-

stone. The supply should stand in the shade, and be quite near to the hives. The top of bucket or barrel should be securely closed after being filled, so that the insects may not attempt to reach the water in that direction. By this plan the water is kept fresh, cool, and sweet, and there is always water available without any risk of the bees being drowned.

Remington—UMC Shot Shells to be Made in Canada

Canadian endorsement of quality in loaded shot shells has brought the Remington Arms-Union Metallic Cartridge Company across the border with the first ammunition factory to be built in this country by United States manufacturers to supply this market. This big arms and ammunition concern, now nearing its one hundredth year of business activity, has its principal factories at Bridgeport, Conn., U. S. A., where ammunition is made, and at Illion, N. Y., U. S. A., the home of modern arms making. Up to this year the steadily increasing Remington business in Canada has been handled from the home factories but of late our dealers and sportsmen have made the demand so strong that early in 1913 the company's Executive Board decided to build a branch factory to this side of the line. Windsor, Ontario, offered advantages as a central distributing point and as a skilled labor market and early in 1913 a factory site consisting of over one hundred acres was purchased there.

The problem then was to rush the plant to early completion and install an equipment capable of producing ammunition of the same high quality demanded in the strict "home factory" inspection. The order was given to spare no expense in providing for the expeditious filling of the unusually heavy orders of the year. A large force of workmen was recruited and five months from the day the first ground was broken Windsor boasted a strictly modern ammunition factory equipped with the latest improved machinery, a ballistic range and chronograph for testing penetration, velocity, pattern, etc., together with powder magazines and storage warehouses. Builders who watched the seemingly magical creation of the splendid plant in all its completeness claim that a remarkable record was made in the erection and installation work.

Two railroads have built switches to the factory door and there is a direct connection with the lake routes so that every facility is afforded for prompt shipments. Deliveries of the famous Arrow, Nitro Club and New Club speed shells are already being made from the new factory.

The Remington-UMC Canadian organization has been generally strengthened by the removal of the office of the General Sales Manager for Canada to the Windsor factory enabling the sales and production department to keep in close touch. The technical work of manufacture is in charge of one of the most competent ballistic experts from the parent factory at Bridgeport.

Needless to say, jobbers and dealers in arms and ammunition in the Dominion join with the shooters from coast to coast in welcoming the makers of world-standard firearms and ammunition to our front door.

Breaking The Kicking Habit

As the result of an inquiry as to means of breaking the kicking habit in a horse, the Breeders' Gazette recently published a number of answers received from practical horsemen throughout the U. S. Many of the answers put forward the very same argument that there is prartically no cure for this aggravating habit. One writer from Kansas, however, has more faith, and explains a device of his own invention which he claims has never failed to break even old hardened kickers. The description follows:—"I attach the regular kicking strap to the crupper about 4 inches from the root of the tail, so that it will always stay in place. Then I fasten two large rings to the shafts where the kicking straps are usually fastened and pass the ends of the kicking strap through them. Then attach another strap or even a rope to one kicking strap end and pass the free end up through the overdraw, which should be extra strong. Fasten the other end to the corresponding end of the kicking strap on the other side. Shorten the overdraw so that the animals head will be a little higher than usual. Now every time the animal kicks it will jerk its head into the air, and a few such lessons will be sufficient to break the most ardent kicker."

St. Stephen Exhibition.

One of tne most progressive Agricultural Societies in the Maritime Provinces is the Charlotte County Agricultural Society under whose auspices the Charlotte County Exhibition, St. Stephen, N. B. is annually held. They purpose holding their exhibition this year on September 9th, 10th, 11th and 12.

The prize list just published is full of tempting premiums, well worthy the attention of each and every agriculturist in Charlotte County. This year the exhibition promises to be larger than any of its predessors. In addition to the agricultural exhibits there will be a fish exhibit, to include fish in all stages, such as canned, smoked, dried, cured etc. The government is also sending an exhibit from the Biological Station. New buildings are being erected to accommodate the exhibits. See St. phen Fair, exhibits if you can. If you cannot exhibit encourage it by your presence.

The safest horses to breed are those that are the scarcest in market and bring a good, round peice.

TRADE MARK
Wilkinson
REGISTERED
PNEUMATIC
ENSILAGE
and STRAW CUTTERS

Our Climax "A" mounted is the only successful combination machine of this capacity on the market. It will cut and deliver green corn into the highest silo, or dry straw or hay into the mow. 13" mouth, rolls raise 8 inches and set close to knives, making solid compact cutting surface. Requires less power than any other of same capacity. No lost power. Direct pneumatic delivery, no worm gears or special blower attachment. Knife wheel also carries the fans. No lodging on wheel arms, everything cut, wheel always in balance. Steel fan-case. Supplied with pipe enough to reach any silo, also pipe rock, tools, etc. Ask your dealer about them and write for catalog. We also make a "B" machine unmounted.

THE BATEMAN-WILKINSON CO.
LIMITED. 438 Campbell Avenue, Toronto, Ontario.

¶An Advertisement in the Maritime Farmer will sell your surplus stock--Try it.

Make Your Coal Oil Lamp Your Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
IF
GIVEN
A
FAIR
TRIAL

EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer
SUSSEX, N. B.

We do not sell these burners but each subscriber may get two beside one we furnish free by sending 35 cents for each additional one wanted.

A Study in Sheep.

From the very earliest ages sheep raising has been one of the most important and profitable industries engaging the attention of mankind. Until the more recent centuries they were kept for the wool and milk which they furnished rather than for their flesh. The improvement of their flesh-producing properties received but little attention prior to the eighteenth century. The improvement of the fleece engaged the attention of mankind at a very early period.

Woolen goods were manufactured in Asia at least 2000 years before the christian era. While Rome was yet a republic, the fine wools of Italy were improved to a degree unexcelled by us at the present day.

The improvement of fleece first seriously engaged the attention of the United States. The object was to enable them to manufacture a fine class of goods for home consumption. The breed introduced to enable them to attain this end was the Spanish merino. The people of Canada and Great Britain have rather sought improvement in the carcass. They have attained this end largely through selection, crossing and improved keeping, and in realizing it they have in every instance effected improvement in the wool.

FIRST GREAT IMPROVER OF SHEEP BREEDS.

Robert Bakewell, of Dishley Hall, Leicestershire, was the first great improver of the modern breeds of sheep. He began this work about 1760, and originated what is now known as the New or Improved Leicester breed. The material chosen by him was taken from the Dishley or old Leicester breed.

IMPROAEMEGTS SOUGHT.

The improvements he sought were more perfect symmetry, appitude to fatten, early maturity, smaller bone and improved in quality, an increased quantity of improved flesh and a diminution in the quantity of the offal. In accomplishing these objects he also incidentally secured a larger quantity of more valuable wool. He effected improvement through the selection of the most perfect specimens of the medium types, judiciously crossed and intercrossed for a long term of years.

The aim at the present time is to improve the mutton qualities of sheep now in this country, and the means more commonly resorted to in effecting this improvement include—Crossing successfully upon these rams of one or other of the improved mutton breeds; selecting with much care breeding stock from the progeny; and giving better food and providing better shelter.

Nearly all the improved breeds now in Canada were originally imported from Great Britain, the country where they originated. They are sometimes classified as the heavy breeds, the down breeds and the mountain breeds. This classification is not sufficiently concise or complete. A more common classification is based upon the character of the wool.

The principal breeds imported into Canada may be classified as fine wooled, medium wooled and coarse wooled. Of these the fine wooled breeds are the American Merino, the Delane Merino and the Rambouillet, fine probably in the order named. The medium or middle wooled breeds are the Southdown, Tunis, Dorset, Shropshire, Cheviot, Suffolk Down, Hampshire Down and Oxford Down. The coarse wooled breeds are the Leicester, Lincoln, and Cotswold.

The influences of climate and food produce variations in all breeds.

Inefficiency of Doing Farm Work Expensive.

(Continued from page 757)

vity. Even the protecting shades of a friendly tree in summer is an aid to saving farm machinery. It is not altogether getting wet that injures wood and paint; getting dry in the heat of a mid-summer sun is also injurious. Protected machinery requires less energy to operate than that exposed to the action of the elements. Listen, Mr. Farmer: The average life of farm machinery is placed authentically at seven years, and that of housed machinery at ten—three years in favor of housed machinery as against farm machinery given average treatment. A tool house and housed tools, when not in active service, pays in dollars and cents in the life of farm machinery, to say nothing of saved horse energy, feed and man time (money).

"A farmer doesn't feel the loss of a dollar's worth of time, but if he had to dig up the cash and pay for it at ruling prices every time there was such a loss from the causes named he might run out of cash sometimes."

Kerry Hill Sheep.

This breed is a native of Montgomeryshire, and held in very high repute in many parts of Wales, while it is finding considerable support in English counties adjoining the border. The animals are hardy and not so much disposed to wander as not so uch disposed to wander as other sheep kept in hilly districts. The wool is of excellent quality, and measures for the improvement of the type and for remedying a certain lack of symmetry, of which they have been accused have been in progress for a considerable time. The breed is one of great utility, and has been used with considerable success for crossing purposes. The great centre for the disposal of Kerry Hill sheep is at the village of Kerry in Montgomeryshire, where a sale takes place every September.

Canadian Newspapers are Increasing

Over 100 new papers started io 1912

We have just received from the publishers, A. McKim, Limited, Montreal & Toronto, a copy of the 1913 edition to their Canadian Newspaper Directory. This work shows that within the last year over one hundred new papers have started to publish in the Dominion. In fact so quickly is our Canadian Newspaper field spreading out that A. McKim, Limited, have decided that it will be necessary in future to publish the Canadian Newspaper Directory annually instead of biennially as before. This Canadian Newspaper Directory gives full particulars of practically every publication in Canada, and is intended as a guide to advertisers, in selecting papers best suited to their requirements.

The work before us is most comprehensive, and gives the population of every newspaper town and the circulation of practically every paper in the Dominion. In all it describes 1,688 publications issued in Canada and Newfoundland, of these 152 are daily, 1,281 weekly or semi-weel 232 monthly and 23 published less frequently.

This issue also contains a list of the principal British publications, which will be of much value to the many Canadian firms now advertisin the Old Country.

The firm of A. McKim, Limited, who are easily the leaders in the Advertising business in Canada are to be congratulated upon the splendid service rendered both to publisher and advertiser through this very com-

OUR VALUES

are summed up briefly under the following captions:

Style and Quality

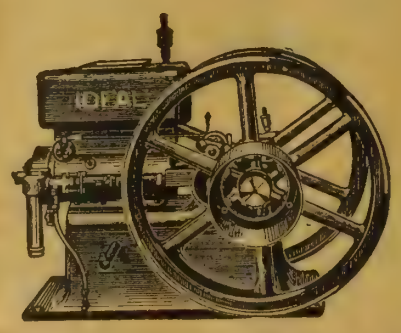
Our goods are made to suit you no matter what your occupation may be or what they are needed for.

We are shoemakers of many years experience and understand the needs of this country.

The Robert Taylor Co., Limited
HALIFAX, N. S.

"Ideal" Gas and Gasoline Engines

1 1-2 To 50 H. P.



Stationary, Mounted and Traction

We have the largest up-to-date engine factory in Canada and manufacture the most complete line.

Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
Concrete Mixers and Water Boxes

Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.
A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

plete Directory. The price of the work delivered—anywhere is $2.00 per copy.

A Summer Paradise.

The unique series of log cabins with main lodge that has been erected the past year by the Grand Trunk system on Smoke Lake in the Algonquin National Park of Ontario are now in operation.

The Camp is built entirely of cedar logs, has accommodation in the several cabins and the main lodge for 70 people, is plainly but comfortably furnished, bathrooms in each cabin, with hot and cold water and is situated in the centre of one of the finest fishing districts in America.

The camp is run in connection with the Highland Inn, the Grand Trunk Hotel, seven miles distant and guests are able to reach their destination from Algonquin Park station either by carriage or by canoe.

The altitude of the territory is 2,000 feet above sea level.

Write to the Manager of the Highland Inn, either for rooms at the hotel or the camp at an early date, addressing him at Algonquin Park Station, Ontario.

The Proper Stacking of Alfalfa

The heating and burning of alfalfa hay in the stack may be avoided by proper curing. Sometimes weather conditions make it almost impossible to put the hay in the stack in good condition, but usually the mischief is done by water in the stem of the plant.

A comparison will show why this water did not really cure out of the stems. If a tree is cut down on a cool, cloudy day, the leaves remain green and fresh for some time. They take the water from the trunk and pass it off into the atmosphere. If the weather is reasonably cool for a few days, the water will be all taken out of the tree.

Now, if the tree is cut down on a hot, sultry day, the leaves will dry up and fall off. The water is still in the trunk of the tree, and there is no way for it to get out quickly. It is the same with alfalfa. If the sun is so hot that the leaves are quickly shriveled, the stem will dry out very slowly. Several alfalfa stacks near here have burned down, and in every case, improper curing of the hay before stacking seemed to be the cause.

When it is impossible to wring water out of the hay, says Professor Leidigh, it is dry enough to stack. The best way to cure hay is to rake it into small windrows and let it dry out slowly. If the ground is damp, or if the air is very moist, the windrows must be turned frequently to expose all the hay to the sun.

Hay often heats in the stack because it is rained on, or because it absorbs moisture from the ground. Not less than $5 to $10 worth of hay is spoiled on the top and bottom of a 25-foot stack of alfalfa, put up in the usual way. This loss may be avoided by stacking on a foundation of poles, or under sheds. The money saved on a few stacks will pay for the shed.

Opinions differ on just how much the feeding value of alfalfa hay is affected by heating. Some argue that while it lowers the feeding value it improves the taste. Cattle usually eat brown and black alfalfa with more relish than they do the bright, green hay.

The proper time to cut the hay is when it is one-tenth in bloom. If it has made a rank growth and is very succulent, it is better to let it stand a few days longer before cutting. The surplus water will in this way be given a chance to pass off.—Kansas Agricultural College.

RU-BER-OID
TRADE MARK REGISTERED

Lessens Fire Risks—Cuts Down Insurance

Fire Insurance Companies rate RU-BER-OID Roofing as "First-Class", and insure at the "base" or lowest rate buildings covered with it. RU-BER-OID will not catch fire from flying cinders or burning brands, and the one-piece, air-tight, fire-resisting RU-BER-OID Roof helps to smother a fire starting within.

KA-LOR-OID (Colored RU-BER-OID) has the same fire-resisting qualities, and in its soft, permanent shades of Red and Green it makes most attractive roofs. 109

ROOFING

Look for this label on every bag

IT means *best quality—tested* quality — *full measure* and *thorough satisfaction.*

It is on every bag of

CANADA CEMENT COMPANY LIMITED
PORTLAND
CANADA
CEMENT
MONTREAL

CANADA Portland CEMENT

UNLESS you have facilities for testing cement, you must depend upon the manufacturer for Cement that is reliable — Every car of Canada Cement is thoroughly *tested,* and unless it passes every test it is not allowed to leave the mill.

You can *depend* upon Canada Cement.

Be sure you get it.

Canada Cement Company Limited, Montreal

There is a Canada Cement dealer in your neighborhood. If you do not know him, ask us for his name.

Write our Information Bureau for a free copy of the 160 page book "What the Farmer Can Do With Concrete."

Tar Weakens Rope

Rope is often tarred to protect it from the weather. This is a somewhat doubtful practice, as the acid in the tar weakens the rope to such an extent that engineers estimate tarred rope to be only two-thirds as strong as clean, new rope. No kind of oil or other preparation has so far been found that will not injure the rope, except tallow. Tallow and graphite are used in making transmission rope, and for lubricating it when in use.

"ORANGE LILY SAVED MY LIFE"

These words or expressions having the same meaning are contained in hundreds of the letters I have received during the past year. Many were from women who had suffered agonies from falling of womb; others from women who had escaped dangerous surgical operations, as the tumors and ulcers had been removed by the action of Orange Lily; and others who had suffered from suppressed menstruation, leucorrhoea, painful periods, etc. For all these and the other troubles known in general as Women's Disorders, Orange Lily furnishes a positive scientific, never-failing cure. It is applied direct to the suffering organs, and its operation is certain and beneficial. As a trial actually proves its merit, I hereby offer to send, absolutely free, a box worth 50c., sufficient for ten days' treatment, to every suffering woman who will write for it. Enclose 3 stamps, MRS. FRANCES E. CURRAH, Windsor, Ont.

For Sale By Leading Druggists Everywhere

CORRECTION

In printing the Halifax Exhibition Prize List an error was made which was not noticed until same was completed.

"In classes 19 to 22 Dairy Cattle the words "or calf" in section 8 to be struck out."

The corrected readings should be: ***Sec. 8 Cow 3 years old, in milk 1st, $15.00; 2nd, $12.00; 3rd, $8.00.***

Reduced Prices of Eggs

For the months of June, July and August only we will sell White Wyandotte, Columbian Wyandotte and S. C. White Leghorn eggs at $1.25 per 15; $3 for 50; $5 for 100. For Light Brahma eggs $2 for 15; $3 for 30. Address,

Michael K. Boyer, Box 27,
Atlantic Co., New Jersey.

1870 1913

Mumford Bros.

PRODUCE COMMISSION MERCHANTS

141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

Holstein Bulls For Sale

We have for sale a six weeks old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
Loch Lomond West Nova Scotia

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

C. C. H EATON,
Canard, N. S.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months. A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.S

THE ADVERTISING PAGES of the Maritime Farmer will help you to get the most value for you money.

Mature or Immature Dams.

In regard to a question on the relative merits of the first bull calf as a sire, I know of no experiments having been conducted to demonstrate whether the bull which is a first calf is in any way inferior on that account. The Illinois dairy department has made considerable study of the advanced registry of the Holstein-and Guernsey records and is unable to find any data which would throw any further light upon the question beyond the bare statement of Superintendent Gardner of the Holstein-Friesian association that a cow would never produce 40 pounds of butter in a week unless she had five generations of mature ancestors. This assertion is not supported by evidence. Inassertion is not supported by evidence. Indeed our Professor Fraser writes that a Holstein cow has recently produced 42 pounds of butter in a week, and about half of her ancestors within five generations were under maturity, and many of them were two-year-olds.

Breeders do not discriminate against a first calf so far as I know, excepting in the sense that the value of a dairy sire depends very much upon the record his dam has made, and any sale of that sire before the record has been made would be at a much lower figure than for an equally good calf from a dam with a record. The price would be lower than asked for the same or different animal after the dam has made a record. Further than this I know of no discrimination against the first calf other than the popular notion that the first-born is not so vigorous as are those of later birth.—Prof. E. Davenport, Illinois University, in the Breeders' Gazette.

One Cent a Word.

This department is one of the most valuable in the MARITIME FARMER. At a cost of only 1 cent a word, you can advertise anything you wish to buy, sell or exchange. The aderess must be counted as part of the advertisement and each initial or a number counts as one word. Cash must accompany each order and advertisement must have address on, as we cannot forward replies sent to this office. Copy must be received not later than Friday before the date of issue, which will always be found on the editorial page of the proceeding issle. No black faced type or display of any kind will be allowed under this head, thus making a small add as noticeable as a large one. The rate for this column is one cent a word, each insertion. MARITIME FARMER, St. John, N. B.

FOR SALE—Pure bred Holstein bull, 4 years old. A bargain for quick sale. F. W. NIXON, Lower Brighton, N. B.

FOR SALE—Collie puppies, bred from heel driving stock. Further particulars apply to GEO. W. AIKEN, P. O. Box 131, Fredericton, N.B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

WANTED—The name and addrees of the party who mailed Postal Note No. H. 998512 at Moncton, N. B., on March 15th, so we may give proper credit for same.—THE MARITIME FARMER, Sussex, N. B.

FOR SALE—Three pure brcd registered Holstein bulls, 9, 5 and 3 months old. These bulls are from cows kept for the dollars they can earn. Milk tested and weighed. Write for particulars and prices. J. D. FRIER, Sussex, N. B,

BROOKLAND'S FARM SHROPSHIRES FOR Sale, 6 head, all reg. or eligible in the A. S. R. Asso., 4 were sired by a Dryden ram, they are dandy ones. $75 takes the lot. Address the Manager, H. McDONALD, French River, N. S.

WANTED—A willing reliable man for general farm work including milking. Wages for summer season twenty-five dollars per month with board, steady work for satisfactory man. CHAS. PETERS, Elmhurst, Kings Co., N. B.

We have for sale one rebuilt engine 4-5 h. p., One rebuilt engine 3 1-2 h. p., One rebuilt engine 4 1-2 h. p. These engines are in first class working order and will be sold cheap. The SUSSEX MOTOR CO., Ltd., Sussex, N. B.

Sample Gasolene Engines at Special Prices.—1 1-2, 3 1-2 and 6 h. p. sizes. They have been only slightly used. They will be adjusted and in perfect condition and just like new before leaving factory. Prices and further particulars on request. THE PAGE WIRE FENCE COMPANY, LIMITED, Walkerville, Ontario.

100-Acre Lake Farm Equipped Near College City

Borders beautiful lake; 35 acres rich machine-worked tillage; pasture for 12 cows; 25 acres good woodlot, a valnable asset to the farm; good 7-room painted house; two 60-ft. barns; 5-room cottage on lake front lets for $1 per day; 9 row boats included are money-makers in season; because of owner's other business an immediate sale is necessary and 6 choicc cows, 4 heifers, bull, horse, hogs, poultry, full line farm machinery thrown in; price only $2700, part cash, easy terms; for all details and traveling instructions, see page 15, our "Mammoth 75-Page Farm Catalogue No. 36"; beautifully illustrated and filled with a wonderful assortment of money-making farms throughout N. S. and the N. E. States; send today for your free copy, it will save you lots of time and money. Box No. 373, Sussex, N. B.

Bargains in Poultry

I have a bunch of nice yearling Single Comb Rhode Island hens I am selling now for $1.00 each, will make splendid stock to start a flock, nice turkeys and some exceptionally fine grey African Geese for fall delivery.

Sarah E. Moses Smith,
Woodward's Cove, N. B.

Seven Guernsey Bulls For Sale

I have seven Guernsey bulls from cows of exceptional milking qualities. Parties wishing high class stock for dairy purposes, should write for description and prices.

John N. Chute, Berwick, N. S.

HIGHLAND VIEW GUERNSEYS

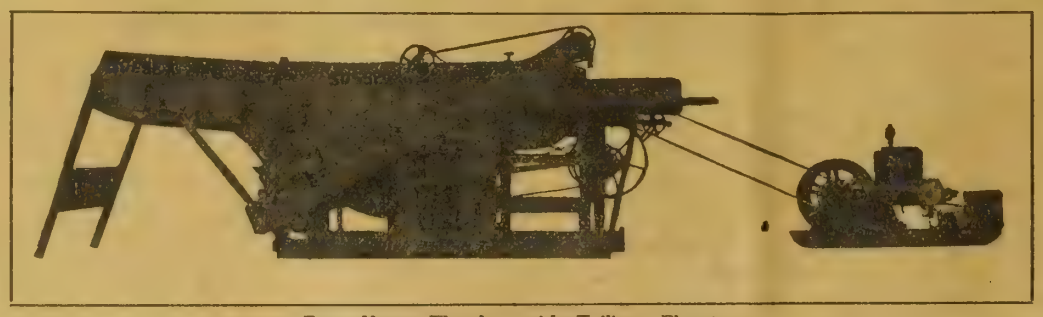
We have very little to sell, but what we have got is the best, it is a bull calf six weeks old, out "Beauty Sue of Willow" (a cow purchased from Roper Bros.) and sired by the famous "Golden Opinion," Write for price.

R. R. BLACK, Amherst, N. S.

Harvest Time is Here

With a Bumper Crop

What About Your Threshing Facilities?



Four Horse Thresher with Tailings Elevator.

If you have a lot of grain to thresh for yourself or, if you want to "Make Money" threshing grain for other people, it will pay you to buy one of our **Little Giant Threshing Machines.**

Built in one, two, four and eight horse power sizes.

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Vol. 18. SUSSEX, N. B., AUGUST 26, 1913 No. 22

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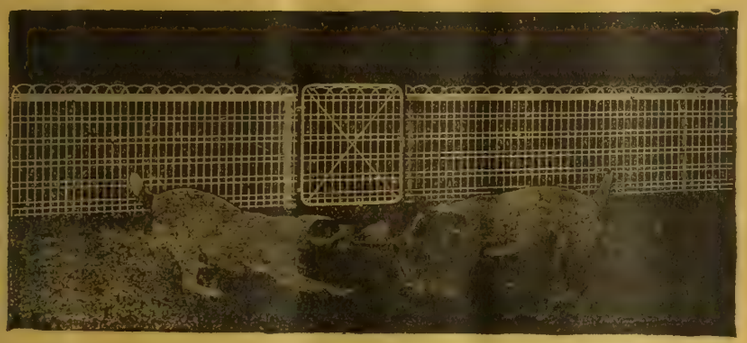

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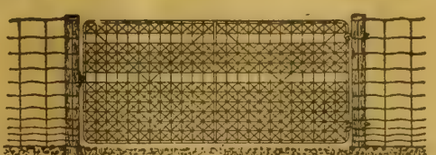

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B T Steel Stalls Uninjured

Two years ago a barn was built on the Boys' Farm & Training School, Shawville, P.Q. and fitted with 30 BT Steel Stalls and Stanchions.

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Mr. Mathews, Principal of the School wrote us: "I am very glad I put in your Steel Stalls. One Dollar makes them as good as ever after the fire."

The barn was rebuilt and the same Steel Stalls used again.

We wrote for photos of the barn in July of this year, and received the letter, copy of which appears below.

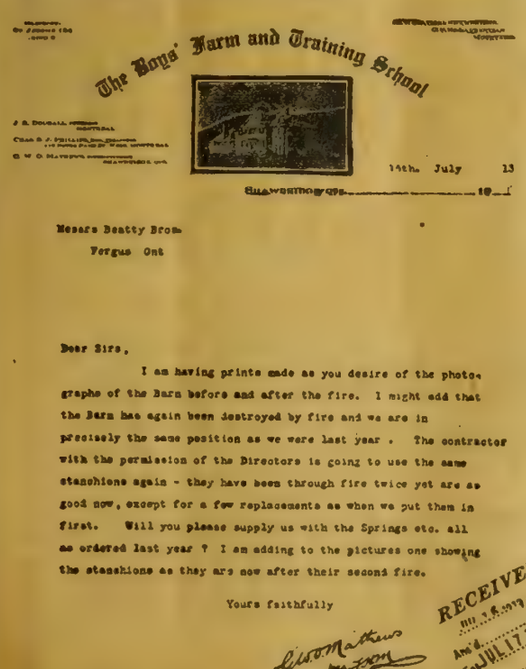
This letter and the photo tell the story better than words. They prove beyond question, that the BT Steel Stalls are fireproof.

BT Steel Stalls, Stanchions, Pens, etc.

Burned to the ground a second time, and again the BT Steel Stalls come through uninjured. One Dollar, to cover the cost of a few springs make them as good as new after the second fire.

And these same stalls, after passing through two fires, are being used again in the new barn.

READ THE PROOF BELOW.



The Boys' Farm and Training School

14th. July 13

Messrs Beatty Bros.
Fergus Ont

Dear Sirs,

I am having prints made as you desire of the photographs of the Barn before and after the fire. I might add that the Barn has again been destroyed by fire and we are in precisely the same position as we were last year. The contractor with the permission of the Directors is going to use the same stanchions again - they have been through fire twice yet are as good now, except for a few replacements as when we put them in first. Will you please supply us with the Springs etc. all as ordered last year? I am adding to the pictures one showing the stanchions as they are now after their second fire.

Yours faithfully

Glen Mathews

RECEIVED JUL 17 1913

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We have made a special study of Dairy Barns, for years, and believe we can give you valuable advice about the most economical layout for your barn.

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When will you start?.....

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Look up the nearest DE LAVAL agent **at once,** or drop us a line and we will have him **look you up.**

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Leading dairymen also testify that the ***Ideal Green Feed Silo*** can be depended upon to give entire satisfaction. It has proved its worth by years of use upon Canadian farms.

The materials and construction throughout of the ***Ideal Green Feed Silos*** are the very best, and everyone contemplating the erection of a silo this year will find it to his advantage to get our specifications and prices before contracting for the erection of a silo.

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Official Organ of The Farmers' and Dairymen's Association of New Brunswick, The Nova Scotia Farmers' Association, The Nova Scotia, New Brunswick and P. E. Island Fruit Growers' Associations, The Maritime Stock Breeders' Association, The Maritime Bee-Keepers' Association and The Newfoundland Agricultural Board.

Volume 18. SUSSEX, NEW BRUNSWICK, AUGUST 26, 1913. Number 22.

THE PRE-COOLING OF FRUIT

By Madison Cooper, in Cold

THE "Pre-Cooling of Fruit" is a matter of much interest to a great many of the readers of the Maritime Farmer: The following article from the pen of Madison Cooper, in Cold Magazine will be read with much interest by readers, who are interested in the shipping of apples, etc. While the article in question discusses the pre-cooling of some of the more tender fruits, the principles involved may be adapted to the shipping of apples.

OUTLINE.

The term "pre-cooling as applied to fruit means the process of rapidly and permanently reducing the temperature of the fruit immediately after picking and before it is put into cold storage proper or loaded into cars for transportation. Fruit when removed from the tree immediately becomes a substance without life, and the processes of decay are at once started and continue more or less rapidly during the natural history of the fruit, depending upon the temperature. With the softer fruits, especially as represented by peaches, which form an important article of commerce, it is of the utmost importance that the heat be taken out of the fruit promptly when picked in order to transport it for several days to market in prime condition. Cooling is accomplished in various ways, which will be described further on in this article either by mechanical refrigerating methods or by the use of ice or ice and salt. Pre-cooling is necessary mostly because the so-called refrigerator cars which are largely in use are not equipped with sufficient cooling capacity to take the heat out of the goods after loading into the cars.

ADVANTAGES OF PRE-COOLING.

It has been demonstrated by actual tests by the representatives of the U. S. Department of Agriculture that warm fruit loaded into a refrigerator car required from three to four days to reach a temperature of 45 degrees F., and even then the fruit in the car was not uniformly cooled, that in the top of the car being from 10 degrees to 25 degrees higher in temperature than that located at the floor and near the ice bunkers. During this period of three or four days the high temperature of fruit and the moisture abd gases in the car result in conditions which promote decay and rapid deterioration. Fruit slightly blemished or injured in picking under these conditions will on its arrival in the market show up in poor condition and be unsalable at the highest market price. It is claimed that a loss of two million dollars has resulted to the citrus fruit growers of the Pacific Coast in one season through failure to properly cool and transport their product to the ultimate consuming market. This is the shipper's viewpoint. From the viewpoint of the transportation companies they are interested in pre-cooling from the fact that an ordinary refrigerator car as generally loaded will transport only about 400 boxes of oranges, whereas the same car loaded with fruit properly pre-cooled may hold from 550 to 600 boxes. More will be said on this score in connection with suggestions for shipping oranges which have been pre-cooled before shipment.

Prior to the year 1905 the peach growers of Georgia and California were unable to ship ripe peaches in refrigerator cars to distant markets without incurring heavy losses because of over-ripening and decay during transit. Thr same trouble was experienced more or less with California oranges and grapes, and other products of lesser importance have come in for their share of losses and unsatisfactory results. Pre-cooling where properly applied will result in saving a greater part of the losses which have heretofore been encountered, but necessarily pre-cooling will not take the place of care and common sense and experience and skill in the handling of any perishable product. Pre-cooling is only one of the steps necessary to attain an approximately perfect result in giving the ultimate consumer a first class quality of fruit. What is said above should not be construed as meaning that pre-cooling facilities are now available to fruit shippers when needed. Such is far from the case, and as a matter of fact, pre-cooling is only just beginning, and probably not one-tenth of the fruit shipped to market is subject to adequate pre-cooling conditions.

METHODS OF PRE-COOLING.

There are two general methods of pre-cooling in use:
First—The car pre-cooling method, and
Second—The warehouse pre-cooling method.
Pre-cooling fruit in cars after loading has been advocated and put forward by the transportation companies to a considerable extent, and they have erected some very large and expensive pre-cooling plants for this purpose. No doubt they have been influenced in this by the control which this would give them of the business as well as the revenue which would result. It is the positive opinion of the author, however, that this method is not theoretically correct, nor is it practically efficient, nor is it likely to come into general use. The disadvantages of this method are so great as compared with the warehouse method of cooling that it will doubtless fall into disuse, and those plants which have already been erected for this purpose will probably be put to other uses.

CAR PRE-COOLING.

Car cooling is accomplished by setting the cars loaded with fruit on a side-track adjacent to the cooling p ant. Cold air ducts or chutes are attached to the trap doors through which ice is loaded into the ice bunker, and in some cases the cold air ducts are attached to the doors of the car. Suitable cold air and return warm ducts are provided. A fan circulates the cold air at a low temperature rapidly through the ducts which results in circulation of the air through the car removing the heat to a coil room or bunker room containing refrigerated pipe coils where it is there absorbed, and the air after being cooled is again sent on its mission of cooling. This results in a very constant cooling or chilling, but it may be said that the fruit is not uniformly cooled throughout the car by this method, as it is not possible with ordinary waste of loading to secure a uniform flow of air throughout the body of goods in the car. Some very remarkable quick cooling results have been obtained by this method of cooling, the temperature being reduced from that of the ordinary outside air, say 80 degrees to 90 degrees F. down to 35 degrees or 40 degrees F. in from one to three hours. Very rapid cooling is absolutely necessary with this method, for the reason that it i not permissible for obvious practical reasons to have loaded cars standing on sidetrack for anv considerable length of time. A rapid cooling or chilling of fruit is positively detrimental to its quality, and it is one of the reasons why car cooling cannot produce as perfect results as may be had with warehouse cooling. Added to this the lack of uniformity in cooling as above suggested, and added still again to this the fact that the cars may stand on the siding for some hours waiting their turn at the pre-cooling plant, it may be seen that car cooling, practically, is a very difficult thing to work out, to say nothing of the inferior cooling results secured.

A car pre-cooling plant must b equipped relatively with a very large refrigerating capacity in order to accomplish the very rapid cooling required on account of the limited time available. This means a very high first cost for a plant of this type, and the construction of numerous plants at points where but a few cars are to be colled is impracticable for this reason. The relative high cost of the machinery required and the short time each day that this machinery can be used from a commercial standpoint makes the car pre-cooling plant a difficult problem. If, as has already been established at several places, it is attempted to concentrate the car cooling plants at chief shipping points, the delay and additional cost of switching the cars to such plants, is a further disadvantage. There are other practical objections to car cooling also, and the difficulty of attaching the removable ducts to the cars without much loss of refrigeration due to leakage of cold air, has nnt been overcome.

WAREHOUSE PRE-COOLING.

Pre-cooling rooms arranged for this purpose need not be essentially different than regular cold storage rooms except that it is desirable to take the heat out of the fruit as rapidly as practical, and therefore, a larger refrigerating capacity is necessary and a fan system of air circulation desirable although not absolutely necessary. In warehouse pre-cooling the time element is not so important, and the fruit may be advantageously kept in storage under refrigeration for several days if necessary. Three days or 72 hours is considered correct by this method for citrus fruits and the longer keeping varieties, and 24 to 48 hours for peaches and softer fruits. A reasonable length of time should be taken for pre-cooling because a sudden cooling or chilling of warm fruit means a rapid change in its cell structure and this hastens deterioration. Therefore, the longer period practically that is consumed in fruit pre-cooling,

(Continued on page 790.)

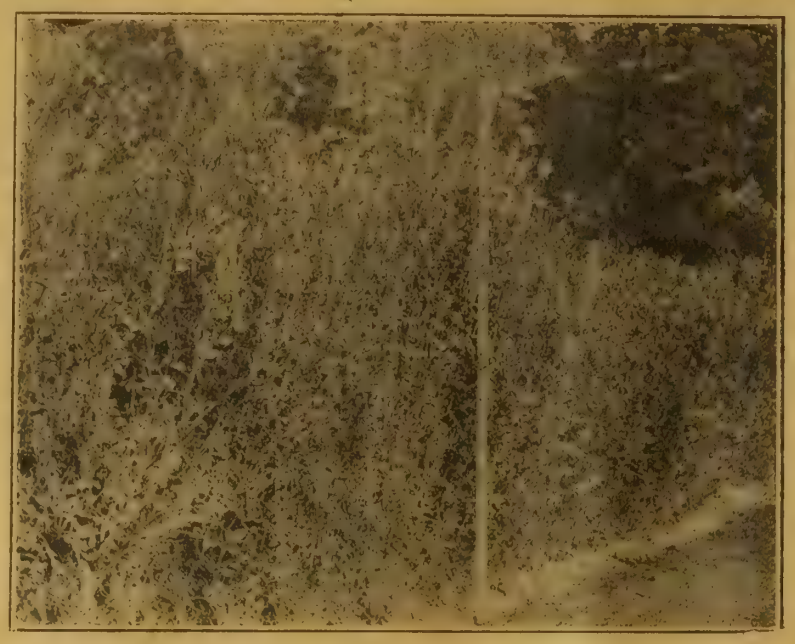
Alfalfa Growing in New Brunswick.

Government Will Conduct Cultural Propaganda.

When Mr. C. W. McDougall was appointed to take up the work of dairy Superintendent for the Province of New Brunswick, he set to work to ascertain in what way he could best promote the dairy industry of the province.

Being a keen observer he soon discovered that thousands of dollars were annually sent out of the country for the purchase of feeds, a great deal of which might be grown at home. Naturally he turned his attention to alfalfa and corn growing. It had previously been demonstrated that during favorable seasons corn could be profitably grown and siloed in New Brunswick. Early frosts, however, had been known to cause almostt a total loss of the corn crop, in some years, and consequently our fatmers had paid more attention to turnip growing, which almost invariably gives bountiful harvests.

A plot of land owned by the I. C. R., near the freight sheds, in Sussex, was secured and on this plot Mr. McDougall conducted experiments with various hardy varieties of corn. His experiments showed that success in corn growing may be reasonably sure even in adverse years by planting hardy varieties—varieties propagated in latitudes of climate similar to or more vigorous than our own.



A Good Stand of Alfalfa at Sussex

Mr. McDougall was able to ripen corn sufficiently for seeding purposes and in this way showed that our farmers can grow their own corn seed which thus acclimitazied gives a better yield and more general satisfaction, under ordinary and extraordinary weather conditions, as has been demonstrated, in all classes of seeds, by experimentalists the world over. As a sequence to this work not a few of our farmers have begun to go in for corn growing a little more seriously than in former years and are erecting silos to take proper care of the crops.

What a boom this has been to our dairymen is best known to those who grow and silo corn. As years go by these farmers find that their feed bills are being considerably reduced, that their bank accounts are getting larger and larger and evidences of prosperity are seen at every hand.

In alfalfa growing Mr. McDougall also carried on experiments and conclusively demonstrated that when the proper care is exercised in preparing soil and following practical cultural methods, alfalfa can be successfully grown in New Brunswick. He preached alfalfa growing incessantly in season and out of season, by day and by night. He was willing to spend and be spent in his efforts to get the New Brunswick farmers to give alfalfa growing a fair and square trial.

A great many farmers sowed small trial plots of the wonderful plant, and the majority of those who closely followed Mr. McDougall's instruction succeeded in getting it established. Others who did not pay attention to all the necessary details, had varying degrees from success to complete failure. Scattered throughout Kings County are plots that have withstood the rigor of two or three or more winters and eclipsing in feed value per acre any other firage crops grown on the farm,

From the Sussex alfalfa plots inoculated soil has been sent in small lots all over the Maritime Provinces and very good results in inoculation have resulted, wherever difficulties had been encountered in getting alfalfa to grow through lack of proper inoculation.

So far Mr. McDougall bore the greater part of the expense incurred in carrying out his experimental work. The I. C. R. evidently had other use for the plot on which he was carrying out his experiments. The fences were torn down and now the plot is used as a common on which neighboring cow owners are wont to pasture their cattle. On this plot Mr. McDougall was successful in producing seed that to all appearance was far superior to any imported seed. He did this despite the fact that some agricultural authorities had made the statement that alfalfa seed could not be produced in the Maritime Provinces. Several other local plots have also produced seed.

One of the alfalfa growers who has carefully followed Mr. McDougall's instructions is Mr. Wm. McLeod, Alderman and ex-Chief of Police of Sussex. For several years alfalfa has been a bonanza for him. He swears by a,falfa as he has for all time solved the feed problem on his farm. He had an exceptionally good crop this year and the Provincial Department of Agriculture has requested him to let the crop produce and ripen seed.

We had the pleasure a few days ago to meet in conference at St. John, with J. B. Daggett, Secretary for Agriculture and others interested in encouraging the growing of alfalfa. Mr. Daggett is alive to the possibilities offered by alfalfa growing. He intimated that the Department of Agriculture was prepared to spend any reasonable sum during the next five years in encouraging the work that had been so well begun by Mr. McDougall.

Alfalfa clubs will be formed and the various details of the scheme will be under Mr. McDougall's direction. We will keep our readers fully informed of the progress made in this connection and trust that all our New Brunswick readers will heartily co-operate in making the work a howling success.

The Maritime Farmer carried on an educational campaign two or three years ago in alfalfa growing, and we are glad to see that at last some tangible work is to be done. We will be glad to receive articles on alfalfa growing experiences from our readers for publication in these columns.

In the meantime, no matter how many times you may have had failure with alfalfa, follow the plans as Mr. McDougall will outline and we feel confident that ere five years have rolled away New Brunswick will be the richer by many thousands of dollars—Alfalfa will do it all.

In Kent County, N. B., there are some very nice, thrifty alfalfa plots. Mr. Seely, of Havelock, Kings Co., has been seccessfully growing alfalfa for several years. He is one of the missionaries, who is also spreading the gospel of alfalfa growing.

In some parts of Nova Scotia, particularly in Cumberland and Colchester counties, there are large fields of alfalfa. The campaign for alfalfa growing carried on by the N. S. A. C. is bearing fruit. Practically all the Provinces of Canada, and the neighboring States are paying more attention than ever to alfalfa culture and ere long we trust that Prince Edward Island, New Brunswick and Nova Scotia will be producing such large quantities that in order to consume it more cattle, horses, sheep, swine and poultry must be kept, and as a consequence we will all reap a bonanza that now lies within our reach if we, as farmers, go at the work with a determination to successfully grow alfalfa.

Progressive Dairying on Rose Bank Farm

Steading of Josselyn & Young, Silver Falls, N. B.

Near Silver Falls, over which flow the waters of Little River, the outlet of the beautiful Loch Lomond and only two miles from St. John, one of the principal gateways of Canada, is situated Rose Bank Farm, the home of good Jersey cattle and Yorkshire swine.

Rose Bank Farm was purchased by its present owners, two young men, Messrs. Josselyn & Young, about fourteen years ago. The area of the farm is about one hundred and forty acres, one-half of which is under cultivation and the remained woods and pasture lands.

The former owners did not pay a great deal of attention to clearing new land and consequently at the time of purchase the amount of rough pasture was rather limited.

To give ample pasturage accommodation for the Rose Bank Jersey herd Messrs. Josselyn & Young have been following the plan of cutting a considerable area of the wooded area each year and after clearing it off seeding it down for pasturage purposes.

Being located in proximity to a good market Messrs. Josselyn & Young naturally engaged in the dairying industry.

After comparing the merits of several breeds they concluded that for the production of rich milk, choice cream and gilt-edge butter, the Jersey cow was the cow for them and in this connection they advance the following reasons:

1. The Jersey is the most economic producer of milk for all purposes of dairying; that is, she will produce a pound of butter-fat or a pound of milk solids from less feed than any other breed of dairy cow. This has been proved in competitive public tests.

2. The high percentage of fat in Jersey milk and its "churnability" make it the best for butter-making.

3. Its high percentage of milk solids makes Jersey milk the best for cheese-making.

4. Owing to the high proportion of milk solids in Jersey milk, which furnishes a pound of butter or of cheese from the least quantity of milk, there is the least amount of worthless residuum, or water, to be handled.

5. The quality of Jersey milk—its normal percentages of fat and casein is such as to render it most nutritious, and it is, therefore, as human food, the best and goes farthest.

6. The Jersey is a regular and persistent milker, and this quality, besides being valuable in itself, renders the Jersey the largest milker in proportion to her live weight.

7 The Jersey is quiet and docile in disposition, coming into usefulness early, and continuing it into old age, strong in constitution, readily adapting herself to every variety of climate, soil and food.

8 She is the most beautiful type of dairy cow with the best conformation and the best-shaped udder, one of the most beautiful domestic animals ever developed by man, making her an attractive cow and a seller.

9. She breeds true to type and transmits all these qualities to her

offspring.

10. Jersey dairy products, for quality, flavor and healthfulness, are unsurpassed. Those who have once used them are not satisfied with the products of any other breed.

Messrs. Josselyn & Young have proved that they can command a higher price for the various products of their dairy since they began keeping Jerseys than they could previously realize. They have regular customers in the city who pay them thirty-five cents per pound for butter during the summer and fall months, and forty cents per pound during the remainder of the year. They get forty cents per quart for cream and ten cents per quart for milk the year round.

When organizing their Jersey herd, Messrs. Josselyn & Young realized that the best was none too good for them so in 1907 they imported several choice animals of the famous Hood Farm breeding—Pogis 40th of Hood Farm and Hood Farm Khedive Bessie. Pogis 40th has thrown some very fine stock and his heifers test high in butterfat. One of his heifers, Lucy of Rose Bank tested 5.6 per cent. fat two weeks after freshening, when milking thirty-five pounds per day.. Nora of Rose Bank, three-year-old, when fresh and milking thirty pounds daily tested 5.8 per cent fat. Her bull calf was sold last fall to the Oak Point, N. B., Agricultural Society.

In 1909 the Rose Bank herd was strengthened by the purchase of three females from Dr. H. M. Moulton, of Maine. These females were by the imported bull Flying Fox's Victor, a son of the great Flying Fox. One of these cows, Flying Fox's Adora was champion cow at the 1911 and 1912 fall fairs where she was much admired by judges and spectators alike.

In 1910, Thomas W. Lawson's Dreamwold Farm, Massachussets, was visited and from it came Foxhall's St. John O' Dreamwold and the imported cow, Forfarshire's Fawn Lady.

From such a solid foundation has the Rose Bank herd been built up. They have increased in numbers and are a credit to their owners both in their home quarters and at our provincial fairs, where they have time and again succeeded in carrying off some of the choicest and most coveted awards.

The following in regard to the Rose Bank herd header appeared in the press about one and one-half years ago :

"Foxhall St. John O' Dreamwold is a grandson of the famous Flying Fox, the first Jersey bull on record to sell at public auction for the snug sum of $7,500. Following are some of Flying Fox's achievements in breeding and show ring circles.

"Flying Fox No. 61441 was imported as the 1899 first prize winner over the Island of Jersey. He was sold at auction in 1902 for $7,500 to T. W. Lawson, of Boston, Mass., in whose possession he remained until he died on December 6th, 1909, in his 12th year.

"He sired the great bull "Oxford Lad" P. 3123 H. C., winner of the first prize at St. Saviors in 1902 and sweepstakes at St. Saviors, and Frowville and State prize over the Island in 1903, and sold at public auction for $3,300.

"He also sired Stockwell, 3550 H.C. Stockwell sold at public auction for $11,500. He sired Brookhill Fox, 65303, also champion winner in England as a yearling, and leader of all the imported bulls at the World's Fair in 1904.

"Fox's Flower O' D. the greatest cow in America today, was sired by Flying Fox.

"His get has won many first all over the United States and a number of his daughters have already made great tests.

"His get won first and champion honors in 1902 and 1903 at the Royal shows, on the Island of Jersey, and England and at Toronto, also at Kentucky, Minnesota, Wisconsin, West Virginia, Maine, Massachusetts, Illinois and Missouri State fairs. At the last World's Fair in bull and progeny class of 23 entries. Flying Fox's get won 2nd, 3rd and 4th and at the great Brockton Fair in 1911 his get won 1st, 2nd and 3rd. At the same Fair his get won the Jersey special for four cows, in milk, bred by exhibitor, and the same get won 1st at the great National Dairy Show at Chicago in 1911.

"Fox's get has done more than that of any other bull by winning 1st at the dairy shows east and west in the same year, winning at the Brockton Fair, in 1910, $669.00 out of $1000.00, in hot competition.

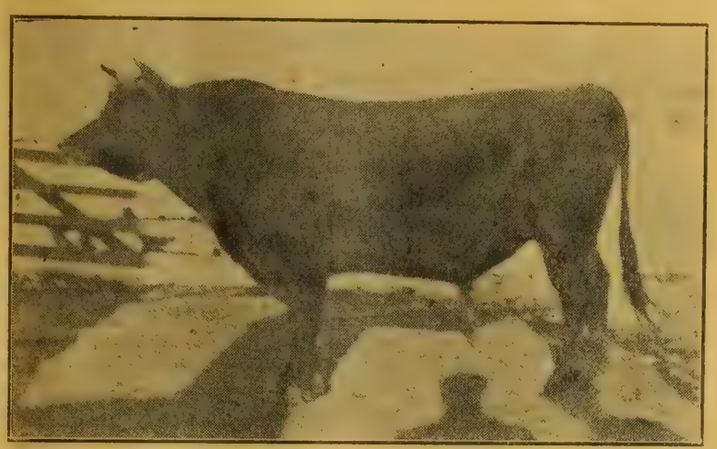
"In 1911 his owners won at Brockton Fair $639.00, which is more than any other exhibitor did, winning all herds. Out of 120 head shown at Brockton 95 per cent were decendants of Fox's descendants.

"At the National dairy show in 1911 the same per cent. were of Fox blood. Champion Flying Fox is also the grand sire of the famous bull, Noble of Oakland, P. 3909 H. C., that sold for $15,000 on Decoration Day, 1911. He is also the grand sire of Gamboy's Night, 95698 A. J. C. C., that sold at the same sale for $6,700.

"He also sired the famous Flying Fox's Foxhall 61435 A.J.C.C., that was picked out by the Jersey Cattle Club to be used on the cows in the dairy test at the great St. Louis Fair in 1904. Flying Fox's Foxhall is the sire of the famous bull Foxhall St. John 'O Dreamwold, whose dam is Golden Bess of St. John, winner of the Parish prize in 1899 and winner of 1st prize at St. Peters show in August 1900. Golden Bess also won 1st with her progeny at the great St. Louis Fair. T. W. Lawson paid $1600 for her at public auction in 1902. She is a magnificent dairy cow with large beautiful udder and well placed teats. Last year she gave over 10,240 lbs. milk average 5.4 per cent. of butter fat. She dropped a beautiful bull calf in December 1911, and is now in her sixteenth year."

Readers of the Maritime Farmer, who are not personally acquainted with Messrs. Josselyn & Young know them through their advertisements in these columns from time to time and by reading about the winnings of their herds at the fairs.

The Rose Bank soil, a heavy clay loam, is well adapted for the growing of hay and for pasturage, but it is rather heavy for cropping purposes. Drainage, liming, thorough cultivation and loads of Jersey manure have very materially counteracted that difficulty.



Foxhall St. John O'Dreamwold, Herd Header on Rose Bank Farm

A Jersey Heifer—The Kind Grown on Rose Bank Farm.

Messrs. Josselyn & Young grow a bountiful supply of mangolds and turnips for winter feeding. The season of short pasturage is bridged over by soiling the stock with green oats and and peas, followed later in the season with fodder corn. In former years the fodder corn was fed whole and consequently a considerable quantity was wasted. As all good farmers are striving to eliminate waste and stop the leakage of their revenues, Messrs. Josselyn & Young began to run the corn stalks through a cutting box before feeding, and now waste is practically nil. Summer pasturage which is a serious question on farms where the pasturage area is limited is thus very satisfactorily solved.

The Rose Bank barn is 90 feet long by 35 feet wide. One of the mows is 60 feet long, and in the space under it is located the stables where the horses and cows are kept. A thirteen foot windmill on the barn is found to be a great and inexpensive labor saver. It is used for pumping water for the house and barn, churning, sawing wood, running hay cutter, pulper and grain grinder and for cutting green bones for the poultry. A gasoline engine is also installed in the barn and used to furnish the power for the various mentioned operations when there is a calm and the windmill is out of action.

The cows are stabled in two rows. The gutters are made of concrete and strawy horse manure is daily hauled in to soak up the liquid manure and keep the cows' tails from gettng wet and dirty. A two-horse load of manure is made in the Rose Bank stables each day and it is hauled direct to the field where it is to be used. The water pumped by the windmill is stored in elevated tanks and is connected with the manger V shaped watering and feeding trough which is made of three-inch planks. The cows are watered twice a day by filling the trough simply by turning on the taps at each end.

After the cows are watered, pulped, mangolds or tunrips is fed, a dry mixture of bran middlings, cornmeal, mashed oats and cotton seed meal is fed by spreading it over the pulped roots in the manger. In addition to the roots and grain the cows get all the hay they will eat up clean three times a day.

The young calves are never allowed to suck their dams as the cows are found to settle down to a full flow of milk quicker, quieter and appear more contented than when the regular practice is followed. The young calves are fed whole milk three times per day for two weeks, after which skim milk is gradually added until at two months they are getting all skim milk and having in the meantime learned to eat mixed grain and oil cake meal twice daily.

During the hot summer weather the cows and heifers are stabled during the day and pastured at night. By following this practice Messrs. Josselyn & Young find that the cows do better and the heifers develop to be healthier and better cows than when stabled at night and they are not worried so much by the flies. The proprietors of Rose Bank claim that while the heifer stabled by day and by night all summer may look slicker they do not develop as well as they do when they get abundance of grass and some exercise.

Messrs. Josselyn & Young are young men who have both made good. They love good stock, well bred and well cared for. In turn the herd is yielding good returns from the sale of stock, the products of the dairy, and the by products of same which is marketed in the form of choice young Yorkshire pigs and pork.

Cause of Bone Troubles.

One cause of spavin, ringbone and other bone troubles in horses is the lack of proper nourishment. An unbalanced ration containing a large amount of corn and deficient in ash, makes a porous bone with a rather spongy texture. Fed a proper ration, the same animal would develop a much stronger bone with a firm, solid texture. The bone diseases are usually simply an effort of nature to add extra growth to reinforce a bone that is not strong enough for its load. A great many of these troubles woulh be avoided if all horses, particularly when they are growing, were supplied an abundance of such feed as oats, with some of the legume hays roighage.

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

Subscription price $1.00 per year. When paid in advance 80 cts. Persons taking advantage of the 80 cent rate are only entitled to it by paying in advance each year. When subscription gets in arrears, $1.00 per year will be charged. Subscribers are requested to bear this in mind. This paper is sent to subscribers unless a definate order for discontinuance is given.

The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

OUR GUARANTEE.—With each subscriber to the MARITIME FARMER, we positively guarantee, while his subscription lasts, that no advertisement is allowed in our columns unless we believe that any subscriber can safely do business with the advertiser, and we agree to make good any loss which any such subscriber may sustain by trusting any such advertiser who may prove to be a deliberate swindler; but we do not undertake to adjust trifling differences between subscribers and responsible advertisers. To take advantage of this guarantee, written complaint must be made to the publisher within one week from the date of any unsatisfactory transaction, with proof of the swindle and loss, and within one month from the date when the advertisement appeared, and the subscriber must prove that in writing to the advertiser he said:—"I saw" your adv. in the MARITIME FARMER.

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Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

AUGUST 26, 1913.

DATES OF ISSUE.

September 16-30

October ....14-28.

ICE ON THE FARM.

At no season of the year does the advocacy of the farm ice house come with more convincing argument than when the thermometer is up in the 90s, and everybody is seeking the shade and is thirsty for a cool drink of water. This is the time that the housewife without ice can most effectually demonstrate the need of the ice supply by an exhibit of soft, flowing butter at the noonday meal, and every meal for that matter.

A good plan is for the housekeeper, wife or head of the house, when things get pretty hot on these occasions, when the thermometer takes an upward flight, to have a contract signed up guaranteeing the installation of an ice house, fully equipped for cold storage purposes, on or before the first of December next. It is at these times and on such occasions that man is most susceptible and easily dealt with. He wants ice just as badly as any member of the family, but when he cools off and gets tempered down to autumn conditions of weather he feels as though he would never again need ice water.

The winter season is the logical period for ice accumulation. It is the time of year when the thoughtful, provident farmer, with his knowledge of the needs of the family provides for the summer. The man who is always looking ahead and making provision in advance has little to worry about as time moves along. It is scarcely necessary to say that there is no available ice supply on my farm, nor near it. There is usually a stream, or reservoir, or place where a few neighbors can get together and provide a basis than can be filled with water and furnish ice for several families.

Running water is the proper source of ice supply; the collection of the water in the basin can be guarded and kept clean. In many localities there can be dams constructed across canyons and catch the surface waters from rains and melting snow. This is often recagnized and recommended as an expedient in water supply for stock, but for ice to be used about the house for family use it would not be considered the proper thing from a strictly sanitary point of view.

Pure, clear, cool water for the family should be the first thing provided. Ice is so frequently used in colling drinking water that the supply should be of such a quality as to be fit for use in the house in any capacity needed. What is there that comes so near satisfying thirst on a hot summer's day as a pitcher of pure, clear water, with a chunk of ice floating in it?

WATER ON THE FARM.

"We never miss the water till the well runs dry." How true this is, and how many persons have had this experience by being a little careless a little lax in providing abundant and ample water supply, not only at the residence, but at the barn, the stock lots and in the pastures. There is no economy in trying to see how many places about the farm one well will supply. It is a good plan to have two wells at the buildings, even if one is let stand idle part of the time. In case some serious mishap occurs with the water supply, it is very comforting to be able to apply for help at the other supply point.

There is more time consumed on some farms in getting the proper amount of water to all the stock and supplying other water demands than would pay for a well with wind power for every field and stock lot on the place. Water is the essential on the farm, lots of it, and good quality. With some things substitutes can be used and a period of scanty supply bridged over, but water must be had where people and live stock are kept.

Of course, the natural water advantages vary greatly in different localities. In some sections the spring, brook, creek, rivulet or rill is almost everywhere present to supply water, but in the great plains and prairie country the well must be looked to as the general source of supply. This means some expense and care in its construction and maintenance. There is great difference of opinion as to preference for well water or the flowing stream. The flowing stream often is found in the midst of hills, hollows and rocky cliffs, when the fancy of the land owner is for smooth, level ground.

The carrying of contagious disease by the stream is also urged by some. In seasons of excessive frought many of the small streams go dry, not a drop of water in them, when the under supply is still turning out its thirst-quenching liquid. It matters not what the source of supply, a never-ending reservoir must be ready to draw from. This is what makes land valuable. Give the farm the reputation of an uncertainty of water supply, and it has no purchasers, except as adjoining lands may be able to use it.

The rersevoir on the farm, where a reserve of water may be held for stock watering purposes and other uses, is a valuab) improvement and is almost always worth its cost as a selling proposition with the farm.

SPOILING HAY.

A good many farmers made the mistake this year of waiting too long before cutting their grass. The idea of waiting for the grass to thicken up at the bottom, following some later summer rains, sounds fairly good, and it may be all right to a limited extent, but we would be afraid to trust that method of securing quantity. This thickening up at the bottom is likely to be at the expense of quality in the top of that which has already grown. After that which has secured its growth begins to mature, it loses quality for hay. Better cut that which has already grown when it is yet green, then give the grass which would otherwise furnish the thickening a chance to grow and make a second crop if the land will stand it.

When we get into the month of August, we can't afford to do much waiting for the hay, for as a grass loses its succulence and its green coloring matter, it loses quality for feeding. Better cut too early rather than too late. Grass ought to be cut before the weeds have time to go to seed. This is one of the great faults with a great many hay fields. The weeds which are allowed to seed make a bigger crop next year. The weeds which spread only from seed can be very materially held back by preventing the seeding, and those which spread both from roots and seed will spread more and farther if allowed to seed. Great fields of orange and golden hawk weed which are alloweh to go to seed each year are doing a large amount of damage because of the contamination of adjoining fields.

A good deal of grass is spoiled for hay every year by being allowed to get weather-beaten. Hay ought to be cured, of course. It should not be put into the barn in so green a condition that it is likely to heat, but agood deal of the old field hay which is cut every year needs very little curing, and would really be of greater value if cut early and put into the barn within a few hours after it is mowed.

MAKING THE PAST.

Day by day, month by month, year by year, our point of view is always changing. As the days go by we see more of the past and less of the future. In youth's joyous bloom there is no past—we know none—we have none; but as the years roll over our heads the past becomes a more and more important part of our lives.

We are wayfarers journeying on over a long road, winding over hill and valley. At the outset our looks are all ahead and we are full of joyous anticipation; as we go on we gradually lay away in the storehouse of our memory pictures of other days—the pleasant and beautiful scenes through which we have passed—the joys and sorrows of the journey.

Some of us, on the way, get some of the bloom rubbed off our youthful dreams— and some must lay away in the dim, quiet room of their memory great sorrows which they must carry bravely to the end. Some, on the way, lose those things which are dearest to them and which through all their journey, they can never live again; still they must struggle on, though for a space they see the road through tears.

And some, in looking backward over the road they have traveled, must see places where they ruthlessly tore up by the roots some tender little flowers that were blooming bravely by the wayside; some must recall planting their heel on a fragrant violet or plucking a wild rose, the path of some, instead of being fairer and more beautiful than when they passed, is marked by ruin and desolation.

We are naking the past—now—every day — that we shall sit and think over when we are old—if we ever do grow old. And we shall think of it, whether the thoughts sting or soothe —whether the pictures we have painted are beautiful or distressing. Let us fill it up to the brim with love and sweetness and beauty, so that in future years the thought of it shall light our faces up with joy and sweetness, we shall have so many pleasant and beautiful things to look back upon.

AGRICULTURAL QUACKS.

From the man with the universal panacea for all the ills of the farming business, deliver us! Keep shy of the fellow who preaches the doctrine of sheep for every farm, deep plowing under all conditions, a co-operative creamery where there are few cows. Suppress the man— there are scores of such—who is certain that he, alone, has the solution to all problems and that a law —with an appropriation embodying his views—is all that is needed to set the world aright.

The funny part of it is that most of these rapid fire regulator don't know anything about farming or farm problems from actual contact. Meanwhile, the regular farmer goes about his business of feeding mankind, doing the best he can in most cases, bearing the burdens ol a stalwart citizen and rearing an industrious and efficient family upon which commerce, art and the professions must ever draw heavily for recruits.

MINISTER AND TEACHER.

How splendid and efficent is the work that many a country minister is doing! Is it always appreciated? Do the members of your family take hold with the minister and with others in the church to make it an ever-renewed force for the betterment of life here, as well as hereafter? What possibilities in the rural church for joy, sociability, more righteous living, better health and more wealth! Especially is this true where parson and people banish denominationalism, abolish petty gossip and work together in charity, love and energy.

The school teacher should be more appreciated. We think the teacher really does more for Canada, and gets less for it in money or recognition than any other class.

Silos and Dairying.

It is generally conceded that the silo is an essential factor on the farm, although the feeding of silage is of comparatively recent origin in America, the first silo hahing been built 38years ago. The silo has come to be one of the indespensible factors in profitable dairying. Fortunately, farmer have learned the value of silage as a roughage leed for dairy cows and in fattening steers. The increased prices received for roughage feeds, together with the prices charged for the by-products of our mills, brewieries and destilleries during the past 10 years, have compelled us to stud more closely the problem of feeds and feeding.

The silo has revolutionized dairying in many states. The poor pasture in summer and the high price ol grain in winter has compelled the farmer to produce and preserve upon his farm those feeds which best serve the needs of his dairy. He has learned to practice intensive farming in its braadest sense. That old dry cornstalk, which in the past was largely waste as a source of great annoyance ance when it reached the manure shed or while being hauled to the field, is now being converted into a source of profit both as a feed and a fertilizer.

The elements in the crop ensiled are preserved and nade available as plant food when returned to the soil as liquid or solid manure. Ensilikg corn does not add anything to its food value as aplant. It simply adds to its digestibility and palatability and preserves the plant in its natural succulent state. The process of fermentation imparts a certain flavor to silage that makes it extremely appetizing to cows. Corn contains sugar which, in the process of fermentation, is converted into acid; and it is this acid in the silage that pickles or preserves it. Chemists have discovered that the acid in the silage is similiar, if not identical, with that found in the large stomach of the cow after fermentation has taken place. So that in ensiling the corn the dairyman aids his cows in one of the most important steps in digestion. The manure from silage fed animals is much more convenient to handle and is more readily taken on by plants when applied to the soil.

SILO SAVES WASTE, PROVIDES STORAGE.

The silo prevent waste in feeding corn as a roughage, as it preserves the entire plant in a palatable form. There is little or no waste, as both the cob and the dry woody stalk, which contains about 36 p. c. of the food nutrients of the plant, are preserved. This saving makes the silo both economical and valuable from the dairyman's viewpoint. Siloing is easily the most economical method of storing roughage feed for the dairy cow. It has been well said that "the silo is the poor man's necessity and the rich man's luxury, for by it both gain a better and more independent living.

When we consider the amount of space that is required to store sufficient roughage to feed a given number of cows for a season, as against that required to store a like tonnage of silage, we at once become conviaced of the economical value of the silo as a storage receptacle. In these days of high-priced buildibg materials it is important that the farmer should be able to store the maximum of feed in a minimum of space. Again, there is a decided saving in both time and labor in feeding silageas compared with that of feeding hay or clover. A larger amount of food can be saved from an acre, when put into the silo, than by any other known method of havesting.—Homestead.

Drain Roads as Well as Fields.

A writer in a recent number of your valued paper contributes an interesting article entitled Roads and roads, in which he makes the following significant statement: "The only way to make good roads without bankrupting the farmers or the state is to make the best use of the material at hand. It isn't the cost of a thing that necessarily makes it serviceable. It is putting the right things in their proper relations to each other. Water and soil mixed together will never make a good road. Get rid of the water and the rest is easy."

Those who are appointed to the important work of caring for our public highways know how true it is that the great difficulty that confronts the road builder is the difficulty of securing proper means of getting rid of the storm water. The writer recently had occasion to travel over a road in Kentucky in the picturesque mountain region. We spent 5½ hours in a jolt wagon to travel 13 miles. The roads were nothing but mud gulleys washed into a thousand ruts and holes by the spring freshets. In the entire distance there was not a single culvert.

Fortunately this condition is rapidly being changed in all parts of the United States. Even the poorest rural communities are discovering that there is no economy more extravagant than that which endeavors to keep down the tax rate by getting along without drainage for the public highways. Almost as fast as the farmers work out their road taxes in filling up the gulleys and dragging the earth roads the rains follow along and wash all their work away, leaving the township no better off than before.

Of course it is not always possible for an agricultural community to have access to all the materials essential to making good and permanent highways. But no longer can it be said that any county is so poor or so inaccessible that it cannot secure adequate culvert materials in such form as to enable the road boss to have them installed with the labor available and with thifling expenditure.

There are many counties where it would be impossible to build culverts with material at hand and one advantage of the corrugated iron culvert, I have found, is that it comes in sections complete and all ready to be placed in position. The sections are short enough to be easily handled and so light in weight that two men can easily install them.

In the opinion of engineers and scientific men the one great essential to culverts of metal is that the metal must be free from the impurities that cause corrosion. There is no question whatever as to the strength of this form of construction which has been proved to be greatly in excess of the more exacting requirements. By securing a grade of iron that is practically free from magnesium and the other corrosion producing elements the road builder is now able to secure very perfect drainage at exceedingly low price.—Bryand Venable.

Rust and Grease.

In using my farm tools I try to guard against rust. This is perhaps the most important point in caring for farm machinery. I believe that more farm machines rust out than wear out. This is just as true of the binder and mower as it is of the plow. The life of the mower and binder is less than that of most other farm machinery, and the outlay in cash purchases for a good mower or binder is large and the average farmer cannot afford to neglect either in its care. The price put in a new machine could be more readily invested in other ways— in the building of proper machine sheds, fencing and fertilizing. Care of the canvases on the binder calls for consideration. Leaving them on the binder all year results in stretching and affords a good place for mice nests. I always take mine off, roll it up, tie it in a bundle, and suspend it from a rafter about the barn or some place where there is absolute assurance that no mice can reach.

Our one great rule is to use plenty of grease on machinery. It is important before putting a machine in operation to see that every part is working free and easy. It must be remembered that rusty knives and guards will not cut grain well and especially if a little green. It is necessary first of all to get rid of this rust. The loosening of the binder is the ordinary method mostly employed. This is certainly hard on the machine and will not be necessary if proper care is taken the previous fall when the machine is put away. One of the best methods I have found to keep any farm machine in good order if it is not to be used for a while, is to clean thoroughly all the oil holes with gasoline, then oil the bearings with a mixture of lard and kerosene having the proportions so that the fluid will permeate all the parts and then harden. This forms a coating over the metal that prevents rusting, leaving the machine in first-class condition and in good shape when again wanted for use.

Going over a machine carefully to see that all the bolts are tight also helps to keep machines in good working order, and causes less wear on certain parts. Many repairs that would be occasioned by bolts falling out can be eliminated. The cutter bar is the business end of the mower. The guards should always have a sharp point and be kept in alignment so that the ledger plates are always even and in good condition and the knife sharp and free from nicks. I save much worry and trouble by keeping the knife grinder in the field through the harvest season.—H. W. Swope in N. E. Homestead.

Quick Returns from Alfalfa.

Aflfalfa has graduated from the experimental class in Connecticut and taken a place among the staple crops of the state. June 14 H. G. Bronson, of Hartford county sold the first cutting from a six-acre field that was seeded last August, for an even $100. And at that price the buyer was to cut it, cure it, cart it away and take all the chances of the weather.

Mr. Bronson had experimented with alfalfa in a small way for several years back, but when he decided to try it on that six-acre field last year the hay thereon was almost ready to cut. He mowed the grass as usual, and about the middle of July plowed the field. Two tons per acre of air-slacked lime were then sown over the furrows and rolled down. With a double action cutaway harrow, Mr. Bronson then went over the field half lap four times, after which he rolled it again. Then 500 pounds per acre of high-grade commercial fertilizer was applied after which both the harrowing and rolling were repeated.

August 20 both the seed and the inoculating soil were sown broadcast, and worked in with a weeder. Then the job was finished up with the roller. Mr. Bronson says that he wouldd prefer to seed alfalfa in rotation with hoed crop, but if the soil is in first class condition this is not at all essential. In addition to the usual precautions regarding lime and inoculation, he finds three things very essential: First, sow the seed just before the big rainstorm that comes every August; second, cover it very lightly; third, roll abundantly. Mr. Bronson's farm is of the same gravelly clay loam, reddish in color, that is generally charactistic of the southern Connecticut valley.

Oxen on Potato Diggers.

I am very much pleased with the work I have accomplished with a yoke of 6½ foot cattle. As I had just purchased these cattle late in the summer, I did not have a chance to prove their usefulness in a field of green potatoes. But as to digging I cannot give too much praise to our humble friend, the ox. I purchased the cattle with beef intentions at a beef price, but as they were quite handily broken with bits and reins, I decided to give them a try-out on the horse digger. I found them a very favorable team indeed.

I dug 30 acres of my own potatoes and an additional seven acres for another farmer. These potatoes were dug very satisfactorily, as the amount of bruised potatoes is almost negligible, the digger being carried so steady that it did away with the usual percentage of bruises that are the result of fast walking horses on our digging machines.

I can also say that the amount of repairs which were necessary were practically nothing compared with years I have dug with horses. As I have found this yoke of cattle too valuable for beef I have decided to keep them over another year to experiment further. My honest opinion is that a great number of yoke of cattle might be used to great satisfaction among the Aroostock farmers, as they will take the place of a $1000 team on a potato digger.— H. C. Barnes, Aroostock County, Me.

Alfalfa Inoculation Tests.

To determine whether inoculation by soil from an old alfalfa field by liquid cultures or by using farm manure is the most successful for alfalfa, trials recently have been made at the Nebraska experiment station. The best results were obtained from the use of the alfalfa soil. The use of the liquid culture was found to be much better than no inoculation at all and also considered fairly satisfactory in many places. The use of farm manure was found to be highly valuable in securing a stand as it seemed to help the young plant to take hold. In several places a considerable difference was noticed in the vigor of fields where farm manure had once been applied and where it had never been used.

Apple Crop Shortage in Ontario.

Less than half a crop of apples throughout the province is about the best P. W. Hodgetts, director of the fruit branch of the department of agriculture, can promise the apple eating people of Ontario this fall.

A second expert report on the condition of the various fruit crops in the Niagara district has been received by Mr. Hodgetts and this places the apple yield at 45 per cent. "That will hold pretty much all over the province from reports coming in to us from the different associations," he said yesterday. The apple crop throughout the eastern townships will be a failure this season. The frosts of June had a good deal to do with blighting the trees, but the worst ravages were by caterpillars.

HORTICULTURE.

The Pre-Cooling of Fruit.

(Continued from page 785.)

the better the results to be expected. In warehouse cooling the air need not be as cold nor circulated as rapidly as in the car method. The room may be better insulated and better constructed, and there will ve very much less loss of refrige*ation, and the cooling is accomplished at much lower cost. The warehouse type of plant is the only one practicable for the shipper who desires to pre-cool his own fruit, or for fruit associations who desire to put up their own plant for this purpose.

Another advantage of the warehouse method of pre-cooling is the possibility of loading a much greater quantity of fruit into a car of a certain given capacity. With the car cooling method the fruit must be piled open so as to allow a free circulation of air throughout, whereas with the warehouse method wherein the fruit is cooled before loading, it is not necessary to leave any space what ever between the packages of fruit in the car, and this results in increasing the capacity of each car by 25 to 50 per cent. as has already been suggested.

POSSIBILITIES OF FRUIT PRE-COOLING.

Aside from the advantage of pre-cooling fruit to prevent deterioration and to have it arrive on the market in the best possible condition there there are some practical advantages which are not yet generally understood.

It has apparently been assumed that pre-cooled fruit after loading into refrigerator cars, must necessarily be iced in transit to maintain temperatures in the cars and deliver the fruit in prime condition at destination. This assumption is based on the use of the average refrigerator cars now in service. If suitably insulated cars were provided, no ice bunkers or other means of refrigerating would be necessary for a ten days' trip in the warmest weather. By suitable insulation is meant insulation equivalent to what is now used in our best cold storage houses. ...

Assuming a suitably insulated car, and that it will be loaded full of fruit the more the better for our purpose: If the fruit is cooled before shipping, to 32 degrees F. and the doors and ventilators tightly closed, this car will arrive at its destination during average summer weather at a temperature of from 45 degrees F. to 50 degrees F. This would be a very suitable temperature for unloading the fruit into the average temperature to be encountered during the spring and summer season. Of course, in shipping during the winter when low temperatures are likely to be encountered in transit or when unloading, it would be better to pre-cool the fruit to only 35 degrees F. or 38 degrees F. These statements are approximate, and are based on theoretically correct figures and can be depended upon in practice.

To insure best results under the above suggested method, not only should the fruit be loaded tightly into the car without air spaces between or around the fruit, but it should be protected on top if much space is left between the fruit and the top of the car, by means of thick, heavy paper spread across the car and secured by battens. If the car is loaded nearly to the ceiling this need not be done. Of course, it is unnecessary to state that if the car is loaded during warm weather, that it should be blown out for an hour or so with cold air before loading fruit into it, and a suitable loading vestibule reaching to the sides of the car to not only protect the fruit while loading, but to keep the car cold, would be desirable.

It must be understood that this applies to fruit which is pre-cooled before loading and which is loaded into an insulated car, which is suitably insulated equal to the best modern cold storage insulation. Under this method of handling the ventilator of the car should not be opened at any time while in route to destination. It is assumed that at least 600 boxes of oranges would be loaded into one car.

It will be readily appreciated that the above suggested scheme opens up some possibilities in fruit shipping which were not dreamed of up to very recent date. It would seem that the railroads with their arbitrary and outrageous icing charges would be entirely eliminated from the shipping of fruit for long distances in future. The plan proposed of pre-cooling and carrying through to destination without icing or without supplying refrigeration will not only be a great saving to the shipper in loss of fruit by damage while in transit, but it will also be a big saving to the railroads on account of not being obliged to haul ice or other means of cooling, and lose time by the stopping of trains at intervals for re-icing. The entire proposition looks so simple and sensible that there can be no real argument against it except preconceived ideas and former practice. It will be interesting to see who will be first to adopt and work out this suggestion.

Pre-cooling has already become a very important feature of fruit production and marketing, but the developments are unimportant as compared with what they will be in future years. The general process has been thoroughly demonstrated and is by the best informed and best qualified judges of the situation, admitted to be a necessity for proper marketing. Adequate facilities will doubtless be provided after a time, but this will be when those who are most vitally interested, the growers and shippers, are thoroughly convinced that it will be profitable, and when they are better able financially to provide their own pre-cooling facilities. It will not do at all to depend on the transportation companies for means for doing this work. They are chiefly interested in getting their pay for transportation, and as long as they get this with present facilities and equipment, it is not at all likely that they will see fit to improve them materially. What is said here applies particularly to refrigerator cars and their construction which we will now consider separately.

REFRIGERATOR CARS.

The refrigerator car service of this country is deficient and unsatisfactory, and this fact will doubtless be admitted by those who really know and at the same time are disinterested. While the average refrigerator car is certainly better than a box car for shping perishable goods, it is far from satisfactory and far from being as perfect as it might be, and the cars now in use fall far short of what they should be considering the length of time through which they have been developing.

If reasons are sought for the present inferior refrigerator car service, the answer by those in control of the business is that they are handicapped by present types of construction and former practice and by the necessity of keeping down the cost, as well as by the contracted area or space available. These reasons are plausible and to some extent reasonable, and they are based on facts, but the reasons are nothing more than reasons, and they may all be overcome. It is, of course, necessgry to keep within the natural practical limits of car dimensions, but these are not all arbitrary within reason. Present construction and former practice except as it applies to methods of icing, loading, etc., need not stand in the way of radical changes if they are found to be improvements. Keeping the cost down is all right enough from a business standpoint, but if great benefits are to be derived from improved construction with increased cost, the first cost of a refrigerator car need not stand in the way of improvements.

There are, as the writer sees it, two chief reasons which are not mentioned above, and which probably have more bearing on the present inferior refrigerator car construction and service, practically considered, than the ones given :

First: The refrigerator car service is mostly in the hands of two or three strong companies. Improved devices suggested by outsiders must first be approved by those in authority; and this means the approval by persons generally with limited experience in refrigeration and with no scientific training. Add to this the possibility that railroad officials and their friends are interested in the building of refrigerator cars now in use, and a good reason for lack of progress is plain.

Second: The refrigerator car lines are in business to make money. If they can get as much for the use of a poorly insulated car of inferior construction as for a first class car, why should they provide something better? It would be an awful thing if they should spend $200 or $400 more in building and insulating a more perfect car. The shippers pay the bill for icing, and why should the cost of cooling interest them? And if the fruit partly spoils or deteriorates as it frequently does, it is the shippers' loss, not the car lines.'

There are, of course, other things to be considered like lack of proper skill and knowledge of what constitutes suitable insulation for a given work, but the above may be considered as chief. Considering the fact that shippers the country over have been paying a price high enough for the best of equipment and service, the first cost of a refrigerator car should be of secondary importance. Surely there is no excuse for economy to the extent of a few hundred dollars on each car, when a positive saving in operating cost to much more than pay big interest on the investment, may be shown, to say nothing of the savinng in damage to goods in transit.

We now get back to pre-cooling. As has been already suggested above. Pre-cooled oranges (pre-cooled during

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Get them all

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Every bag left in the ground is a dollar **lost.**

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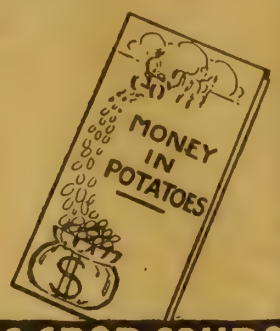
If it costs $5.00 too much an acre to harvest them it is $5.00 per acre **lost.**

To handle the **whole** crop and handle it **cheaply** is going to make a big difference in the profits.



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Dollars saved in the potato field are as good as extra bushels to the acre. The "big crop" coupon will entitle you to a free copy of the book "Money in Potatoes." Send it in to-day. There is money in it for you. 18

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Your Life of Man Bitters and Invigorating Syrup also cured me of lung trouble, I consider your medicines superior.

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a period of two or three days in the packing house and not for as many hours at the railroad car-cooling plant) are now being shipped without icing during the cool weather of March and April in the inferior refrigerator cars now provided. If suitably insulated cars were obtained, oranges properly pre-cooled could be shipped from California to New York in any weather withot icing, asc would arrive in really better condition than when shipped with ice in the regular way and there would not be any necessity for icing anywhere if the car isulation were as good as the average cold storage warehouse. The isulation of the present refrigerator car is only an excuse for insulation, as it is not more than ane-quarter to one-third the insulation considered correct for a modern cold storage plant of small capacity.

It will be claimed that additional insulation means the loss of so much space, as well as increasing the weight to be hauled. This will be such a small fraction of the possible saving resulting from loading 25 to 50 p. c. more fruit into a car when the fruit is properly pre-cooled, that it needs no answer.

The National League of Commission Merchants assembled in convention early in the year 1913 offered resolutions condemning the present equipment of the private refrigerator car lines as inadequate and obsolete, and suggesting that this feature of the transportation business be put under the jurisdiction of the Interstate Commerce Commission. They also passed resolutions favoring the building of pre-cooling plants at shipping centres. This fact is mentioned to show that refrigerator cars and precooling are closely allied, and a representative body of produce dealers like the National League of Commission Merchants may be considered qualified to pass on the results which have been secured in fruit transportation and shipping.

Criticism is perhaps unfair without suggestions for improvement, and the writer, therefore, offers the following suggestions for improving the insulation of refrigerator cars. It is not practicable to offer suggestions for improved refrigeration as this involves complicated mechanical details, but improved insulation is such a crying need that it is very easy indeed to suggest improvements along this line.

It may be interesting to note that the present average insulation of a refrigerator car consists of not more than one to two inches in thickness of insulating material, and not that much where the framework of the car interferes. There are, of course, some air spaces, but air spaces are obsolete as insulation, as is now well known by competent refrigerating engineers. The suggestion, therefore, is made that the insulation be increased to at least six inches of some of the better insulating materials like hair felt, or sheet cork, and that the frame of the car itself be filled with some material like mill shavings or granulated cork. This material must of course, be properly protected from access and penetration of air and moisture, and this may be easily accomplished by using the best grades of insulating paper.

The question at once comes up as to what additional sum of money this would mean in increased cost of a car, and roughly speaking, assuming the exposed surface of an ordinary refrigerator car at 1500 sq. ft., the extra expense of suitable insulation over what is now being uesed would be in the neighborhood of $400 per car. Ample insulation in a refrigerator car is especially necessary on account of the large outside exposure compared with the cubic capacity, al-

(Continued from page 791.)

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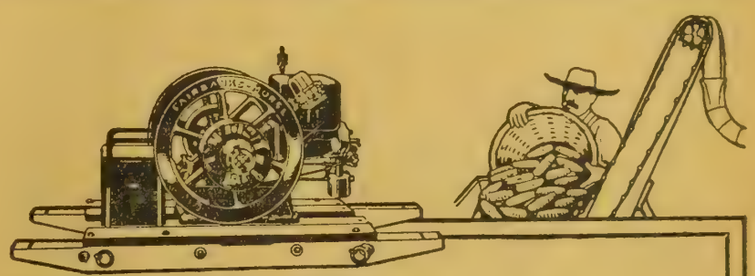

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DAIRYING.

Cost of Summer vs. Winter Milk Production.

Farming does not lend itself to that accuracy of estimate of cost of each definite thing produced that other business does. Each operation of the farm so shades off into another and merges with it that a clear separation of costs of each and returns of each cannot be mathematically determined. Incidentally, I may say that the inability of farmers to accurately determine the cost of each product of the farm has led to his censure by nusiness men as unbusinesslike. This is unjust. The truth is that the representative farfarmer compares favorably with other workers in the business world.

Perhaps as censurably as anywhere may he be charged with inadequate knowledge of the relative cost of summer milk in comparison with winter production. This knowledge is quite important as the market makes a distinction between the two in its purchase price. For the past few years the market of Boston has made a spread of 7½ cents per can of 8½ quarts, or nearly 1 cent a quart. Is this difference justified? We should know, as it makes a difference of some $10.50 per cow in her annual revenue, or for a herd of 20, $210.

NO SENSE IN LOWER PRICE.

A lessened summer price is without sentimental, logical or industrial warrant. The pasture is an integral part of the farm business and can no more be set apart from it than can the separate fields of varying fertility; no more than other business can be expected to make products or to exchange them at less rates for those produced in the summer, because less heat, lights and other things are required in the summer than in the winter.

Again, all the overhead or the fixed charges are required and more in the summer than are called for in the winter—labor for milking, handling the cows, salt, ice for milk, rent, manager's share for the care, interest and risk on the cow, her depreciation, bedding and several other legitimate expenses.

With great care, as the result of long and varied experience, I made not long since an estimate of the annual and total expense other than food to be $56, or 43 p. c. of the total annual expense of the cow. But this is not all, it is found to be necessary to feed both grain and coarse fodder in the five pasture months. When this expense is allowed, it will be found that on the average New Hampshire pasture it requires fully five acres to pasture a cow. One-half the feed to 60 p. c. of it in summer comes, after all, from the barn. This would leave for a well-managed herd but 40 p. c. of the cows' feed for five months, or only 16 p. c. of the year's food supply to come from the pasture and more than its share of care and capitalistic expense. This reduces the excuse for the change of price by a reduction of 20 p. c. to practically an absurdity.

GRASS COWS GIVE LESS in YEAR

Nor is this all. In going over those of my cows calving in the spring months and those calving September to December 31, I find that over 1200 pounds more milk is given by cows calving September tp December than is given by those calving April 1 to July 1. The element of age of cows comes in to disturb accurate calculations, but I feel warranted in saying that in my selections from 150 cows that approximately 1208 pounds is an advantage that may be claimed for the cow freshening September 1 to January 1.

Maj. Alvord, formerly at the head of the dairy division of the national department of agriculture, a competent and careful man, found that for his herd that a gain of 1000 pounds of milk was to the credit of cows freshening in the fall months in contrast to those calving in the spring. A prominent dairyman in New England having 200 Jersey cows states that 10 of his best cows freshening in the spring gave 745 pounds less milk than 10 of fall cows inferior to them. Several thousand cows in Denmark, under co-operative tests, were shown to yield 1400 pounds more milk when calving in the fall than those freshening in the spring. This loss of 2000 pounds milk by those freshening in the spring, so as to take advantage of pasture feed, more than bridges whatever of gain that may appear to the credit from the old point of view in favor of pasture made milk.

This loss is easily accounted for. Short pastures, hard work for a living, flies, hot weather, less time for attention to them in the hurry of the season's activity are factors. The loss of weight of the cows at pasture of 150 pounds when fed pasture alone has to be recouped at the barn at a cost of 1800 pounds food. The loss in milk flow from reduced conditions hampers the succeeding year. A grazed pasture or field will not yield as much food as one that is cut and the product fed in the barn.

New England farmers should study the problem more carefully and by common agreement cease accepting for summer milk, as costly or more costly than winter milk, the reduction in price that has been accepted by common consent and without protest. It keeps the market demoralized and the price of milk one of ceaseless barter.

By no possible system of figuring can it be shown that for the average farm summer milk costs less than winter milk. It is to be hoped that farmers will look carefully into this matter and act upon the facts as they may find them.—N. E. Homestead.

At the Milking Stool.

There are times—morning and evening—when the milker, the milk stool and the cow are closely associated. There are several makes of milk stools; sometimes a variety may be seen in the same stable. It may be a small box, or a piece of scantling with a piece of board nailed on top; but such a stool omly forms one leg, while the milker has to find the others, as a one legged stool is dangerous for the milker to sit on. Then there is the chair with short legs that makes a pretty good stool. A paint keg with apiece of board nailed on the end answers very well when nothing better is at hand, and if an extra milker is at hand a common pail can be used. There is also a patent milk stool that will hold the pail as well as the milker; it is rather a clumsy seat to get out of the way if the cow is in the habit of using her hind legs too freely. With such a stool a could would not be apt to get any bad treatment by stool blows. Some milkers get down on their knees, setting the pail under the cow, a poor place to put the milk pail, especially if the cow puts her foot into the pail. We have also seen a small pail used with one hand to do the milking, but this is a waste of time.

Some time ago we saw in a certain stable a newly made milk stool that we think is worthy of its place as a milk stool. Its makeup is a piece of 2 inch plank, about ten inches square with three good legs, put in right, a covering of burlap with a thin layer of excelsior underneath and a nailed round the edge of the plank. Persons that make milking a test need comfortable surroundings and a comfortable seat might help keep the milker good natured, and kindness on the milker's part will be a means to keep the cow good natured.

So much for the different milk stools. We hope no stool will be used as a weapon on the cow. If some of the stools mentioned are used on Topsy by a person witn the force of a quick temper and a strong arm it will result in a broken stool, a bruise and a loss of milk.

When a person is in a cow stable, if he employes or uses a small portion of his look sharps he can tell if business moves along smoothly, especially at milking time. The cow looks as if she had a good home because she is well fed and kindly treated, rough and loud words she doesn't hear; kicks and blows are not her portion. Change the aspect of things; let rough treatment take the place of kindness and the result is nervous cows, afraid of their milker and the worst is a loss in the milk pail. One great secret in dairying is clean milking, which has a wide meaning, and milking ought to be done by the same person for the same cow and as near the same time as possible. The milker must show a certain respect to the animal and in most cases the cow will return the same feeling.

It is very possible to fail, even after much thought and expense is used to build up a good herd of cows. The dairyman aims to receive returns sufficient to be profitable, but after all his outlay in dollars and thought there are many chances of leakages regarding the milk question. In many cases not much notice is given to how the milking is done, and it is well known that not many milkers enjoy being watched, especially hired help. The marketing of the product is also a matter of importance.

There are several bad habits or tricks that some cows have that are very annoying to the milker, but it is an animal that we have to deal with. Sometimes the milk stool is used for other purposes besides to sit on, or a kick may be used on bossy in place of the stool. A kicking cow is almost worthless as a milker. Sometimes the milker, pail and contents get hurt. The butcher's block is the best place for such. Some heifers when they freshefi the first time have several tricks. They are apt to keep the hind legs on the move while milking is going on. If she persists in not letting the business go on, put the left arm in front of the gambrel joint, take hold on the off leg, and milk a while with one hand. If this fails to get satisfaction, get up from the stool— but don't use it—take hold of the off hind leg with both hands and pull the leg from under her, laying her over on her side, let her get up, lay her over again and in almost every case she will know what that means. Sometimes the udder is tender and needs to be used gently. A milker sometimes is to blame for kicking cows, as is the driver of balky horses. There is the switcher that is very unpleasant sometimes, and the flies have something to do with that. In summer a covering will help; in winter tie the tail to something and in the midst of it all, have patience.

There are other notions that the cow is the subject of, and in all let patience have her perfect work. The sure way to successful dairying is to get and keep good friendship with the cow.

A dairyman must know a good milked one from a poor one in order to succeed. Some dairymen have the cows eating while milking is on. That is a practice we very seldom follow. In our opinion it is enough for the cow to attend to one thing at a time, that is to give her milk. The first work in the morning is milking when the cow is in quiet mood. On the other hand, if she had feed before her she is somewhat excited, and that ought not to be at the time of milking. We had much rather see Brindle chewing her cud than eating, because eating is accompanied with some disagreeable movements and here again comes in patience. Talking while milking ought to be avoided as much as possible, especially if the milkers are at each end of the stable, as they may have to stop milking to hear each other's story. Milking is of more importance than story. Quick and clean milking is what is needed.

Here is the plan we follow in winter—Morning, milking done, grain ration, next silage and after breakfast a feed of corn fodder; noon, water in yard from tank, watering done, put cows in stable and feed a small feed of hay or oat straw, about half-past four give a small feed of alfalfa. When this is eaten, milking is done. That done, a grain ration is fed, then silage. That finishes the feeding part. Perhaps a cow may get used to eating while milking, but the milker must do the same.—Geo. Hodgson.

Average Yields.

A common question round the factory receiving platform is "how are the cows doing?" What a volume of thought that suggests! If they are doing well is it because of good feed and careful attention; or may it be despite the feed and care they deserve, but do not get? Leaving aside the question of weather, breed, heredity and persistency of flow of milk, is it possible to account for the remarkable differences in yield that are to be found? For instance, the dairy division at Ottawa found in one locality 100 cows that gave 3,000 lbs. of fat last month, but 100 cows close by in the same county gave only 2,500 lbs. of fat. Another lot of 100 cows in a near by county gave only 2,200 lbs.

Is the ordinary factory patron's herd keyed up to the pitch of creditable performance, or is it just jogging along in the old rut of "average yields?" Suppose the patron ascertains his herd is doing "about as well" as his neighbor's, does it not seem a great pity that his ambition should end there?

Average cows can do vastly better if their owners train them and train themselves for better results. If each lot of 100 cows in the Dominion gave an additional 500 pounds of fat per month, would that not make a startling difference in the amount of the patron's cheques? Cow testing has helped many communities to far larger banking business, because it shows that scores of cows, and average herds, can be made to produce far more than they do at present. Make each cow pay a good profit.

Feed Dry Cows Well.

For many years most of our dairy instructors have taught that the milk of any cow is practically constant, and that it cannot be affected to any extent as to its component parts by the feed consumed. We have shown that the condition of the cow at times of freshening is an all-important factor for consideration. And man who will unduly shorten the lactation period of his cows in order to force them dry to fatten before freshening may well be considered an enemy of the breed and of the short-time test; while the man who, after an exhaustive lactation period puts his cows into condition for freshening is to be commended. We have largely given up following the teachings of nature. In a natural condition her-

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binorous animals give birth to their young in the spring at about the time the grass will furnish plentiful sustenance; and it is not so long ago that farmer-dairymen, even in the dairy sections, tried to bring their cows through the winter with the least expenditure for feed. The expression "spring poor" describes the the condition of the animals.

A fleshy condition was rightly associated with parturient apoplexy or milk fever and consequently as something to be avoided. It was even taught that to keep the cows in rather a thin condition insured better and stronger calves. Milk fever was indeed a dread disease; its victims were always the best cows in the herd. Were they the best because when dry they had a tendency to take on flesh, and so be better prepared for the next lactation period? I think so. The air-treatment has banished the terrors of milk-fever and has giveo to the breeders of dairy cattle all the advantages to be derived from properly caring for their cows while dry. If our short time test has resulted in but the one thing of teaching the importance of having raidy cows in strong, healthy moderately fleshy condition at freshening, it has added millions to the wealth of the country.

Churning in Summer Should be Done as Early as Possible in the Morning.

A few rules on the management of a dairy: First, everything used in a dairy must be perfectly clean. In summer all utensils should be rinsed in cold water before use. In winter all should be rinsed in hot water. Churn, butter-worker and prints should be put in soak the night before churning in the summer in cold water. In cold weather the churn should be warmed with hot water before putting the cream in; if very cold and frosty the cream tins should be set in a furnace of hot water to take the chill off the cream before putting it in the churn. Always add salt and saltpetre to the cream. When saving it for churning stir once or twice a day till there are a lot of bubbles on the top of the cream to emit air.

Butter day: Churning in summer should be done as early as possible in the morning while cool; if churned at night, well wash it in the churn with two lots of cold water; drain all water away; work salt in; put a wet cloth over the butter, and let it stay till morning, when it will be quite firm and fit to make up. Butter should never be sent to the market the day it is churned in the summer—always allowed to set one night, when it will be in good condition for packing. Each pound should have a strip of butter paper round it to prevent finger marks. The kind of feed the cows have makes a great deal of difference, as on some pastures the herbage spoils the butter; swedes are bad for the butter; mangels must be used sparingly.

Fix the Responsibility.

When a disastrous railway accident occurs the whole trend of the enquiry is to ascertain the cause, so that measures may be taken to prevent a recurrence of the wreck. If a fault is noticed in any workshop is not the particular delinquent sought out? Every traveller on a steamer pays passage money; the several branches in a department store are all expected to show a profit on the year's business. So the dairy farmer will do well to enquire as to whether he has any delinquents in his present herd of cows, perhaps one or two are in a fair way to wreck his fortunes, their passage money may be paid by some better producers, for often two or three out of every herd of twenty cows show no profit at all on the year's production of fat.

Plenty of cows in June or July gave over one thousand pounds of milk and over thirty-five pounds of fat. What dairyman would voluntarily keep the kind of cow that yielded only twenty four pounds of fat, or those that gave only four hundred pounds of milk during last month? Yet some men got only that much from a great many cows in Ontario and Quebec. This is the point; each dairy cow has a certain responsibility, that of producing plenty of milk and fat at a profit. So, also, has the dairyman his responsibility, that of knowing his cows do not shirk theirs. His business is to know what each cow does; she won't tell, he has to keep individual records to find out. They cost little, they do much.

Ranked at the Very Top

DAVID Rankin was a big farmer and he knew his business. He owned the largest corn farm in the world, about 35,000 acres down in Missouri. He devoted his life to the pleasant study and practice of right farming, and he succeeded mightily, for he made $4,000,000 in the business of farming. This is what David Rankin said about the manure spreader: "It is the most efficient money-maker on the place."

It's warm praise to be ranked above all other farm machines, but it is in keeping with what all the agricultural world has been recognizing. Soils rebel when crop after crop is taken from them, without return of fertilizer. Witness the abandoned, worn-out farms of New England. Return every bit of manure to the soil by the spreader method. The I H C manure spreader will save you much disagreeable, hard labor, will spread evenly, and will make one ton of manure go as far as two tons spread by hand.

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You will find all styles and sizes in the I H C spreader line. They will cover the ground with a light or heavy coat, as you choose, but always evenly, up hill or down. There are high and low machines, with steel frames, endless or reverse aprons, but always giving best possible service. Tractive power is assured by position of the rear wheels well under the box, carrying nearly three-fourths of the load, and by wide rimmed wheels with Z-shaped lugs.

These and many other things will interest and convince you if you look the I H C spreader line over at the local agent's. There is one for your exact needs. Read the catalogues that the agent has for you.

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LIVE STOCK.

Making Pigs Pay.

"I can make more out of a brood sow than one of my neighbors, who is a horse fancier, can make out of his best brood mare," says M. C. Thomas, one of the practical hog men of Ohio in the Rural New Yorker. "I am not abig raiser of hogs." says M. Thomas, "but I turn off about 200 head annually, and they all pass the 200-lb. mark. I receive from seven to eight cents apound for them, and to show how good investment my feed turns out to be, when turned into hogs, I figure that I receive one dollar for each bushel of corn turned in my porkers.

"You can succeed with the breed of hogs you like, and with no other. Poland Chinas are my favorites, and my liking may be due possibly because of my closer acquaintance with the black and white fellows than with other breeds, and because they have netted me anice figure each year. However, I would say to the pork producer not to concern himself so much about the fine points of color, the right number of twists in the pig's tail and other small details that get on the nerve of the hog fancier, but look for productivity and efficiency. The swine breeders have established certain standards of perfection for all breeds, and for the Poland China, to be afirst-class show animal, he must have the right turn of the tail, it must have a white tip, and the pig must have four white feet and a white star in his forehead. To cinch these perfect markings it has been necessary to imbreed, and this has reduced the efficiency of the sow. She seems to have gotten down to producing twins, when she should be on the job and deliver to the farmer at least seven or eight good healthy pigs. I figure on eight pigs from my sows, and these litters come in March and September. Occasionally I have litters come as early as the first of February and the first of August.

"Don't tie up to much money in equipment. A simple hoghouse can be built for $5.50. I have built these houses, am using them, and find them far more efficient than the expensively planned apartment buildings designed by the city farmer or the theorist.

"The small houses such as I build should be constructed on runners, and about eight feet long; they are six feet wide, and the boards running to apeak make the house appear "A"-shaped. One end should be closed, and the other should have an opening large enough easily to admit the sow. When cold weather comes, a covering can easily be placed overthe door, by tacking an old fertilizer sack at the top of the opening. The sow will recognize that it is not fastened other than the top, and she will soon learn to throw it aside with her nose and to pass in and out. At farcowing time, just hang alantern in the peak of the little house, and the heat from it will make the quarters comfortable for the sow and her family. These colony houses need not be built of about the farm may be used, and if lumber is scarce, roofing paper may be tacked on the sides of the building.

"There is no danger of the sow crushing her little ones. I never spend a minute's time with my sows watching them at the time of farrowing. The shape of the building provides space under the sides back into which the sow cannot crowd, yet it allows room for the litt,e pigs to run around behind the mother. In the back end of the house a board might be nailed a little higher than the floor. This board can be placed on blocks, and be just high enough to allow the little fellows to run under it, yet it will keep the mother from crowding her young against the wall.

"Keep plenty of straw in the hog-houses, and do your share to keep the sow's home neat and clean, and she will do her share. A sow is naturally clean and if given half a chance this instinct will ruleher conduct in her home. It is an imposition on this profitable farm animal for the farmer to give it as dirty quarters as he does, when buildings and yards may be erected as cheaply and efficiently as to-day. And the buildings which I describe have the advantages of being easily cleansed, and can be drawn about from one field to another.

"When I wean my little pigs, intherstead of taking them from their mother, I take her from them. They seem to do better. They are already acquainted with their home, and can get along without their mother better than they can be shifted from one place to another.

"I feed the little fellows skim-milk and shelled corn, and add some tankage. The tankage I buy contains 80 per cent. digestible protein, and, of course, all farmers are aware that it is the refuse of stock yards, ground dried and prepared for feeding. I do not advise starting in heavy on this feed, but gradually. I feed one pound of tankage to ten pounds of shelled corn. Perhaps other fe(ders may not agree with me, but I feed shelled corn to my little pigs. I do not grind it, since nature has endowed the little fellows with grinders, and why not keep the equipment busy? I supply plenty of good fresh water to my hogs. Be sure your hogs have plenty of drink. Then when I feed them, I just like to stand by the fence and watch them grow.

"I have my own remedies, which I believe are effective. I sharpen their appetites with all the soft soap the pigs can eat. It is surprising to see how this will put them on their feed when they get off it even for a short time. As aconditioner I secure from my druggist some black antimony and mix it with the same amount of baking soda. I give about a teaspoonful of this to a hog weighing, say, 50 pounds, and Iadminister the dose each week. I also aim to give ahalf-dozen drops of turpentine to each porker, each week, and I find this keeps him free from worms. I believe in keeping my hogs healthy, and I consider the use of those things efficacious in doing it. I prefer as pasture and as ahogging crop combined, a seeding of rape between the corn rows. This can be done at the final cultivation, and greatly increases the feeding efficiency of the field. Hog-raising is profitable, but he must make short cuts in feeding and caring for the animal. If a man loves ahog and will treat him right, the hog will pay the owner handsome profits."

Start Your Herd Right.

There is a general centering of effort now on increased production of live stock. High prices and scarcity of the meat-producing animals have influenced farmers and land owners to buy breeding stock and exert some effort in this line of industry, realizing that remunerative prices will prevail for some time to come. Not everyone, however, that goes into this work has a proper conception of the importance of starting right or understands that a few more dollars in the investment of well-breed stock means many dollars to the credit of the business at the end of the first year.

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This is an age of pure-breed stock from the standpoint of large, rapid gains and also higher prices. The man who wishes to increase his breeding herds of cattle and hogs cannot afford to buy quantity and hope to profit equally with his neighbor who buys quality. The feed is an important part, but should not be sacrificed on animals that are not able to respond liberally. "The best is the cheapest in the end," is an old saying, and never has been successfully refuted, especially in animal breeding where heredity exerts such a positive influence.

To the buyer who has never tried pure-breed stock in hogs, cattle, sheep and horses, we would suggest that now is a good time to make a start. If you have not the capital to invest, in as many head as you desire, by all means make a start with a few pure-breed animals, and use nothing but pure-breed sires. To produce and own the best is the ambition of hundreds of energetic breeders in every variety and breed of animal now being produced. There should be a quiet ambition in the mind of every intelligent breeder to excel—to be above his neighbor in quality of stock produced.

It is this ambition that is responsible for the excellence and quality of animals that are today commanding such seemingly high prices. A good breeder knows when he sees an animal of superior quality that the quickest way to attain, in his own herd, the individual merit that this animal possesses is to buy the animal and introduce his blood and breeding at once. It would be folly for him to set about in some roundabout way to attain this character and individual excellence. He might carry this type in his mind for a lifetime and yet not be able eo produce it. It is very often the wise plan to buy your ideal when you find it, even if you have to pay the other fellow a big price for producing it to you.

How many breeders have produced wonders? And, again, how many breeders have become famous by paying abig price for the wonders that other breeders have produced? It is a good plan to get into the pure-bred list as soon as possible, and keep clear of the grade animal, even when breeding for meat production.

The Age of Breed Heifers.

The warning not re the folly too early breeding of heifers, recently published from the pen of Professor Barton, of MacDonald college, is timely. In these days of "Hustle up Johnny, get rich quick," etc., even the purebred cattle are innocent victims of the craze of humans to get ahead of the other fellow, says G. A. Brethen, in Farm and Dairy, Peterboro, Ont.

Apparently there is a very strong temptation to breeders of the present day to have the work of reproduction begun almost before the female has passed the age of calfhood. I believe with some of us this is done with awell-defined purpose in view of promoting early development of the organs of production, and thereby make a highly creditable showing for the heifer, when age is taken into consideration; and we would hesitate to call such an object an unworthy one. With altogether too many, however, apparently no better reason is forthcoming for early breeding than could be given by the boy with the knew jackknife. "When he has the knife he needs must whittle." No aim, no definite purpose, just haphazard mating, and at any old time.

In the case of well-grown heifers with atendency to become rough, we believe it is quite proper to make an exception, and breed earlier. But we deem that Professor Barton is on the right track when he suggests deferring the breeding of the heifer until about 24 momths of age, as a safe rule to follow.

Time and again, when visiting some of the older breedeers of Holstein cattle, I have been forcibly impressed with the size, strength, and type of the early imported cattle, as displayed on the pictures hanging on the walls. Whether these pictures are true to type, I am not prepared to say, but be this as it may, cattle of this description are altogether too uncommon in these days of wonderful progress, especially along the line of almost abnormal production.

While we would hesitate to say that persistent breeding of immature animals has worked all the evils attributed to the practice, still I think that any course which leads to deterioration in the size, strength and constitution of dairy cattle, should be carefully avoided.

In our experience, while we must admit that to a limited extent, we have been guilty of this practice of having heifers freshen at or near 24 months of age, we confess we have not seen the evils resulting therefrom to such a marked extent as has the professor with the cattle with which he experimented. This seeming confliction of results, we believe, lies in the fact that we have always, in handling heifers in this way, made it a practice to lengthen the first lactation period to about 15 months.

Much can be said in favor of this system. We give the heifer at least a 12-month milking period with her first calf. This is conducive to the habit of persistent milking, the balance of her life. At the same time we leave a sufficient time for a rest period which is to build up the heifer before she is called upon to perform the work of her second period. of production. An examination of the heifers handled in this way in our herd show them invariably of more size and depth than ther dams, and their in crease in production very satisfactory.

Send your Raw FURS to John Hallam

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THE HORSE.

Splints in Horses.

Splints are the commonest kind of blemish found in horses, but fortunately they do not, as arule, affect a horse's usefulness or soundness in any way, the objection to them mainly consisting in the fact that they form more or less of a disfigurement if of any appreciable size. These bony deposits on the cannon bone are very often thrown out on comparatively slight provocation, the inducing cause usually being either concussion resulting from trotting on hard roads (or in the case of riding horses also from galloping or jumping them when the going is very hard) or else a blow inflicted on the cannon by the foot of the opposite limb, while occasionally they are caused through the horse accidentally hitting his leg against some object Young horses not infrequently develop splints when they are being broken in or soon afterwards, and one may often notice that these are more liable to throw them out than older and seasoned horses, a circumstance to be ascribed to the fact that the bones of their legs have neither attained their full degree of strength nor are inured to the affects of concussion. Sometimes a splint will make its appearance in the unbroken colt, but it decidedly does not speak well for the stoutness and the wear-resisting capacity of the limbs if an exostosis of this kind shows itself thus early. Some horses possess a special susceptibility to suffer from splints, which usually is inherited.

THE EFFECT OF SPLINTS

While a splint comparatively rarely causes actual unsoundness, it will very often give rise to aslight degree of temporary lameness or tenderness in the affected limb during its formation and while the inflammation which leads to the throwing out of the bony deuosit is active. Such lameness quite commonly is present before the splint can actually be seen or felt, so that the cause of it frequently remains unsuspected at the time, though a careful examination would probably reveal the presence of some heat at the part where the exostosis is in process of development. The inflammation soon runs its course and subsides, and any lameness there may have been then disappears, the splint becoming perfectly callous and in average cases occasioning no further inconvenience. It sometimes may happen that much concussion gives rise to another inflammatory process in the same place on some future occasion, perhaps after a year's time, or longer, the result of whick will be to increase the size of the original splint. It is very desirable to give rest during the criticaff time when a splint is forming, while the application of cold water and cooling lotions in order to allay the inflammation will also prove beneficial, for the splint will remain all the smaller if such treatment is followed. If the animal is worked at this stage the inflammation naturally is much aggravated and prolonged which will cause a correspondingly greater amount of osseous material to be thrown out, so that a larger sized and more unsightly splint results. Unfortunately, the fact that a horse is developing a splint is very often not detected in time, the mischief not being noticed until the splint has actually formed. Then it is too late to adopt the above remedial measures. Newly-formed splints can oftentimes be reducee to a greater or less extent by blistering or painting them daily with iodine, the effect aimed at in following this line of treatment being to bring about a partial absorption of the bony deposit. In the last resort, recourse can be had to point-firing in order to try to reduce a splint, but this drastic step should only be taken in a case of really pressing need, such as when the splint gives rise to lasting lameness and milder methods have failed to remedy the mischief.

TREATMENT FOR.

Ordinarily there is no particular reason for interfering with a splint, and it is a good policy to leave we,l alone. In cases of old standing, when the splint is fully solidified, it is most unlikely that blistering or the application of other absorbents will make the least impression upon the exostosis, so that it is, as a rule merely a waste of both time and trouble to meddle with it. In plenty of cases splints become reduced in size of their own accord in the course of time owing to the absorption of some of the osseous material taking place in the natural order of things, and in aged horses splints will sometimes—as a result of such natural absorption—almost wholly disappear again, ever when they originally were quite large size. Splints are most usually so placed on the cannon-bone as not to come into contact with the sinews at the back of it, and in these circumstances they do not, as stated, ordinarily cause any inconvenience. But sometimes it happens that the splint is located so far backwards as to interfere with the play of the suspensory ligament, or—which occur more rarely—with that of the back tendons; and then, if bad luck will have it, lameness may result. Hence a splint situated far back in the cannon is to be regarded as being more serious than those placed more forward. However, even when the position of the exostosis is such as to get in the way of the back sinews these latter often after ashort while, so to speak, adapt themselves to the altered situation, so that, despite the awkward position of the splint, the horse will work quite sound. But if the lameness persists, then it becomes imperative to resort to drastic treatment with a view to reducing the bony growth.

Horsemen Attention!!

DR. J. WOODBURY'S HORSE LINIMENT & DR. J. WOODBURY'S CONDITION POWDERS will save and preserve the life of your horses. Their use will cure and prevents the diseases common to horses, such as Coughs, Colds, Distemper, Glanders, Spavins, Pink Eye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Trouble, Fevers, Cuts, Sores and will remove bunches of all kinds.

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CURES:
SPLINTS
CURBS
SPAVINS
ENLARGEMENTS
COUGHS
COLDS
DISTEMPER
GLANDERS
FOUNDERS

After Using

Use this preparation thoroughly for alland every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and note its effects, and honestly judging it on it's merits, you will be compelled to endorse it.

TESTIMONIALS

DEAR SIR :—I had a mare which had a very bad cough and heaves for almost six months, and become so thin there was nothing left apparently but skin and bones and I was tempted to shoot her. A friend of mine who had used Dr. J. Woodbury's Horse Liniment, with good success, induced me to try one bottle of it which I did with the best results. I used just one and one-half bottles of the Liniment which effected a complete cure of both the cough and the heaves, and I have worked and driven her ever since.

I strongly rccommend Dr. J. Woodbury's Horse Liniment as the best Horse Liniment on the market, and advise all horse owners to try it.

Very truly,
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Hillsboro, N. S.

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Some Common Ailments of Farm Horses and how to Treat Them Effectively.

Diseases of the horse which are called common are frequently serious. I will name only a few of the common ones. Quite often the trouble is with the man and not with the horse. I want to tell you first a little bit about the food, light, ventilation and general care of the horse in which the man figures a great deal.

The first thing will be the watering. The water from agood well is all right if the water is pure and situated in a place that keeps it so. Water is a source which contributes to disease by carrying the disease exciting organisms such as fungi. Diseases such as strangles and distemper are often carried through water. The wells should be 60 feet or deeper and the area surrounding them free from any low places or manure drains. Low water is very dangerous to stock and so is running water, where sewers empty into it. Bacteria from different diseases may get into the water and be carried down the streams. The average horse will use six to eight gallons on the average, a little more in the summer a little less in the winter. They should be watered before feeding and not immediately wash the food out of the stomach before it has a chance to be digested. Watering immediately before feeding. If the water is cold, cools off the stomach and the secretion is not so good. Do not water with real cold water or in large quantities of water immediately after or immediately before feeding.

The barn should be well lighted. Several diseases are the result of badly lighted barns due to the fact that they are too dark and the sudden changes from the darkness to the bright light causes a weakness and then disease. You do not want too much or too little light. The window should be placed as high as the horses heads or a trifle higher and at the right angle so as not to allow the light to strike the horses directly in the eyes. There should be plenty of light by all means.

We should have good air in our barns, as it is essential to the health of the horse. It is well to have the windows above the horse's head so that a direct draft will not strike the horse. Windows should be on two sides of the barn so that the air may pass in from the one side and out the other. Be sure the air in the barn is pure. A good way to find out the condition of the air in the barn is to notice the air as you go in from the outside into the barn. See that it smells fresh and clean. Il it is good for you it will probably suit the horse all right. Count your air space by the number of windows you have and do not take into consideration the doors. Do not depend upon fresh air coming through cracks and crevices either. It is not a good idea.

The horses should have a regular amount of feed and be fed according

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to the size of the horse and the amount of work it is doing. They should receive a balanced ration that is fed at regular periods. They should have salt before them all the time. Feed good feed and see that it is not moldy. Bad results come from feeding moldy feed. Be sure you feed according to the amount of the work the horse does. Have a pair of scales and weigh your feed and hay. Good many horses waste from one-half to one-third of the hay. Some men pile the mangers full and let the horse eat what it wants then use the rest for bedding. Weigh it a time or two and then you will have an estimate of the amount you should feed. Allow the horse to clean up the manger after feeding and it will avoid part of the trouble with colic.

By disinfection we mean the getting rid of those organisms which spread diseases in infectious diseases such as strangles and distemper. Be sure when you disinfect that you disinfect thoroughly as it is aremedy or medicine which destroys the organisms that cause disease. One of the common disinfectants in use is thr bichloride of mercury. It must be used carefully. It acts on metals and poisons animals if given in large quantities. Some of the safer disinfectants are the coal tar disinfectants as creolin, etc. Using a 5 per cent solution usually gives good results. When you disinfect do a thorough job of it. Bacteria are very small and you have to be very careful or you will miss some of them. You cannot see them as you pass down the street, but they are there just the same, and they turn neither to the right nor the left, but enter into the nostrils and lungs. Bacteria are very small organisms so a spot no larger than the end of your little finger. If you do not disinfect thoroughly and leave a few such spots your stock comes along and rubs against this spot and the disease is spread. So disinfect thoroughly. Clean out all the corners, all the cobwebs and dust. If you have a dirt floor take off three inches of the dirt and put on new, or better while you have the dirt off put on cement. If your barn is tight you can use some of the disinfectants such as formalin or some gaseous disinfectant. Otherwise use a spray. Chloride of lime is a good disinfectant to use in the form of a spray for afterward everything is clean and white. Sulphur is also good, but sometimes the animals breathe in too much and it is injurious to the lungs.

Bot flies is a serious disease, but it is hard to prevent. The bot fly is a little fly that bothers the horses' legs and under the chin. They deposit tiny eggs on the hair of the legs and under the chin. To get rid of these pests attack them while on the horses' legs and not after they have developed. They cause no trouble while they are on the legs of the horse, but after they have entered stomach. The horse licks his legs and the eggs get on his tongue and are carried into the stomach where they hatch. They stay there until they are developed and pass out through the body of the horse in the feces and go into the ground. The method of treatment is to take a pair of clippers and trim the eggs on the legs and keep them trimmed off and you should have no trouble. You cannot reach the disease once they are in the stomach and so in order to prevent it keep the legs free from the eggs. Another fly similar to this deposits black eggs on the legs of the horse and these also develop in the stomach and may pass further back into the intestines.

When horses are affected with lice and mites the thing to do is to clip the horse and disinfect. For washing a horse that has lice a very good thing to use and very common too, is tobacco stalks about four ounces to a gallon of water and boil about thirty minutes. Fill it up after it has been boiled unti, you have a gallon and use this. Mites are a little harder to treat. Clip very close and then spray with a disinfectant and these are the only means of getting rid of lice and mites in the horse.

One of the symptoms of intestinal worms is the enlargement of the abdomen. People often think is is caused from overfeeding. By watching closely you can notice the passage of worms in the feces. Treatment is to give something that drives off the worms.

Azoturia is a common disease existing at this time of the year and one which everyone is interested in. This disease has been known for a long time and yet we do not know just what the cause is. Horses that are kept in the stable, fed nutritious feed and not exercised are the ones most subject to the disease. It affects the horses that have been at work and then are left to stand in the stable over Sunday and perhaos Monday on the same ration w;thout exercise. Horses that are being fattened for market seldom ever have it. Perhaps it is because they have no exercise at all and then they are usually fed a ration containing certain foods which serve to keep the digestive system in good condition. The symptoms are profuse sweating, weakness in the back and hind legs, stiffness, and if exercise is continued they will finally drop. When the first signs of the disease appear they should be stopped. Keep them warm with the head up and get help as soon as possible. The horse usually begins to go lame in the hind parts first as those are used most in working. The disease is almost always incurable if the horse is allowed to go down.

Colic is common in horses. A man usually thinks it is just a little stomach ache but it is a very serious proposition. There is more than one form It is like tuberculosis which is a disease of the lungs, bones, joints, etc. There are twenty-five or thirty kinds of colic. Sometimes treatment is given for colic when it is not colic at all but pains coming from an attack of pneumonia, and quite often the result is serious, for treatment for the colic is of an entirely different nature than treatment for pneumonia. Colic is a serious thing and should not be treated at all unless you are sure that it is colic. Sometimes in the case of young colts, colts being subject to colic, treatment is given for colic and the colt dies. Do not make a colt suffer by giving a treatment that will take effect the next day. Injections in most cases will relieve the suffering immediately. Spasmodic colic is where they have an attack of the colic ever so often with apparent relief in between the attacks. Treatment should b? given at once, for if the animal is neglected it is sure to die.

Moon blindness has a great many causes. It usually comes from low damp, mucky soil, or weather. By taking the horse to higher elevated ground it will recover. Anything which lowers the horse's vitality causes moon blindness. The disease may not be hereditary, but the tendency to the disease is hereditary. Horses with a small eye or a great circle around the eye are subject to it. If the horse has one sound eye compare them. Examine them and see if there is a little angle in the upper lid, if so it is a sign of moon blindness. It may develop in thirty days, six months or go a long time. Watch these horses with the little angle in the upper eyelid. Little later a scum appears and the eye is swollen and red with a discharge from the eye. Finally a scum develops on the eye. This may disappear and then return again.—Dr. J. D. Cline before Iowa Draft Horse Breeders' Association.

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Horse Notes.

The well trained work horse always has another pull coming and doesn't mind it at all if the pulling doesn't hurt his shoulders.

A stiff scrubbing brush is a very good thing to clean dirt from the horses' legs.

If you are buying a horse, get him on a slow trot. Then, if ever, he will show any lameness he may have.

Did you ever think that grabbing sheep by the wool makes a sore place on their bodies? It surely does; don't do it.

If our cattle could do to us as we do to them, what a lot of sore shins and broken ribs there would be on the farms of this country!

Full blood or grade swine will pay a handsome dividend. They cost more at the start, but are very satisfactory in the long run.

There is in some parts of New Ontario a reversion of the use of oxen. Well-mated and properly broken they make a reliable farm team, and can be turned off at a good profit when the outdoor work is over.

"Were all medicines as meritorious as Chamberlain's Colic, Cholera and Diarrhoea Remedy the world would be much better off and the percentage of suffering greatly decreased," writes Lindsay Scott, of Temple, Ind. For sale by all dealers.

POULTRY.

Simple Treatment for Early Symptoms.

While the writer holds that it is not profitable to report to much poultry doctoring, inasmuch as even if the fowls are apparently cured they are unreliable as breeding stock. But to give prompt treatment in the early stages is awise act.

Reviewing the more common ailments in the poultry yard, we learn these facts:

If in tke early stages of bumble-foot, we can spread the corn by painting liberally with tincture of iodine, daily, for a week. Bumble-foot is caused by having to high perches or roosting places. In flying down the fowl's feet often come in contact with some hard, sharp object which causes a bruise resulting in the corn.

When our hens are allowed to become overfat, a disoreder of the oviduct is often the result, which causes it to "break down behind." It really is no disease—merely a penalty for injudicious feeding. The best remedy known is to kill and eat all such specimens. They are not sick birds.

Canker is a disgusting ailment, but generally in the start it can be checked by several applications of fine salt rubbed on the sore spots.

Four drops of aconite in a half pint of drinking water, given daily for a week or more, is effective in cases of cartarrh.

Chicken-pox can be successfully treated by anointing the head and wattles with carbolated vaseline, after having first bathed well with hot water. A one-grain quinine pill thould also be given each night for a week.

A one-grain quinine pill, given each night for three nights or aweek, will also work wonders in cases of colds.

Cases of costiveness can also be relieved by adding 10 drops of sulphate of magnesia to each pint of drinking water.

For enlarged or sour crop, a half teaspoonful of baking soda to a quart of drinking water added daily for a few days is excellent. During time of treatment feed sparingly.

Cases of crop bound have been successfully treated by giving the bird all the warm coffee that can be forced into its crop. The dose should be repeated several times.

When a bird is debilitated it needs something nourishing so as to build up the wasting tissues. There is nothing better than a raw fresh egg every morning, until the fowl shows signs of recovery. Then it can be changed to a little cooked meat, and a little muriate of iron added to the drinking water. When it is noticed that a bird is mopish, but otherwise seems in good health, the sluggishness can be quickly remedied by giving a family liver pill—just the kind that you would take yourself did you seem out of sorts. Repeat each night for three nights in succession. If possible also allow the bird free range over agrass plot during the day time.

Slight cases of diarrhoea can be greatly benefited by adding a few drops of spirited camphor to the drinking water. Also add finely ground charcoal to the soft feed.

Nothing better than linseed meal for indigestion. Give a gill in the soft feed to each dozen hens. A teaspoonful of fenugreek added to the mash for every ten fowls is also a good remedy.

A pill made of a half grain of quinine, one grain of sulphate of iron, and give grains of phosphate of lime, is just the thing for cases of leg weakness. A more simple remedy is ten drops of tincture nux vomica in a quart of drinking water.

A pill of asafoetida, about the size of apea, given nights and morning, is highly recommended for cases of limberneck.

When the fowl "rattles in the throat" it is evidence that there is some bronchial affection. This "rattling" will be more plainly noticed at night, while the fowls are roosting. Give a half teaspoonful, every other morning, of amixture composed of equal parts of vinegar and water. If this is not effective, treat with a mixture of one part spirits of turpentine with four parts of sweet oil, giving ten drops daily.

There is no more effective ?emedy for scaly legs than to coat them with gas tar, allowing the preparation to remain on the legs until it wears off. The scales, as a rule, come off with the tar. To make astill more complete job of it, after the tar has worn off, is to wash the legs with warm water and carbolic soap, and after wiping dry apply apreparation of one-third carbolic acid to two-thirds glycerine. The glycerine has a tendency to soften and bring out the color on the shanks and toes that may have become harsh and dry. A drop of glycerine is also a sovereign remedy for sore eyes.

Linseed meal is made by grinding flaxseed from which the oil has been mote or less completely extracted. "Old Process" contains more fat and somewhat less protein than "New Process" linseed meal.

Gluten meal and gluten feeds are by-products left in the manufacture of starch and glucose from Indian corn. Corn consists largely of of starch. The waste product from the manufacture of starch or sugar is relatively much richer in oil and protein than corn. Many factories are removing part of the corn oil from the waste, so that some gluten meals carry but little oil.

For some reason, the Jews, in purchasing geese in the market prefer a bird with a yellow or orange co,-ored bill. As long as he can secure a light colored bill, the Jew will not purchase a goose with ablack bill.

Cartarrhis not roup. It is usually caused by dampness; exposure to a drenching rain is a good starter for the disease. Roup is apurulent catarrhal affection of the air passages.

Dr. Sanborn says it is a filthy disease, and not caused by "taking cold." The difference between roup and catarrh, is that the latter has a tendency to get well without treatment, while the former seems inclined to progress to a fatal end.

An English remedy for leg weakis to give each chicken daily four grains of citrate of iron, or five or six grains of phosphate of lime, put in the drinking water and given in pellets of meal. A good supply of nourishing food must also be offered, and it should be of akind calculated to produce flesh and not fat—worms, ground raw bones, or chopped meat being very acceptable. Plenty of fresh green food should also be given. Let the chickens hav? healthy exercise and do not overfeed them or give them food that causes the formation of fat.

Il you stop to look at it, a feather is a master piece of creation. The covering of birds combines in a wonderfu manner, lightness an complete ventilation, is a first class non-conductor of heat, and repels dirt.

A Canadian authority says that in his opinion the most profitable egg-laying fowl will be found in a white or buff variety of the American class. as a class, he says, they will beat all comers.

It is said that the calico painters use more than 40,000,000 dozen of eggs each year, and that the coffee roasters, the photographic trades, the cracker and biscuit combines, and the chemical trades consume more than twice as many.

Large quantities are also used in the leather trades, for tanning, etc. They are also largely used in the preparation of many patent foods, and the liquor trade takes no inconsiderable number. For many of these uses, inferior grades of eggs are used—not because they are better, but because they are cheaper. One biscuit company in New York City buys 4,000 eggs every week.

Healthy, strong and vigorous breeding stock is necessary for quick growing, profitable market birds.

To secure best results, the scalding of poultry is something that must be done with the greatest of care. Overscalding makes an unattractive carcass. The water should be just to aboiling point, but not actually boiling before the birds are immersed. In doing this, it must not be forgotten, the operator must hold the birds by the legs and head and then lift up and down in the water three or four times, when all feathers and pin feathers should be removed very cleanly without breaking the skin. All scalded poultry should be "plumped" after picking by dipping for about two seconds in very hot water—just under boiling point—and then thrown into cool water of the natural temperature, where it should be allowed to remain for 15 to 20 minutes.

The man who allows his fowls to roost in trees and in fences when the Fall changes come, is the one who complains of having sick hens. He finds some of them sniffling and sneezeing, some with matter exuding from their nostrils, some standing around the places where they can find protection from the winds and enjoy the warmth of the sunshine. They will stand there humpeh up, with pale combs, showing every symptom of sickness.

The beginner very often introduces roup to his flock by doing some foolish thing. For instance, he will close up the house tight at night. In Winter, when the weather is very cold, and allow it to remain closed all the next day. Naturally a moisture is created which generates a dampness,

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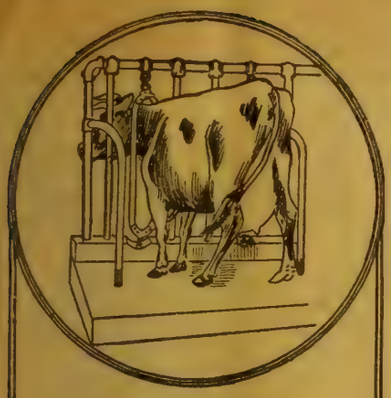

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The Fall Term

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and the whole house will feel like a vault. The dampness which fills the house at night, and which usually comes from the fowl's breath, can easily he dispelled in the day time by opening all the windows wide. Nothing will dispell dampness so quickly as fresh air, especially if it is dry. It must also be remembered that fresh air never makes a fowl sick, and it matter not how cold the outside temperature may be, it will benefit the fowls.

Spade up the Feeding Places.

On most farms feed for the flock is scattered about on the ground, and the chickens are continually fed within a small spacef The surface of the groufid soon becomes foul with the droppings of the flock. True, the sunshine acts as a germicide, and if the space is at all sloping the washing of the rain helps some; but generally the space is level and often muddyf ffl

The ground quickly becomes contaminated with the continual trampling of the flock, and if there be one sick fowl the whole flock may soon become infected. This is especially true with small chicks and young turkeys. The first advice given in cases of general loss is "change your feed place." It is often impossible to find another location so convenient and accessible.

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Be sute to try this method of often spading up the feeding places and watch results in avoiding infectious diseases and improving the general health of the flock by inducing exercise and furnishing palatable succulent feed.—N. E. Chapman, Minnesota Agricultural College.

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Don't ship bony, skinny stockd. Don't ship half-picked, flesh-torn poultry. Don't ship to every strange house that solicits your consignment. First look them up; investigate the references. Don't ship dressed stock in any old box that may be handy. It pays to use clean, fresh boxes, using care and neatiness in packing. Frequently the buyer is present when the box is opened and a sale spoiled because of the packing. Don't pack poultry after dressing until all the animal heat is out. Don't let some little market fluster cause you to change houses. Get a good, solid house and stick to it. That keeps the commission man interested in retaining your trade, and oftentimes he will pull you out of a hole caused by a glut. Don't fail to carefully inspect your shipment before closing the box. Put in the memorqndum of your own bill head, showing the count and every thing data. Keep a duplicate yourself, thereby saving much annoyance and frequent loss. Don't chase off into a new market and untried people just because of a possible temperorary advantage. Nine times out of ten you will lose. Don't fail to notify your commission house before or at the time you ship and give full data, so he can know what is coming and prepare to handle it rapidly.

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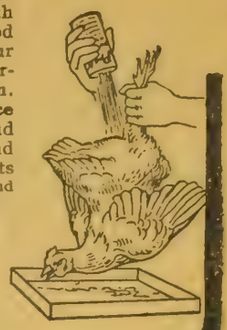

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To judge how fast our business is growing, you'll remember we stated in a previous announcement that our business last year doubled that of the year before. Well, this year the first two months' sales total more than twice the 1912 sales for the same period. More and more it is being recognized by those in the local telephone business, that we are the legitimate people to deal with. There are those in the telephone business who are interested in depreciating the success of the independent telephone movement and the development of municipal systems. On the other hand, our business lies wholly and directly with the independent telephone systems, and it is to our own best interests to look after these systems well, as on their success depends the growth of our business.

If you would like a list of the large independent telephone systems built in Ontario during the last twelve months, just drop us a line. We would be glad to send you a list of the systems, with the make of the telephones they are using. In fact, if you'll name over the large independent systems built during the last year in Western, Northern and Eastern Ontario you'll find that nine out of every ten are using our telephones and equipment.

You are absolutely safe in equipping your system with our telephones. We guarantee them as regards material and workmanship. In fact, we guarantee all our equipment and materials. And in addition, we offer to send our telephones for FREE TRIAL, so you can test and compare them with others right on your own lines before risking a dollar.

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David Copperfield.

By Charles Dickens.

(Continued from last issue.)

CHAPTER XII.

In due time, Mr. Micawber's petition was ripe for hearing; and that gentleman was ordered to be discharged under the act, to my great joy. His creditors were not implacable; and Mrs. Micawber informed me that even the revengeful bootmaker had declared in open court that he bore no malice, but that when money was owing to him he liked to be paid. He said he thught it was human nature.

Mr. Micawber returned to the King's Bench when his case was over, as some fees were to be settled, and some formalities observed, before he could be actually released. The club received him with transport, and held an harmonic meeting that evening in his honor; while Mrs. Micawber and I had a lamb's fry in private, surrounded by the sleeping family.

"On such an occasion I will give you, Master Copperfield," said Mrs. Micawber, "in a little more flip," for we had been having some already, "the memory of my papa and mamma."

"Are they dead, ma'am?" I enquired, after drinking the toast in a wine-glass.

"My mamma departed this life," said Mrs. Micawber, "before Mr. Micawber's difficulties commenced, or at least before they became pressing. My papa lived to bail Mr. Micawber several times, and then expired, regretted by a numerous circle."

Mrs. Micawber shook her head and dropped a pious tear upon the twin who happened to be in hand.

As I could hardly hope for a more favorable opportunity of putting a question in which I had a near interest, I said to Mrs. Micawber:

"May I ask, ma'am, what you and Mr. Micawber intend to do, now that Mr. Micawber is out of his difficulties and at liberty? Have you settled yet?"

"My family," said Mrs. Micawber, who always said those two words with an air, though I never could discover who came under the denomination, "my family are of opinion that Mr. Micawber should quit London, and exert his talents in the country. Mr. Micawber is a man of great talent, Master Copperfield."

I said I was sure of that.

"Of great talent," repeated Mrs. Micawber. "My family are ol the opinion that, with a little interest, something might be done for a man of his ability in the Custom House. The influence of my family being local, it is their wish that Mr. Micawber should go down to Plymouth. They think it indispensab,e that he should be on the spot."

"That he may be ready?" I suggested.

"Exactly," returned Mrs. Micawber. "That he may be ready—in case of anything turning up."

"And do you go too, ma'am?"

The events of the day, in combination with the twins, if not with the flip, had made Mrs. Micawber hysterical, and she shed tears as she replied:

"I will never desert Mr. Micawber. Mr. Micawber may have concealed his difficulties from me in the first instance, but his sanguine temper may have led him to expect that he would overcome them. The pearl necklace and bracelets which I inherited from mamma, have been disposed of for less than half their value; and the set of coral, which was the wedding gift of my papa, has been actually thrown away for nothing. But I will never desert Mr. Micawber. No!" cried Mrs. Micawber, more affected than before, "I never wil, do it! It's of no use asking me!"

I felt quite uncomfortable—as if Mrs. Micawber supposed I had asked her to do anything of the sort—and sat looking at her in alarm.

"Mr. Micawber has his faults. I do not deny that he is improvident. I do not deny that he has kept me in the dark as to his resources and his liabilities, both," she went on, looking at the wall; "but I never will desert Mr. Micawber!"

Mrs. Micawber having now raised her voice into a perfect scream, I was so frightened that I ran off to the club-room, and disturbed Mr. Micawber in the act of presiding at a long table, and leading the chorus of

Geeup, Dobbin,
Gee ho, Dobbin,
Gee up, Dobbin,
Gee up, and gee ho—o—o.

—with the tidings that Mrs. Micawber was in an alarming state, upon which he immediately burst into tears, and came away with me with his waistcoat full of the heads and tails of shrimps, of which he had been partaking.

"Emma, my angel!" cried Mr. Micawber, running into the room; what is the matter?"

"I never will desert you, Micawber" she exclaimed.

"My life!" said Mr. Micawber, taking her in his arms. "I am perfectly aware of it."

He is the parent of my children! He is the father of my twins! He is the husband of my affections," cried Mrs. Micawber, struggling; "and I ne—ver will—desert Mr. Micawber!"

Mr. Micawber was so deeply affected by this proof of her devotion (as to me, I was dissolved in tears), that he hung over her in a passionate manner, imploring her to look up and be calm. But the more he asked Mrs. Micawber to look up, the more she fixed her eyes on nothing; and the more he asked her to compose herself, the more she wouldn't. Consequently Mr. Micawber was soon so overcome, that he mingled his tears with hers and mine; until he begged me to do him the favor of taking a chair on the staircase, while he got her into bed. I would have taken my leave for the night, but he would not hear of my doing that until the strangers' beell should ring. So I sat at the staircase window, until he came out with another chair and joined me.

"How is Mrs. Micawber now, sir?" I said.

"Very low," said Mr. Micawber, shaking his head; "re-action. Ah, this has been a dreadful day! We stand alone now—everything is gone from us!"

Mr. Micawber pressed my hand, and groaned, and afterwards shed tears. I was greatly touched, and disappointed too, I had expected that we should be quite gay on this happy and long-looked for occasion. But Mr. and Mrs. Micawber were so used to their old difficulties, I think, that tkey felt quite shipwrecked when they came to consider that they were released from them. All their elasticity was departed, and I never saw them half so wretched as on this night; insomuch that when the bell rang, and Mr. Micawber walked with me to the lodge, and parted from me there with a blessing, I felt quite afraid to leave him to himself, he was so profoundly miserable.

But through all the confusion and lowness of spirits in which we had been, as unexpectedly to me, involved, I plainly discerned that Mr. and Mrs. Micawber and their family were going away from London, and that a parting between us was near at hand. It was in my walk home that night, and in the sleepless hours which followed when I lay in bed, that the thought first occurred to me—though I don't know how it came into my head—which afterwards shaped itself into a settled resolution.

I had grown to be so accustomed to the Micawbers, and had been so intimate with them in their distress, and was so utterly friendless without them, that the prospect of being thrown upon some new shift for a lodging, and going once more among unknown people, was like being that moment turned adrift into my present life, with such a knowledge of it ready made, as experience had given me. All the sensitive feelings it wounded so cruelly, all the shame and misery it kept alive within my breast, became more poignant as I thought of this; and I determined that the life was unendurable.

That there was no hope of escape from it, unless the escape was my own act, I knew quite well. I rarely heard from Miss Murdstone, and never from Mr. Murdstone; but two or three parce,s of made or mended clothes had come up for me, consigned to Mr. Quinion, and in each there was a scrap of paper to the effect that J. M. trusted D. C. was applying himself to business and devoting himself wholly to his duties—not the least hint of my ever being anything else than the common drudge into which I was fast settling down.

The very next day showed me, while my mind was in the first agitation of what it had conceived, that Mrs. Micawber had not spoken of their going away without warrant. They took a lodging in the house where I lived for aweek; at the expiration of which time they were to start lor Plymouth Mr. Micawber himself came down to the counting-house, in the alternoon, to tell Mr. Quinion that he must relinquish me on the day of his departure, and to give me a high character, which I am sure I deserved. And Mr. Quinion, calling in Tipp the carman, who was a married man, and had a room to let, quartered me prospectively on him—by our mutual consent, as he had every reasin to think; for I said nothing, though my resolution was now taken.

I passed my evening with Mr. and Mrs. Micawber, during the remaining term of our residence under the same roof; and I think we became fonder of one another as the time went on. On the last Sunday, they invited me to dinner; and we had a loin of pork and apple sauce and a pudding. I had bought a spotted wooden horse over-night as a parting gift to little Wilkins Micawber—that was the boy—and a doll for little Emma. I had also bestowed a shilling on the Orfling, who was about to be disbanded.

We had a very pleasant day, though we were all in a tender state about our approaching separation.

"I shall never, Master Copperfield" said Mrs. Micawber, "revert to the period when Mr. Micawber was in difficulties, without thinking of you. Your conduct has most always been of the most delicate and obliging description. You have never been a lodger. You have been a friend."

"My dear," said Mr. Hicawber; "Copperfield," for so he had been accustomed to call me of late, "has a heart to feel for the distresses of his fellow creatures when they are behind a cloud, and a head to plan, and a hand to—in short, a general ability to dispose of such available property as could be made away with."

I expressed my sense of his commendation, and said I was very sorry we were going to lose one another.

"My dear young friend," said Mr. Micawber, "I am older than you; a man of some experience in life, and—and of some experience, in short, in difficulties, generally speaking. At

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present, and until something turns up (which I am, I may say, hourly expecting), I have nothing to bestow but advice. Still my advice is so far worth taking that—in short that I have never taken it myself, and am the"— here Mr. Micawber, who had been beaming and smiling, all over his head and face, up to the present moment, checked himself and frowned—"the miserable wretch you behold."

"My dear Micawber!" urged his wife.

"I say," returned Mr. Micawber, quite forgetting himself and smiling again "the miserable wretch you behold. My advice is, never do tomorrow what you can do today. Procrastination is the thief of time. Collar him!"

"My poor papa's maxim," Mrs. Micawber observed.

"My dear," said Mr. Micawber, "your papa was very well in his way, and Heaven forbid that I should disparage him. Take him for all in all we ne'er shall—in short, make the acquaintance, probably of anybody possessing, at his time of life, the same legs for gaiters, and able to read the same description of print, without spectacles. But he applied that maxim to our marriage, m8 dear; and that was so far prematurely entered into, in consequence, that I never recovered the expense."

Mr. Micawber looked aside at Mrs. Micaber, and added: "Not that I am sorry for it. Quite the contrary, my love." After which he was grave for a minute or so.

"My other piece of advice, Copperfield," said Mr. Micawber, "you know Annual income twenty pounds, annual expenditure nineteen six, result happiness. Annual income, twenty pounds, annual expenditure twenty pounds ought and six, result misery. The blossom is blighted, the leaf is withered, the God of day goes down upon the dreary scene, and— and in short you are forever floored. As I am."

To make his example more impressive, Mr. Micawber drank a glass of punch with an air of great enjoyment and satisfaction, and whistled the College Hornpipe.

I did not fail to assure him that I would store these precepts in my mind, though indeed I had no need to do so, for, at the time, they affected me visibly. Next morning I met the whole family at the coach office and saw them, with a desolate heart take their places outside, at the back.

"Master Copperfield," said Mrs. Micawber. "God bless you! I never can forget all that, you know, and I never would, if I could."

"Copperfield," said Mr. Micawber, "farewell! Every happiness and prosperity! If, in the progress of revolving years, I could persuade myself that my blighted destiny had been a warning to you, I shou,d feel that I had not occupied another man's place in existence altogether in vain. In case of anything turning up, (of which I am rather confident,) I shall be extremely happy if it should be in my power to improve your prospects."

I think, as Mrs. Micawber sat at the back of the coach, with the children, and I stood in the road looking wistfully at them, a mist cleared from her eyes, and she saw what a little creature I really was. I think so, because she beckoned to me to climb up, with quite a new and motherly expression in her face, and put her arm round my neck, and gave me just such a kiss as she might have given her own boy. I had barely time to get down again before the coach started, and I could hardly see the family for the handkerchiefs they waved. It was gone in a minute. The Orfling and I stood looking vacantly at each other in the middle of the road, and then shook hands and said

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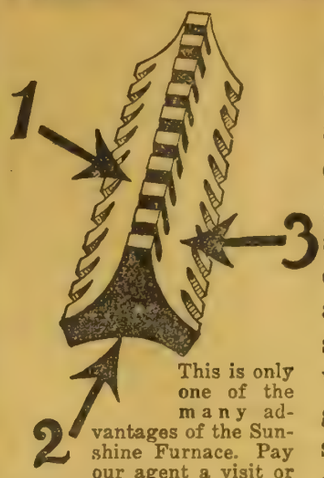

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Women's disorders always yield from the very beginning of the treatment to the mild, but effective, action of Orange Lily. Within two or three days after commencing its use the improvement becomes noticeable, and this improvement continues until the patient is completely cured. Orange Lily is an applied or local treatment, and acts directly on the womanly organs, removing the congestion, toning and strengthening the nerves, and restoring perfect circulation in the diseased parts. In order to convince all suffering women of the value of this remedy, I will send a 35-cent box, enough for ten days' treatment, absolutely FREE to each lady sending me her address. MRS. FRANCES E. CURRAH, Windsor, Ont. 6

For Sale By Leading Druggists Everywhere

Would Faint and Fall Down Wherever She Was.

Heart Would Seem All Gone.

MRS. DANIEL DEWLEY, Mineral, N.B., writes:—"I take great pleasure in expressing myself for the benefit I have obtained from your wonderful medicine, MILBURN'S HEART AND NERVE PILLS. I had been a sufferer for over five years, and took doctors medicine of every kind. I would faint and fall wherever I was, and my heart would seem all gone. I was advised by some of my friends to try your HEART AND NERVE PILLS. I only used three boxes, and I can say I am completely cured.

"MILBURN'S HEART AND NERVE PILLS are a specific for all run-down men and women, whether troubled with their heart or nerves, and are recommended by us with the greatest of confidence that they will do all we claim for them."

Price 50 cents per box or 3 boxes for $1.25 at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

"Sovereign" Sheathing Felt

Trade Mark Registered

Makes Houses Draft-Proof

SOVEREIGN Sheating Felt is as effective as several layers of ordinary building paper. It is thick, tough and wind-proof, and will prevent even a particle of draft from passing through walls or floor. Being really light-weight RU-BER-OID Roofing, it will last as long as the building.

For every extra cent you spend on SOVEREIGN Sheathing Felt you will save dollars in fuel, and will have a more comfortable home.

Get a sample from the nearest RU-BER-OID dealer, or write for sample and booklet to 106

Standard Paint Co. of Canada, Limited
Montreal-Winnipeg-Calgary-Vancouver.

Uric Acid Never Caused Rheumatism

I WANT to prove it to your satisfaction. If you have Rheumatism, acute or chronic—no matter what your condition—write today for my FREE BOOK on "RHEUMATISM—Its Cause and Cure." Thousands call it "The most wonderful book ever written." Don't send a stamp—it's ABSOLUTELY FREE.

JESSE A. CASE, Dept. 461, Brockton, Mass. U. S. A

1870 1913

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PRODUCE COMMISSION MERCHANTS

141 Upper Water St., Halifax, N.S.

Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

FARMER ADS BRING RESULTS

good-bye; she going back, I suppose, to St. Luke's workhouse, as Iwent to begin myweary day at Murdstone & Grinby's.

But with no intention of passing many more weary days there. No. I had resolved to run away.—To go, by some means or other, down into the country, to the only relation I had in the world, and tell my story to my aunt, Miss Betsey.

I have already observed that I don't know how this desperate idea came into my brain. But, once there, it remained there; and hardened into a purpose than which I have never entertained a more determined purpose in my life. I am far from sure that I believed there was anything hopeful in it, but my mind was thoroughly made up that it must be carried into execution.

Again and again, and a hundred times again, since the night when the thought had first occurred to me and banished sleep, I had gone over the old story of my poor mother's about my birth, which it had been one of my greatest delights in the old time to hear her tell, and which I knew by heart. My aunt walked into that story, and walked out of it, a dread and awful personage; but there was one little trait in her behaviour that I liked to dwell on, and which gave me some faint shadow of encouragement. I could not forget how my mother had thought that she felt her touch her pretty hair with no ungentle hand; and though it might have been altogether my mother's fancy, and might have had no foundation whatever in fact, I made a little picture, out of it, of my terrible aunt relenting towards the girlish beauty that I recollectted so well, and loved so much, which softened the whole narrative. It is very possible that it had been in my mind a long time, and had gradually engendered my determination.

(Continued next issue.)

Household Pests and Their Eradication

Household pests may be classified in two ways first, those that breed outdoors, and those that breed indoors; second, those that anny man and carry disease and those that destroy furniture and clothing.

There are certain general principles to follow in preventing and curing the ravages of all household pests, such as plenty of fresh air, sunshine and light—all these creatures love darkness rather than light, I suppose becaue their deeds are evil—cleanliness about the house and grounds, the use of movable rugs instead of carpets, the use of plainer, less heavily upholstered furniture, filling up cracks in walls, etc., with putty or plaster, the screening of houses and the liberal use of antiseptics and preventives, and fumigation if necessary.

But to intelligently combat these enemies of health and comfort we must know more than mere general rules to follow. We must understand each pest. We must be able to recognize it in every stage of its growth. We must make ourselves familiar with its life history and its habits, and we must know definite preventive measures and cures.

THE BUFFALO MOTH.

The Buffalo Moth or Carpet Beetle was introduced into this country in 1874 in some imported carpets. Naturally, it breeds outdoors, especially in the spirea plant. In the house it usually lays its eggs in woollens seeming to prefer carpets. The eggs hatch in two or three weeks, leaving the insect in the larva stage. The larva looks like a small apple seed covered with hairs, tufted at one end, from which shaggy aupearance it derives its name buffalo. These larvae do all the harm, and they remain in the larvae stage for two or three months sometimes although in very warm weather they develop more rapidly. They prefer to feed on soiled woollens, but will eat anything in the shape of wool or fur. The beetles themselves are about three sixteenths of an inch long, and look very much like lady bugs, having a stripe down the back, almost scarlet with irregular bands of black and white out from it. Often we see them around window sashes in the fall, and they are not disturbed because they are just "pretty little lady bugs." One of these destroyed

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Save all your Crop and therefore save More Money by using the

Hoover Potato Digger

The Amherst Trading Co., Ltd.

Amherst, N. S.
General Agents

Write for Descriptive Catalogue.

"Ideal" Gas and Gasoline Engines

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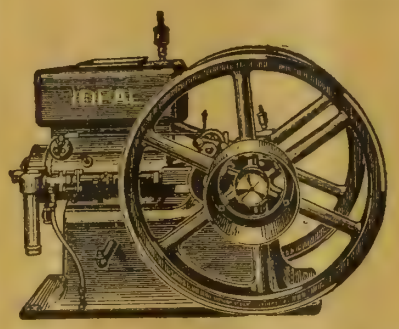

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Brantford Wind Mills
Steel Saw Frames, Pumps
Grain Grinders, Tanks
Concrete Mixers and Water Boxes

Good Live Agents Wanted in Unrepresented Territory

GOOLD, SHAPELY & MUIR CO., LTD., BRANTFORD, ONT.

A. McCAUSLAND, Victoria Hotel, St. John, N. B., Maritime Representative.

Bad Blood

is the direct and inevitable result of irregular or constipated bowels and clogged-up kidneys and skin. The undigested food and other waste matter which is allowed to accumulate poisons the blood and the whole system. Dr. Morse's Indian Root Pills act directly on the bowels, regulating them—on the kidneys, giving them ease and strength to properly filter the blood—and on the skin, opening up the pores. For pure blood and good health take

Dr. Morse's Indian Root Pills

Dates to be Remembered

Nova Scotia Provincial Exhibition, Halifax, N. S., September 3 to 11, 1913.

Miramichi Exhibition, Chatham, N. B., September 23-26.

Fredericton Exhibition, Fredericton, N. B., September 15 to 20, 1913.

P. E. I. Provincial Exhibition, Charlottetown, P. E. I., September 23 to 26, 1913.

Canada Eastern Exhibition, Sherbrooke, Que., August 30 to September 6, 1913.

Canada National Exhibition, Toronto, Ont., August 23 to September 8, 1913.

Central Canada Exhibition, Ottawa, Ont., September 5 to 13, 1913.

Maritime Winter Fair, Amherst, N. S., December 8 to 11, 1913.

Fredericton Poultry Show, Fredericton, N. B., February 17 to 19, 1914.

Dominion Exhibition, Brandon, Man., July 15 to 25, 1913.

Yarmouth County Exhibition, Yarmouth, N. S., October 1, 2, 3, 1913.

Charlotte County Exhibition, St. Stephen, N. B., September 9-12, 1913.

Cape Breton Exhibition, Sydney, N. S., September 30th to October 4th, 1913.

Westmorland Poultry and Pet Stock Exhibition at Moncton, N. B., January 13th to 16th, 1914.

Minard's Liniment Co., Limited.

Gentlemen.—I have used MINARD'S LINIMENT on my vessel and in my family for years, and for the every day ills and accidents of life I consider it has no equal.

I would not start on a voyage without it, if it cost a dollar a bottle.

CAPT. F. R. DESJARDIN,
Schr. "Storke," St. Andre, Kamouraska.

BICYCLES

BICYCLE SUNDRIES

At Cut Prices BICYCLE MUNSON

413 Spadina Avenue,

Send for Cut Price Catalogue. TORONTO

Dr. de Van's Female Pills

A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

Mr. W. S. Gunsalus, a farmer living near Fleming, Pa., says he used Chamberlain's Colic, Cholera and Diarrhoea Remedy in his family for fourteen years, and that he has found it to be an excellent remedy, and takes pleasure in recommending it. For sale by all dealers.

For Sale, Small Potatoes

for feeding purposes. Price 60 cents per barrel, F. O. B. Cash.

Maritime Seed Potato Co., St. Stephen N. B.

means the prevention of thousands the next yeac.

Simple preventive measures are to put turpentine under rugs especially around the edges and to wash out closets, cracks and corners frequently with hot soap suds. If a trap is made by putting a piece of woollen or cotton batting in a closet, the eggs are likely to be laid in this, and can be destroyed. Furniture or clothing sprayed or soaked in gasoline is rid of the moths, and, carbon bisulphide, while more expensive than gasoline, is very effective if sprayed around carpets and furniture. A treatment that is sure to drive the moths out of the nests and kill the larvae, is to mix equal quantities of carbolic acid and cedar oil and spray these about infested places through an automizer. In using carbon bisulphide, turpentine and gasoline, remember they are all explosive.

Where eggs are laid under the carpet the best way to destroy them without taking the carpet up, is to spread a wet cloth over the carpet and iron with a hot iron. The steam generated destroys the eggs. This would seem like a very inhuman method of killing live moths.

THE CLOTHES MOTH.

The real clothes moth is sometimes called the case-making moth because it makes the case in which it is going to rest and carries it aroundf In Canada it usually breeds from June to September, appearing in June to lay its eggs, but in very warm springs it comes around earlier and some years we find it as late as August. They generally hatch in August and are then at their most dangerous stage. The eggs are laid up deep in furs, woollens and cracks in trunks. The larvae is a dull, white caterpillar with a light brown head, and spends the greater part of its life feeding on woollens, (preferably soiled), and dragging its case with it. When full grown it attaches itself to a garment for about three weeks and emerges a yellowish moth.

The simplest preventive measures for these pests, are frequent inspection, brushing, airing, sunning and putting everything away clean, usually a repellant with them as tobacco, cedar, red-pepper, camphor, newspaper, tarred bags, new cotton. If flannels and furs are put away early, there is little danger; if later than April or May, be more careful. Boxes should be sprayed with gasoline or carbon bisulphide. The exposing to sunlight usually gets rid of any moths but if there are eggs already laid, gasoline or carbon bisulphide are about the only sure remedies. To use the latter, sprinkle it on the clothes or set it in a saucer on top of them in a box. Leave them for forty-eight hours. As it is heavier than air, the fumes will go down through the clothing, and will kill all the larvae and most of the eggs. Ten days later repeat the treatment and it is an absolute sure cure. Cutter and carciage blankets must be watched, especially through August. If there are signs of moths, airing and spraying with gasoline is all that will be necessary. For closets and wardrobes, a good preventive is to wash them out, when house cleaning, with a pound of alum to a quart of water, or with carbolic solution. Kerosene and turpentine are good but it is difficult to get rid of the odor.

COCKROACHES.

These are among the filthiest of insects, tainting everything they touch. They prefer to live in a warm, damp place, so are likely to make their haunts wherever there are leaking pipes. The eggs are held together in a horny pod which the female carries about until they hatch. Fortunately they take six months to de-

PEOPLE MUST EAT IN ALL KINDS OF WEATHER

And Food must be Cooked even in July and August

Most important in every house, therefore, is the Kitchen Range, and when you select a new one you should buy *the best you can find.*

This is without doubt—

THE ENTERPRISE MONARCH

and these are the reasons:—

It bakes perfectly at all times.

It is easy to operate—the dampers are the simplest possible, with no complications to confuse the housekeeper.

It has for wood a very large fire-box, so constructed that it will hold the fire many hours.

Its copper reservoir heats quickly and is very large (9 Imp. Gallons); and it cannot burn out.

The price is low, being no more than inferior ranges are sold for, and there is—

A WRITTEN GUARANTEE WITH EVERY MONARCH SOLD.

Manufactured by *Write us a card for descriptive circular*

Enterprise

FOUNDRY CO. SACKVILLE, N.B.

Something New for Men

Restore Your Own Strength--No Drugs

The free illustrated pocket compendium of private advice for all men, whether young or elderly, single or married, whether well or ailing (explained below), not only contains a great fund of necessary information upon certain avoided private subjects, telling you what to avoid, what to do and what not to do, but also fully describes a new small mechanical appliance called a VITALIZER which generates a natural force and which is now being worn by men all over the world who seek new manly vigor. You, yourself, no matter where you live, may easily have one of these little VITALIZERS to try out in your own case. Therefore, please use the coupon below and get this free pocket compendium by return mail. SANDEN, AUTHOR.

How would YOU, reader, like to be strong, vigorous, vital and manly once more, without an ache, pain or weakness? If you really seek and want this new vigor, this rugged manly strength, then please call at my office or write today and get my free book that you may know the whole wonderful story of this great, drugless, self-treatment, this marvellous little VITALIZER of my invention, which you wear comfortably on your body, and which sends its steady gentle, silent supply of FORCE into your nerves, blood and organism while you sleep.

Manly Men Fascinate the Whole World

Real manhood with a perfect manly strength is not only nature's own gift, but, according to my belief, may easily be within the reach of practically any man. Of course, we all know that it is the husky, vigorous, vital fellow who attracts both women and men to him, and it is he, also, who is ever sought out and who achieves the really big things of life. Sturdy, vital manhood is, without doubt, the one great, silent universal power which fascinates us all, no matter how we may argue to the contrary. Therefore, reader, I care not what may be your age, nationality or creed, whether you are married or single, whether you are a bank president or work on the farm or in the shop, nor do I care how unstrung or nervous you may feel, or what past acts may have left you debilitated and enervated, I say to you in all seriousness, if I can show you an easy, drugless way by which you may treat yourself with the object of bringing back full vigor to your organism, then I will show you the road to new hope and new manhood. A man may be small in stature, yet as strong and attractive as a giant, or he may be big in stature, yet unstrung, nervous and unmanly. It is all a question of your own vigorous strength. Therefore, let me suggest that you call or write at once, then, after reading my book, if you decide you want to try out my little vitalizer in your own case, and will write to me saying so, I will reply to your letter and guarantee to make an easy proposition which should enable you to have one of the vitalizers at once. At all events, you need the knowledge that my little book contains, whether you ever get a vitalizer or not, so please call or fill in and send the coupon.

NOTE—With special attachments my VITALIZER is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, nervousness and general ill health.

Free Self-Help Book For Men

I publish a little illustrated pocket compendium in booklet form, as mentioned above, which is meant to guide both single and married men along the road of Vigorous Health and Moral Rectitude, so they may be as vigorous and strong as the best, and may live to a ripe, healthy old age. There is a lot in this little compendium which every young or elderly man should know and can refer to from time to time with great profit to his own physical health. The booklet in one part fully describes my new VITALIZER, the great drugless self-treatment. If it is not convenient or if you are too far away to call, please write for this booklet today. It will come to you in plain, sealed envelope by return mail. Please use coupon. Office hours, 9 to 6.

Dr. M. F. SANDEN, CO.,
140 Yonge St., Toronto; Ont.

Dear Sirs—Please forward me your book, as advertised, free, sealed

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velop. They hide in cracks during the day and come out mostly at night, eating whatever they can find, but preferring dead animal matter.

The best preventive measures are to have the kitchen clean and dry, open plumbing, that is no cupboards under the sinks, and to have no damp, warm places for breeding. Borax sprinkled in crevices frequently is very effective. Pyrethum powder sprinkled about will stun them, then they must be swept up and burned. If the room can bi made air tight and pyrethum powder burned in it, they aree likely to be completely eradicated. A jar containing a little stale beer, set on a slant makes a very good trap.

THE HOUSE ANT.

The eggs are produced in extraordinarily large numbers usually by a solitary queen ant. The larvae are fed by workers. When developed a new colony of ants emigrate. They pair on the flight. most of the males die, then the females strip themselves of their wings and go to work.

The red ant nests in cracks, the black ant usually under stones. If possible destroy the nest by drenching with kerosene, gasoline, salt or carbon bisulphide. A strong solution of borax prevents larvae hatching. Gum camphor placed on pantry shelves is a good repellant and sponges dipped in sweetened water make excellent traps. If a number of the ants are killed the rest will leave.

MOSQUITOES.

The Anopheles mosquito is the only means by which malaria fever can be transmitted. Mosquitoes become infected with the malaria organism by biting and sucking blood from infected human beings. After passing through several stages in the stomach, (or its equivalent), of the mosquito, this infection may be transmitted to other human beings bitten by one of these infected mosquitoes. All malarial fever is transmitted from man to man by mosquitoes and by mosquitoes alone. Only the female mosquito ever stings or bites. No amount of stagnant water is too small to afford the mosquito a place to breed. Pools of rain-water in the back yard, in the cellar, or along the roadside, make excellent breeding places so they should be filled or drained. Empty bottles, old tin cans, rain water barrels, buckets, tubs, broken crockery, cisterns, springs and wells also afford the mosquito ample opportunity to breed Most of these can be easily disposed of while wells and springs can be kept covered. Roof-spouts and gutters often become stopped up or sag and retain water. This forms a good breeding place and one usually convenient to bedroom windows. Such spouting should be drained and repaired. In the house, mosquitoes frequently breed in flower vases, water pitchers in the guest room, and all imaginable places. All such stagnant water should be changed not less than once a week and the vases rinsed to make sure that no eggs are left along the edge.

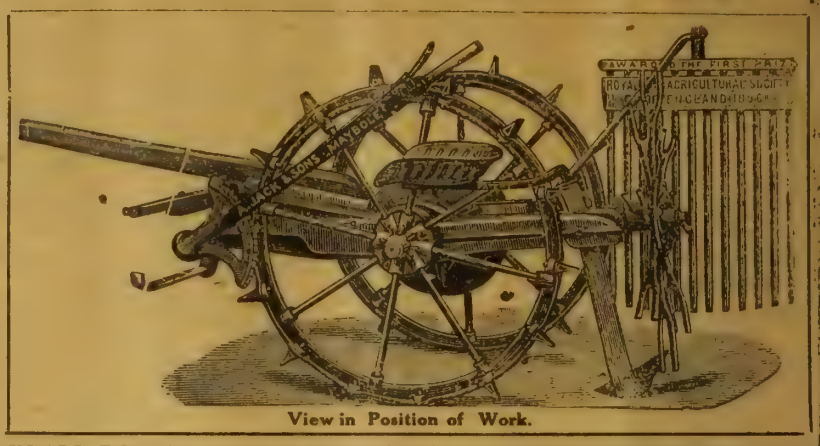
Knowing that mosquitoes breed nowhere except in stagnant water, the measures to take in order to get rid of them need scarcely be mentioned. Swamp lands near dwellings must be drained, and no stagnant water left about the house, that is to say, that broken dishes, old tin cans, etc., must not be left about, and rain barrels must be screened, or covered with coal oil. Where a pond in a neighborhood proves a serious source of annoyance the community should co-operate to have it covered with kerosene. Where mosquitoes have invaded a cellar or room, about the only thing to do is to make it airtight and burn prrethum powder.

The World's Best Potato Digger

Jack's Royal First Prize New Patent

Caledonian Potato Digger

Fitted with Ball and Roller Bearings



View in Position of Work.

THE NEW PATENT CALEDONIAN POTATO RAISER holds the record as the Most Perfect Potato Raiser in the World. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at Leicester, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christiana, (leading Foreign and English Machines competing.) WRITE FOR CATALOG and PRICE.

ILLSLEY & HARVEY, Canadian Agents, Port Williams, N. S.

THE HOUSEFLY.

It is quite unnecessary to enlarge upon the dangers of flies. With all that is spoken and written on the subject there are few people who do not know that besides being a discomfort and carrying filth, they spread a tremendous amount of disease, and are responsible for more of our typhoid cases than over-work and bad water combined. Possibly, however, few people know that one fly lays from 100 to 120 eggs at a time and that a pair unmolested may produce 74,000,000,000,000, more in one season, or else they would realize more keenly the importance of getting rid of every single fly early in the season.

The first step to be taken in fighting flies in individual homes is cleanliness. All filth about premises, such as manure, garbage, decaying or fermenting vegetable matter must be screened, removed or destroyed to prevent the breeding of flies. The second step of importance is to screen the house so that stray, travelling flies cannot get in, and the third to destroy all flies that gain admission to the house. The best means of doing this is the fly swatter especially where there are small boys and girls

The only building material that has not increased in price is

CANADA Portland CEMENT

It makes concrete that you can depend upon for satisfactory results, whether you use it for a silo or a garden walk.

High quality and low price are made possible by efficient organization and manufacturing economies due to a large and growing demand.

See that every bag of cement you buy bears the "Canada" label—it is your guarantee of satisfaction.

Canada Cement Company Limited, Montreal

Write for a free copy of the book "What the Farmer Can Do With Concrete."

DIARRHŒA, DYSENTERY, SUMMER COMPLAINT

AND ALL

BOWEL TROUBLES

ARE CURABLE BY THE USE OF

Dr. Fowler's Extract of Wild Strawberry.

MR. WM. R. GREEN, St. John, N.B., writes:—"As I have had the pleasure of testing DR. FOWLER'S EXTRACT OF WILD STRAWBERRY, I might say it is the only remedy I would recommend. Last summer, I had a very severe attack of Diarrhœa and Vomiting. My doctor treated me without result, and friends advised me to try the above remedy. After a few doses I was completely cured, and ever since I have never been without it in the house. I have used it with the children, and find the same result. I have recommended it to several of my friends who also join with me in saying that DR. FOWLER'S EXTRACT OF WILD STRAWBERRY is the greatest remedy on earth for all summer complaints."

"DR. FOWLER'S" has been on the market for over 65 years, and so popular has it become that many dealers try to substitute other and cheaper preparations. Be sure and get what you ask for.

Price: 35 cents.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

HIGH CLASS

JEWELRY

18k roll gold jewelry at wonderfully low prices.

Gold Hat Pins, sell for $1.75 to $2.50, our price..... ....68 cents

18k Rolled Pendants, worth $3.00, our price..... ....99 cents

Others worth $2.50 we sell for 89c.

GUN METAL

A $3.50 watch for..... ....$1.36

Boys Watch..... .....69 cents nickel

All mail charges prepaid

Money refunded if goods are not as desrcibed

These goods were bought from one of the best known firms in Great Britain and are guaranteed by them. Splendid for gifts.

SUSSEX NOVELTY CO.,
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LADIES French Pilules. No. 2176 Proprietary or Patent Medicine Act

A never failing and harmless monthly regulator. No lady can afford to be without them. They are pleasant to take and act very promptly. Mailed plain and sealed upon receipt of $2 per box or three for $5 with full instructions and advice. Correspondence confidential.

CANADIAN MEDICINE CO., Dept, H. Montreal, Que.

It costs only a one cent Postal card to answer any advertisement in Maritime Farmer and you will get many dollars worth of information.

in the house, and sticky fly paper is another excellent remedy. Fly traps as a rule, are rather unaesthetic and are rarely effective in the house because only a few flies gain admission to a well-screened house, and when for any reason may flies have gotten into a room, it is desirable to kill them off quickly. This may be done easily by closing the doors and windows and dusting Pyrethum or Persian insect powder around the room. Similar effects are obtained by burning the powder. This soon stupifies the flies and they can then be swept up and burned. The best place for a fly trap is on the lid of a garbage can. Poisons are undesirable on account of the dead flies falling about the room and possible danger to children. Where they do their best work is set just outside a screeoed window or door, or on the porch, particularly just before a rainstorm or at other times when flies are especially troublesome.

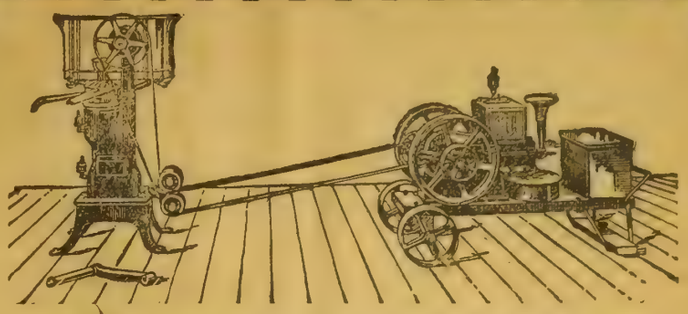
BED BUGS.

It is surprising how little some people seem to know about these pests. I heard the subject of household pests taken up in a Home Economics School last year, and while the girls could talk freely about buffalo moths, and house ants, telling what methods their mothers had employed at home and how these worked out, when the subject of bed bugs was introduced there was a dead silence. Never a student could offer a suggestion, or had ever seen one of the objects in question.

Now anyone is liable to get these from hotels, sleeping cars or laundries. It is not a disgrace to get them, but, of course, it is very undesirable to keep them. Biologically, this is a true bug, that is a piercing insect, reddish, rusty, black in color, nocturnal in habits, thrives in old houses, prefers dirt, natural food is human blood.

The simplest preventive measures are cleanliness, which is more easily obtained by using brass or iron bedsteads, sunlight, fresh air, and no cracks in the wall. Old bedsteads be gone over occasionally with gasoline or kerosene, but none of these are remedies. Where the insects are known to be in a house, fumigation is the surest method. If you have to do this yourself make the room air-tight. Make a solution of two parts formaldehyde to five parts of water, put in a ten quart pail, set on newspapers to catch spatters, measure out thirteen ounces of permanganate of potash to each quart of the solution, put this into the pail and get out. Leave this for twenty-four hours at least before airing the room. If, instead of the permanganate of potash you use one quart of fresh unslaked lime and one cup water, it need stand only three hours. Formaldehyde candles may be burned in the room using two ounces for every thousand cubic feet. Carbon bisulphide is good for fumigating but it destroys paper and hangings. Sulphure burning has the same disadvantage. Corrosive sublimate sprinkled into all the cracks and crevices is very effective. It takes the eggs from ten days to two weeks to hatch so by using this remedy every ten days you can get rid of them in three weeks.

And above all, don't be a pessimist about these things. They are not sent to us as plagues, they have a purpose, if it be nothing more than to serve as an index to the sanitary condition of the home or town or community in which they are found. We know that they can be eradicated and when you have done this you may sit down and congratulate yourself that your environment is clean and sanitary and wholesome. Only don't sit too long.—Farmers' Magazine.



Next Door to Perfection

POUR your milk into an I H C cream separator. Out of the cream spout will come close to 9,999 parts of cream for only one part that goes into the skim-milk pail. That's marvelously close separation; it means every possible dollar of dairy profit from your cows.

It takes an I H C separator to do such efficient work. Every detail has its use, every mechanical point its purpose. Shafts and spindles are the strongest made for separators. Bearings all have phosphor bronze bushings. Gears work without back lash, and they are protected from dirt and grit. In short, everything in

I H C Cream Separators

Dairymaid, Bluebell, or Lily

makes for great strength and durability. Perfect adjustment and balance mean smoothness and ease in operating, hence continued satisfaction during long life. All parts are easily accessible for cleaning. There are four convenient sizes of each style.

Then if you have a one-horse power back-geared I H C engine to complete your separator outfit, you will soon find that an indispensable helper on the farm. It will run steadily and at the proper speed to pump water, run washing machine, churn, grindstone, etc.

Study I H C separator outfits at the local agent's Catalogues may be obtained from him, or, write to

International Harvester Company of Canada, Ltd

EASTERN BRANCH HOUSES
At Hamilton, Ont.; London, Ont; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

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Boot & Shoe Manufacturers

HALIFAX, N. S.

Our Spring Samples are now out for you Inspection.

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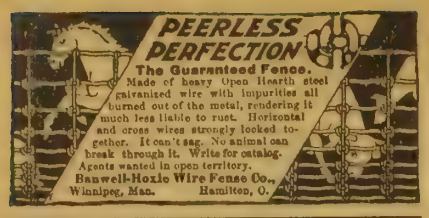


The Golden Jubilee of the Fredericton Exhibition.

The first fair held in the city of Fredericton took place fifty years ago. Consequently the 1913 fall fair at Fredericton will mark the Golden Jubilee of the Fredericton Exhibition, which will open on September 15th when several of Canada's most prominent men will be present to help commemorate the event.

While the present management is to be credited with the success attended at the fairs held there in recent years, the grand old man of the Fredericton Exhibition and the man probably most responsible for its existence was the late John A. Reid, who died several years ago at an advanced age. Through his energetic, work, when all previous efforts had failed, Fredericton's first exhibition was launched under his capable management, and for many years, undaunted by reversals, did he command the helm of the capital's Fair, placing it on an equal with the fairs of the larger cities of Canada ,and the United States.

FIRST EFFORTS UNSUCCESSFUL.

Although the first attempt to organize an exhibition was begun in 1852, and a committee of organization was effected for that purpose, which eventually procured a grant of £500 from the Provincial Government, the idea did not take favor with the citizens as a whole and fell through for the time being. Among those of the board of management appointed at that time were the following: G. F. Street, President; Joseph Gaynor, Treasurer; W. Watts, Secretary of Board of Directors. The Board of Directors were: Messrs. David S. Kerr, J. A. Beckwith, Joseph Myshrall, John Gregory, J. C. Allen, George L. Hatheway, N. S. Hooper, Colonel Hayne, Peter McFarlane, Asa Dow, Spafford Barker, Hon. W. H. O'Dell, Thomas Rutter, George Todd and Dr. Toldervy. Mr. N. S. Hooker was father of the present secretary, Mayor W. S. Hooper.

Again in 1858 the same Board of Directors and management committee, augmented by S. D. McPherson, H. S. Beek, Henry Rutter, Alex Black and Robert Sutherland, again endeavored to create an exhibition, but again were unsuccessful through not meeting with the co-operation of the people. It was not until 1862 when the late Mr. Reid assumed the management of the enterprise and with careful planning and the assistance of the merchants of the city, supplemented by a substantial Government grant, that the proposal took on any life-like proportions.

THE FIRST EXHIBITION.

Receiving the information that the Government had allowed a grant for the exhibition, on the 8th of April a meeting was called together by Mr. Reid and was held in the Old Market House, which was where the city Hall now stands. The meeting place was thronged and great interest and unanimity characterized the proceedings, and this meeting practically proved the birth of the enterprise which was gradually developed from year to year until at the present time the Fredericton Exhibition ranks with the best in Eastern Canada. At the time of its origination the Exhibition was under the direction of the New Brunswick Society for the Encouragement of Agriculture, Home Manufactures and Commerce.

And so it came to pass that in the spring of '63 preparations for the construction of the first fair buildings were commenced, and these were completed before the fall of that year, allowing ample time for completing all the arrangements necessary for the holding of the Exhibition that fall, which was officially opened by Col. Amber Cole, at that time acting Lieutenant Govenor of the Province.

A COLOSSAL STRUCTURE.

The main building was a colossal structure and at the time one of the most imposing edifices in Canada. Altough a miniature of the Crystal Palace of London, it was amply commodious for the purpose lor which it was intended and was situated on the lot of land at present occupied by Mr. Jos. Moore at the corner of Westmorland and Saunders streets. Adjacent to the fair buildings, which included the usual cattle sheds and barns was the old race track, at that time the only mile track in British North America. The track extended in the direction of where the Hartt boot and shoe factory now stands, and the grand stand and starting post were at the northern end of the track.

These buildings, however, were not long standing, for through the work of an incendiary they were burned to the ground several years after their construction. Although with practically no financial start another set of buildings was erected some few years later, again under Mr. Reid's supervision, but they were also destroyed by fire. This latter calamity signified the departure of Mr. Reid from the position of manager, which he had held for so many years.

Fairs in Fredericton remained dormant from that time up till 1888, when the exhibition spirit was again revived and met with much success. Messrs. E. H. Allen and A. S. Murray assumed the duties of the secretaryship until 1901, when the office was taken over by Mayor W. S. Hooper, the present official. At the time the present management took hold of the project the holdings amounted to practically nothing, consisting of only one small building and that on leased ground. At the present time, according to an official of the board of management, the real estate and buildings owned by Agricultural Societies, No. 34, are valued at almost $50,000.

One of the most common ailments that hard working people are afflicted with is lame back. Apply Chamberlain's Liniment twice a day and massage the parts thoroughly at each application, and you will get quick relief. For sale by all dealers.

The Pre-Cooling of Fruit.

(Continued from page 790)

so because the car is exposed to the direct rays of the sun.

If the refrigerator car service were handles as most other businesses are necessarily handled, and those who own and operate the refrigerator cars were obliged to pay for the icing of same out of their own pockets, the cost of increased insulation would be paid in a year or two in the actual saving in ice consumption to say nothing about the great saving from deterioration of the perishable goods which are transported in the car. Those who are responsible for the building and operating of refrigerator cars must be induced by peaceable megns, if possible, or by compulsion if more reasonable methods fail, to provide adequately insulated cars for both summer and winter service.

What constitutes adequate insulation is necessarily subject to a difference of opinion, but this can all be figured out in dollars and cents when it is reduced to the actual loss from ice melting, and if something may be allowed for unnecessary loss from damage to perishable goods shipped, the shoRing is in favor of a heavy isulation on refrigerator cars instead of the present flimsy and inadwquate quantity which is provided as a mere excuse and called suitable insulation. The refrigerator car service up to the present time is almost as bad an an abuse and an imposition on the shippers of perishable goods as the express abuse has been on the shippers heretofore.

CAR COOLING METHOD.

The principles of the car method of pre-cooling are as follows:

The essential parts of such a plant consist of the primary means of cooling located in coil room or bunker room; a fan for circulating the air over the primary means of cooling, and suitable discharge and return ducts for conveying the air to and from the car to be cooled. In the plant flexible detachable ducts are arranged so as to be attached to the trap doors of the ice bunker of the ordinary refrigerator car.

"The car is so connected up to the cooling room that the air goes in at one end, through the ice bunker door and out at the opposite end, then back through the room to be re-cooled. In this method the fruit is given air at a temperature of ten or fifteen degrees colder than the temperature of the car and within an hour the temperature of the air going into the car is reduced to about 35 degrees F. The cooler and fan are of sufficient capacity to bring the temperature of the car down to 32 degrees in from three to six hours, according to the pack of the fruit and the temperature in the beginning.

"The efficiency of this system of pre-cooling was tested by the Northern Pacific Railway Co., who had one of their most modern insulated refrigerator cars loaded with pears and placed on track in the state of Washington for pre-cooling. A cold blast was forced through this car for 12 hours until the temperature of the air in and out showed the same 34 degrees; then the ice bunkers were thoroughly filled, all doors and openings to the car were locked and the keys turned over to an attendant who

DIABOLO CREAM SEPARATOR

BUILT IN SWEDEN BY THE WORLDS LARGEST CREAM SEPARATOR MAKERS

The "Diabolo" Separator is sold more extensively throughout foreign countries than any other machine, and has a world wide reputation for the excellent quality of its work. It is very **light running** and **easy to handle** and on account of its simple construction the cost of repairs is practically nothing. In introducing the "Diabolo" Separator to the trade, we are offering you a machine that has no superior, at a price that never before was attempted on a first class Separator.

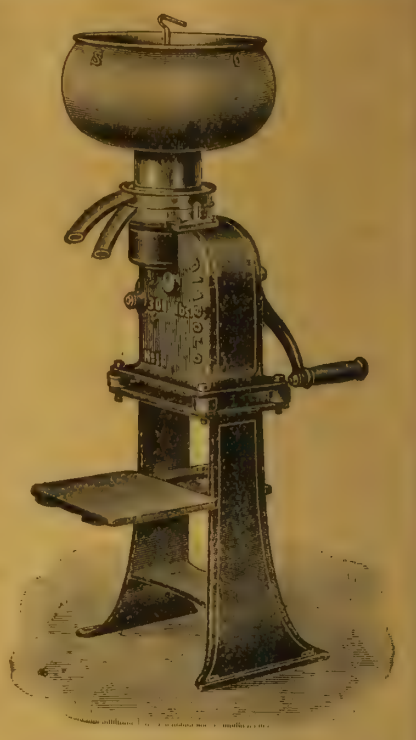
We can positively guarantee that there is no Separator on the market :—

That skims closer; That is easier to turn; That is made of better material in every detail; That costs less for repairs; That gives you the quality, at our price.

Every machine guaranteed for 10 years.

Send for full description.

Agents wanted in every locality.



Prices 300 lbs. $33.00
550 " 53.00

THE BAILEY-UNDERWOOD CO., Limited, NEW GLASGOW, N. S.

accompanied the car to Minneapolis to see that no changes were made en route. At Minneapolis the ice bunkers were well filled, temperature at the top and bottom of the fruit at the middle of the car still remained 34 degrees, and the fruit was in prime condition. The car was forwarded to Chicago, where the same conditions were observed as to ice, temperature and condition of fruit. From here it was continued to New York city, where an inspection showed one ice bunker half full of ice, one two-thirds full and the temperature of fruit at the top warmed up to 36 degrees, while the temperature on the floor still remained 34 degrees and the fruit in prime condition. By this pre-cooling process peaches have reached Texas and Philadelphia in first-class condition."

The Apple Maggot or Railroad Worm —A Note of Warning.

The Apple Maggott, (Rhagoletis Pomonella) is one of the serious pests of the apple, particularly the early and fall varieties. The maggott is the larva of a fly, a small two winged insect belonging to the family Trypetidae. In this family are a number of serious fruit pests, all difficult to combat on account of their mode of life. The Apple Maggott is quite widely distributed through out the North-Eastern United States, part of Ontario and Quebec. It is also reported from several sections of our Province but it has not done any serious damage as yet.

The work of this pest may be readily recognized. The maggot lives in the pulp, burrowing back and forth between the core and the skin. The burrows are discolored, generally brown with small cavities here and there in the flesh. Several maggots may be found in a single apple and the flesh so honey-combed as to be almost ready to fall to pieces. In these burrows will be found a small, footless maggot about three-eighths of an inch long, yellowish white in color. These maggots remain in the fruit until mature, that is after the apples drop. The maggots then leave the fruit and change to small yellowish brown pupae. These pupae transform to the adults, two winged flies, the following summer.

The fly is somewhat smaller than the house fly, of a general black color with yellowish head and legs, and four dark bands on each wing. The eggs are laid throughout the summer just beneath the skin of the apple. As the adults appear at various times during the summer the egg laying extends over a considerable period. There is thus only one brood a season.

At the present time this pest has not been found in the fruit belt extending from Annapolis to Windsor. However, every day sees considerable early fruit coming into our province from the New England States and various parts of Ontario. The writer found nearly every apple infested in a small shipment of early fruit from some point in Ontario. This fruit is being distributed all over the province and all damaged or old specimens are dumped outside, under ideal conditions for the maggots to mature and transform to adults the following season. In this way we may look for several new points of infestation each year unless care is exercised in the handling of this kind of fruit. This note is especially prepared to warn all merchants and those buying early apples to see that all spoiled fruits are carefully burned or fed to animals, not dumped in some convenient place outside, thus allowing this pest to secure a foothold in our province. All fruit growers should exercise care and examine their apples and if any suspicious fruit is found to send samples to the Department of Agriculture at Truro, N. S.

In infested orchards about the only efficient means of control known at present is the picking up and feeding or burning all dropped fruit. This should be done about every week to ten days. Another efficient means is to allow the hogs to roam through the orchard and they will take care of all the dropped apples.

It is to be hoped that all fruit growers, who are at all suspicious that their fruit is infested will adopt the control measures suggested and thus rid their orchards of a dangerous pest.

Fortunately this pest does not spread rapidly and may confine its attack to only a few trees in a single orchard for a few years before spreading to adjacent trees of the same variety. This habit is a very fortunate one and often enables the fruit grower if he exercises care to not only control it but to exterminate it when the infestation is a limited one. It is to be hoped that all persons interested in our fruit industry will be on the lookout for this pest and immediately report its occurrence to the Provincial Entomologist at Truro, who will at once recommend treatment and endeavor to prevent the spread of the pest. Robert Matheson, Provincial Entomologist, Truro, N. S.

ROYAL WARRANT

After supplying the Royal Stables for several years, His Majesty King George V has granted a Royal Warrant to the makers of MOLASSINE MEAL

Sun-dried Grass Won't Give Good Milk

In early Spring, the milk from your cows may be plentiful and high in quality. But the summer sun dries all the juicy sweetness from the grass and it is an impossibility for the cows to derive the requisite nourishment from it. The flow of milk fails both in quality and quantity, your cows lose weight and you lose money.

This loss, which amounts to a large sum yearly, can be easily saved. Instead of depending on the grass alone as a nourishment, supplement it with "MOLASSINE MEAL"—it will increase the flow and quality of the milk—make the cows actually gain weight—keep them in better health and make yourself much richer. The best food known to science to-day for milch cows, cattle, horses or any livestock for all year feeding is

MOLASSINE MEAL

Made in England

By feeding it as a regular ration, it supplements the needed nourishment of the grass or other foods and enables the cows to retain their fat sleekness—insures good health and keeps the flow and quality of the milk high as in the good grazing days.

"MOLASSINE MEAL" is a good food. It builds up your cattle, horses and all other livestock—it keeps the stomach and the blood clean and pure and also enables the cows to derive the full nutrition from other foods.

Feed **"MOLASSINE MEAL"** regularly and your animals will be free from worms, intestinal troubles and other kindred animal diseases which claim so many victims every year.

"MOLASSINE MEAL" is guaranteed by the makers to keep in good condition for any length of time. Put up in 100-lb. bags. Begin to feed to-day.

If your dealer cannot supply you, write us.

MOLASSINE

Co. of Canada, Limited

ST. JOHN, N.B. MONTREAL TORONTO

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Look for this Trade Mark

on every bag

Provincial Exhibition, Halifax, Sept. 3rd. to 11th.

The entries in the various agricultural and live stock classes, which are now coming in, indicate one of the best fairs held in Nova Scotia.

In addition to the amusement programme, which is the best ever published, a number of features which will be interesting and educational to the live stock people have been booked.

The Sharples Co., will demonstrate their Milking Machine on each day after the judging is completed, and in addition, Mr. Telfer, of the Dominion Live Stock Branch has secured space on the grounds for an exhibit known as the "Sheep Extension Tent."

The exhibit will consist of all utensils needful to the flock master, shearing machine, marking material, tatoo marker, ear label punch, etc. Methods of tying and preparing wool for the market, charts dealing on all phases of the industry.

Outside the tent will be a dipping tank and platform, showing the proper method of dipping shesp.

"I was cured of diarrhoea by one dose of Chamberlain's Colic, Cholera and Diarrhoea Remedy," writes M. E. Gebhardt, Oriole, Pa. There is nothing better. For sale by all dealers.

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CHALLENGE BRAND WATERPROOF COLLARS

—can be cleaned as easily as washing your hands.

Always neat and tidy—with none of that celluloid or rubber shininess about them.

They look and feel like linen — but outwear a dozen linen collars.

All of linen's whiteness and comfort—without linen's expense.

Sold at all Men's Furnishing and Dry Goods Stores—or send 25c. for sample collar. 6

Absolutely the best Waterproof Collar Made.

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issued: Guns, Rifles, Ammunition, Fishing, Tackle, Baseball, Golf, Tennis, Lacrosse, Camping Outfits, all Summer and Winter Sports. We want

Every Man

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You save money by getting Catalogue to-day.

T. W. Boyd & Son,
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Homeseekers Excursion to Western Canada.

Every Wednesday until the 9th of October the Intercolonial Railway will sell second class, round trip tickets to Winnipeg, Brandon, Regina, Edmonton,, Saskatoon, and Calgary. These are good to return two months from date of issue and are a special inducement to those wishing a cheap trip to the West. The nearest I. C. R. ticket agent will furnish all particulars. In that ticket read via Intercolonial Railway, the only all Canadian route from the Maritime Provinces.

FITS CURED Send for Free Book giving full particulars of TRENCH'S REMEDY, the world-famous cure for Epilepsy and Fits—Simple home treatment. 25 years' success. Testimonials from all parts of the world; over 1,000 in one year.

TRENCH'S REMEDIES Limited, 434 St. James' Chambers, TORONTO

Lime Wash.

1. Place freshly burned lime in a tight barrel or tub pour on sufficient hot water to cover the lumps of lime and keep well stirred clear to the bottom. A piece of iron pipe makes a good stirring stick. If the lime is very "quick" two persons may be required to slake it, one to pour on the water and the other to stir it. The adding of the water and the stirring should be kept up from the time the lime begins to slake until it is reduced to a smooth paste. It is not absolutely necessary that hot water should be used, but unless the lime is very "quick" hot water facilitates the operation, and results in more thorough slaking. 2. The thorough slaking of lime is an important operation, and should be done with care. When lime is allowed to slake without being stirred the result is generally, that a portion of it has not come into contact with the water at the right time, and the whitewash made from it will be full of small hard lumps which were not "drowned" in the slaking process is slaked. Lime that is "burnt" or loose or flaky in texture when applied. 3. In preparing the surface of a room for whitewashing, all the loose flakes of old whitewash, dust, cobwebs and mould should be carefully brushed or scraped off, to leave an absolutely firm surafce upon which to apply the lime. It is advisable to have the whitewash quite hot for the first coat, especially if there should be the least suspicion of mould or mildew spores having lodged on any part of the surface or in the cracks or crevices of the ceilings walls, or floors. The whole surface should be carefully covered with lime. If the first coat does not cover completely, or if it should be applied upon a surface upon which there has been a growth of mould, another coat should be applied so soon as the first has become dry.

How to get Clean Milk.

Brush the cow's udder and wipe with a dry cloth; use clean water and dry with a clean towel.

Milkers should wash their hands with soap and water and dry with clean towel.

Whitewash the cow stable at least twice yearly.

Feed no dusty feed until after milking.

Remove all manure from cow stable twice daily.

Keep barnyard clean and have manure pile at least 100 feet from the stable.

Have abundant windows in cow stable to permit sunlight to reach the floor.

Arrange a proper system of ventilation for the cow stable. King system is suggested.

Do not use milk from any cows suspected of garget or any udder inflammation. Such milk contains enormous numbers of bacteria.

Use abundance of ice in water tank for cooling milk.

Canadian Holsteins in South Africa.

The most important agricultural exhibition held in South Africa is that of the Central Agricultural Society, Bloomfontein, Orange Free State. At this year's show, which took place in the month of April, the Canadian Holstein-Friesian Association offered a special prize of $25.00 for the best bull imported from Canada or bred from Canadian sire and dam; also a similar prize for best cow of like breeding. Both prizes were awarded toMessrs Martin & Bradshaw, Tweespruit, O. F. S.

THE REASON WHY You Should Use REGAL FLOUR

is that no other brand gives you so much in *quality*, as Regal.

Superior flour means superior bread—success in your baking and palatable, nutritious bread, excelling in everything that makes bread worth eating.

So certain are we that Regal Flour will please you, that if you will buy a barrel and give it a fair trial, we will return your money if you find it unsatisfactory.

THE ST. LAWRENCE FLOUR MILLS CO., LTD.
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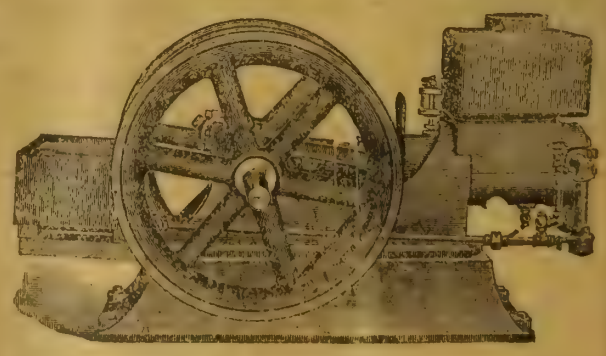
The Sussex Motor Co. Ltd. Hopper Cooled Engine

A well built engine of extremely simple construction and especially adapted for all Farm purposes.



It is made in 1 1-2, 2 1-2 4, 6, 8, 12 h.p. Impossible to freeze up in cold weather. Every engine guaranteed for five years.

Can run on either kerosene, gasolene or natural gas. Write for catalog at once. It is Free.

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We want agents in a few unrepresented districts.

"Uniformity is a big word, Bud."
"I 'spect it's because it means a lot, Rose."

Steady—Regular—*Dependable* Quality, there's the FIVE ROSES idea.

No bad dreams bakeday eves — the morning batch "flat" instead of "up."

So very exasperating, you know, to get *less* loaves this week than last from the *same* quantities.

FIVE ROSES is the sure flour — *reliable*, you see.

No wrinkling worries over bread, or cakes, or pies, or anything.

Bake things always *up to the mark* of your happy expectations.

Disappointment—*never*.

Four times Uniform—Strength, Color, Flavor, too, and Yield.

FIVE ROSES—*trouble-proof* flour.

Use FIVE ROSES *always*. 10

Five Roses Flour

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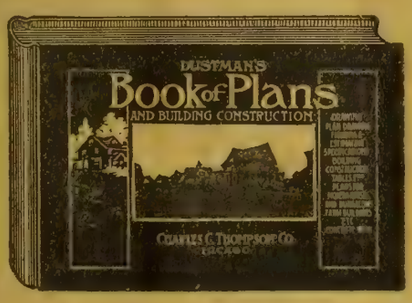

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Everyone interested directly or indirectly in building should have this book. 250 pages; oblong size, 9x13 inches; bound in blue cloth; white hand stamping—150 plans for modern houses, bungalows, barns, farm buildings, store fronts, store buildings, garages, etc., etc.

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WANTED—A pure bred Scotch Collie dog. State age, breeding and price. D. R. Nicholson, Coxheath, N. S.

FOR SALE—Collie puppies, bred from heel driving stock. Further particulars apply to GEO. W. AIKEN, P. O. Box 131, Fredericton, N.B.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

GIRL WANTED for General Housework. Wages $15 per month. Apply to MRS. D. B. PIGEON, 153 Douglas Ave., St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R. J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

WANTED—The name and addrees of the party who mailed Postal Note No. H. 998512 at Moncton, N. B., on March 15th, so we may give proper credit for same.—THE MARITIME FARMER, Sussex, N. B.

BROOKLAND'S FARM SHROPSHIRES FOR Sale, 6 head, all reg. or eligible in the A. S. R. Asso., 4 were sired by a Dryden ram, they are dandy ones. $75 takes the lot. Address the Manager, H. McDONALD, French River, N. S.

WANTED—A willing reliable man for general farm work including milking. Wages for summer season twenty-five dollars per month with board, steady work for satisfactory man. CHAS. PETERS, Elmhurst, Kings Co., N. B.

FARM FOR SALE—Pleasantly situated at Amherst Shore, a farm containing 63 acres, handy summer cottages, store post office and church. Owner offers same for $1200. For further particulars apply to owner W. A. Rose, Amherst Beach, N. S.

Bargains in Poultry

I have a bunch of nice yearling Single Comb Rhode Island hens I am selling now for $1.00 each, will make splendid stock to start a flock, nice turkeys and some exceptionally fine grey African Geese for fall delivery.

Sarah E. Moses Smith,
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Seven Guernsey Bulls For Sale

I have seven Guernsey bulls from cows of exceptional milking qualities. Parties wishing high class stock for dairy purposes, should write for description and prices.

John N. Chute, Berwick, N. S.

HIGHLAND VIEW GUERNSEYS

We have very little to sell, but what we have got is the best, it is a bull calf six weeks old, out "Beauty Sue of Willow" (a cow purchased from Roper Bros.) and sired by the famous "Golden Opinion." Write for price.

R. R. BLACK, Amherst, N. S.

NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months. A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

JOHN McDONALD & SON,
Bloomfield Farm. Shubenacadie, N.S

140 Acre Seashore Farm

A Bonanza, Price $1100.

A chance of a lifetime to secure a money-making seashore farm for a fraction of its value, cuts 35 tons hay, estimated to be 400 cords wood besides the timber, 10 room painted house, 40 x 60 ft. barn with horse fork; if taken now, wagons, carts and full line farm machinery thrown in, get full details of this starting sacrifice on page 7 our "Mammoth 75 page Farm Catalogue No. 36"; beautifully illustrated and filled with a wonderful assortment of money-making farms throughout N. S. and the N. E. States; send today for free copy, it will save you lots of time and money. Box No. 373, Sussex N. B.

Holstein Bulls For Sale

We have for sale a six months old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

We are also offering our 3-year-old stock bull Cobequid Rory, a sure stock getter. PRICE $100.

W. C. McLEOD & SONS,
Loch Lomond West Nova Scotia

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

240 Acre Seashore Farm

Big Producer Fully Equipped.

Cuts 150 tons hay; 3000 cds. wood; abundance fruit; splendid 11 room house; 2 barns, one 100 ft. long, large wing, tie-up for 50 head; tenant house for help; all in good condition; wharf for large vessels on farm, good shipping point to large cities, a splendid money-making farm or site for beautiful country estate, charming view of bay and two villages, to quickly settle aged owner's estate the low price of this fine old homestead with 3 horses and full equipment of farm tools and machinery is only $8200, part cash; for traveling instructions to see this and a shore farm of 100 acres for only $1100, see page 7, our "Mammoth 75 page Farm Catalogue No. 36;" beautifully illustrated and filled with a wonderful assortment of money-making farms throughout N. S. and the N. E. States; send today for free copy, it will save you lots of time and money.—Box No. 373, Sussex.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

C. C. H. EATON,
Canard, N. S.

EVERY YEAR BETTER----INTER-PROVINCIAL EXHIBITION

SEP. 23 CHARLOTTETOWN SEP. 26

1 9 1 3

GRAND DISPLAY OF EXHIBITS

TWO DAYS **HORSE RACING** SEVEN CLASSES

BEST ATTRACTIONS EVER SEEN ON P. E. ISLAND

24th 25th **AEROPLANE FLIGHTS** WITH PARACHUTE DESCENTS

EXHIBITION ENTRIES CLOSE AS FOLLOWS:

Live Stock, except Poultry, and all classes in Manufactures, 12th September. All other entries close 17th September.

CHEAP RATES ON STEAMERS AND RAILWAYS

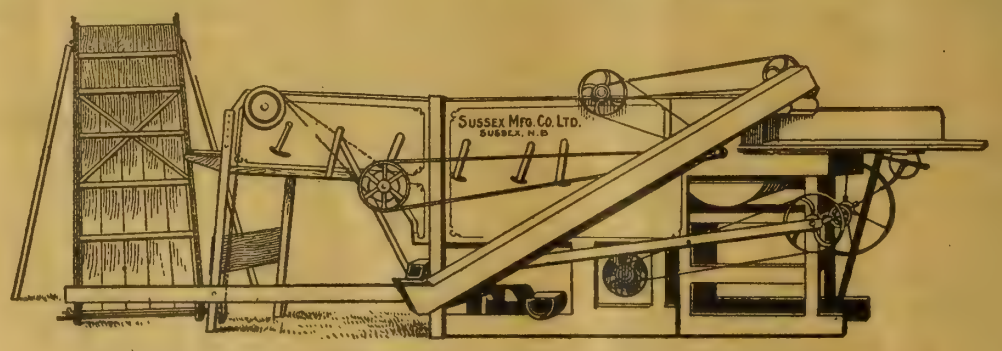
For Prize List and Information write the Secretary.

FRANK R. HEARTZ, President. C. R. SMALLWOOD, Secy-Treas.

Harvest Time is Here

With a Bumper Crop

What About Your Threshing Facilities?



Four Horse Sussex Little Giant Thresher with Tailings Elevator and Straw Carrier.

If you have a lot of grain to thresh for yourself or, if you want to "Make Money" threshing grain for other people, it will pay you to buy one of our **Little Giant Threshing Machines.**

Built in one, two, four and eight horse power sizes.

Two Horse Thresher can be operated with from two horse and up power engine. Four Horse Thresher can be operated with six horse and up power engine. Either two, four or eight horse power machines can be supplied with or without Tailings Elevator, Straw Carrier and Bagger and equipped with Trucks. Every machine is given a thorough test before it leaves the factory and is fully guaranteed.

Send for our complete Farm Machinery Catalogue which describes our Threshers, Hay Presses, Thread Powers, Wood Cutters, Grain Grinders, Feed Boilers, Root Pulpers, Rubber Belting, etc. It is free and contains a large number of testimonials from satisfied users.

The Sussex Manufacturing Company, Limited, - Sussex, N. B.

BREEDERS' DIRECTORY

Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N. B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire attle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S.
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

Stewart Bros., Alliston, P. E. I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Station, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A. Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.

Shropshires

C' A. Archibald, Truro, N. S.

POULTRY.

Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

Springbrook Ayrshires!

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

SPRINGVALE FARM AYRSHIRES

Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd.
Young Stock For Sale.

FRED S. BLACK, Amherst, N. S.

ROSE BANK FARM
Jerseys & Yorkshires For Sale

Jersey bull calves by Foxhall's St. John O'Dreamwold, and two litters of Yorkshire pigs, ready to ship in June.

JOSSELYN & YOUNG, Silver Falls, St. John, N.B.

Lawndale Stock Farm Shorthorns

We offer at present a few young heifers and bulls, as well as three cows, all bred in the purple.

Information cheerfully supplied to enquirers, Address,
I. M. LOVITT, M. D., P. O. Box 352, Yarmouth, N. S.

OCULUM

For Roup, Canker, Cholera and White Diarrhoea.
Greatest Poultry Tonic on Earth
Sent prepaid for **$1.00** per bottle.

GEO. H. SEAMAN, Moncton, N. B.,
Sales Agent for Occulum

Columbian Wyandottes
For Fall and Winter Shows

We can supply you with winners at reasonable prices.
We also have a small farm fronting on river with house and barn for only $700.00. See it.

Orchard Hill Farm, Browns Flats, N.B.

FOR SALE!

A few choice White Leghorn Cockerels from prize stock. Eggs for hatching all breeds. Send for catalogue.

Maritime Poultry Supply Co.
MONCTON, N. B.

NORTHERN GROWN TREES

Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery —no agents. Send list of your wants for prices, etc.

E. L COLPITTS
Petitcodiac, New Brunswick

FOR SALE

We have a number of choice cockerels and pullets of Barred Plymouth Rock, White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Eggs for hatching $1.00 per setting. Apply to

Walter McMonagle & Sons, Sussex Corner, N. B.

EGGS FOR HATCHING

From prize mating Rose and Single Comb R. I. Reds and Buff Orpingtons and S. C. Brown Leghorns. Eggs $2.00 per 15. Send for mating list.

W. H. HENRY, Shubenacadie, N. S.

Dollar Bottle Free

Send for a bottle of my Veterinary Medical Wonder. Cures Colic, Fever and Inflamation, Sent postpaid upon request. Agents wanted.
DR. BELL, V. S.
Kingston, Ont.

Fullline of veterinary remedies in stock including Dr. Bell's Wonder, fine blister for Spavins, Ringbones, lumps or bunches of any kind.

SHORTHORN CATTLE

Stock bull, Doune Gladiator, (imp.) 79308. No superior in Maritime Provinces.
Also choice lot of heifers, best blood of the breed obtainable, with size, style and quality. Also a few high class milking grades.
Prices within reach of any farmer who wishes to improve or renew his stock.

J. E. Hetherington,
Cody's N. B.

BEES HONEY

The genuine article fresh from the Clover fields. Ready in a few days in bulk or comb. Prices given on application.

CRAIG BROS., Amherst, N. S.

Maple Grove Ayrshires

For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

M. H. PARLEE, Lower Millstream, N.B.

Reduced Prices of Eggs

For the months of June, July and August only we will sell White Wyandotte, Columbian Wyandotte and S. C. White Leghorn eggs at $1.25 per 15; $3 for 50; $5 for 100. For Light Brahma eggs $2 for 15; $3 for 30. Address,

Michael K. Boyer, Box 27,
Atlantic Co., New Jersey.

Exhibition Stock

As we will not show at any fall shows this year we offer for sale our last years Prize Winning Stock in White Wyandottes, White Orphingtons, Black Minorcas, R. I. Reds, Barred Rocks and White Leghorns.
Write for price

Kingsdale Poultry & Supply Co.
SUSSEX, N. B.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

WISH-TON-WISH STOCK FARM
Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

AYRSHIRE BULLS FOR SALE

I am offering a two-year-old bull for sale. He is out of the famous cow White Heather of St. Annes. I have also two other choice bulls that are fit for service. Correspondence solicited.

J. FRANK ROACH, - - Sussex, N. B.

BRAMPTON JERSEYS!
Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

B. H. BULL & SON, - Brampton, ONT.

YOUNG HOLSTEIN BULLS!

We have lots of them, all ages, from one to six months. Show Calves from our best cows. Now is the time to get your choice. Females all ages, bred for the fall shows and dairy tests. Some excellent high grades fresh or springing. Also Three Draft Fillies rising two, three and four, and a quantity of Seed Potatoes.

LEA & CLARK, VICTORIA, P. E. I.

Rockview Farm, Welsford, N.B.
(Wm. S. Harding, Jr., Proprietor)

High Class Holstein Cattle. Young stock bred from heavy producing and showing ancestry for sale.

Cobequid Farm Holsteins

Present offering. One fine bull fit for service and several bull calves three or four months old, sired by Helbon Dehols Prince, and from cows that are producers. Among them one whose two nearest dams average over 26 lbs. butter in 7 days. For particulars and prices write

Samuel Dickie & Son, Central Onslow, Col. Co. N.S.

BELLEVIEW STOCK FARM
Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

C. A. ARCHIBALD, - Truro, N. S.

HOMESTEAD FARM
Holstein--Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

LOGAN BROS.
R. R. I.
Amherst, N. S.
Long distance 'Phone

JOHN RICHARDS,
Bideford, P. E. Island,

Breeder and Importer of

Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

Get a "Monarch" Gasoline Engine for Threshing and Other Farm Uses

THE individual gasoline engine and threshing machine are becoming more prominently into use because the threshing can be done when you are prepared for it. Not necessary to depend upon the other fellow who sometimes keeps you waiting for a week or perhaps two beyond the time arranged for.

There is a MONARCH engine of any size made to suit the various sized threshing outfits, and is always at your service. The MONARCH will take care of this work better than otherwise possible.

We Ask You to Investigate

The MONARCH very carefully. It is designed especially for all general farm work. It is not subject to derangement. It is extremely simple, strongly built, and is

also a Fuel Saver

As a matter of fuel economy the MONARCH has a carburetor equal in quality to those used on a $1000 automobile. This carburetor is so arranged that every ounce of fuel is properly mixed to give the maximum power with the least possible amount of fuel. In actual practice "MONARCH" fuel bills are 10% below other engines of the same rating. This 10% fuel saving will in the course of a short time pay for the price of your engine besides giving you greater efficiency. Every engine user wants low fuel bills. If so get a "MONARCH"

A Power Giver

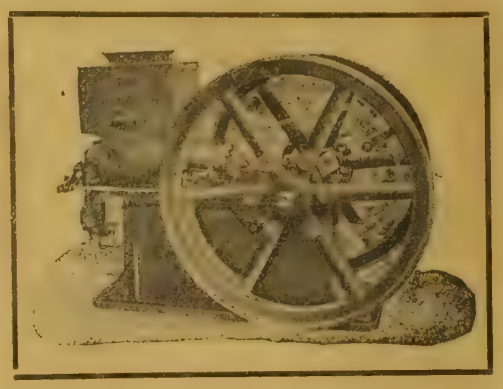
With a MONARCH there is always surplus power over their rated horse power. If you buy a 6 H. P. MONARCH it will perform the work that will stall a 8 H. P. ordinary engine.

The Fuel Tank

Our fuel tank is another means of saving the fuel bills because we have a solid cast metal tank in the base instead of the ordinary tin tanks, which are usually exposed and liable to be dented with a result that you have leaky tanks wasting fuel, which is not possible with the cast metal tank. You will really appreciate this MONARCH feature.

You Can Always Know

just the exact quantity of gasoline as contained in the tank of a MONARCH, because there is a sight guage glass where at any time it can be seen just how much gasoline is in the tank.



The MONARCH is the only engine which has this feature. Why bother with attempting to measure the fuel in your tank, and so often you cannot measure it. Our sight guage glass is always in sight.

There are Other Features of Design

The MONARCH is perfect in control and regularity—A big point especially where speed is absolutely necessary, as in running cream separators, fanning mills or electric light plants.

There is also a cut-out lever to make easy starting, and is a battery saver as well.

The crank shaft is 22% over size.

Connecting rod bearings can be adjusted again and again to take up wear.

The MONARCH is so simple that your wife, son or daughter can operate the engine easily.

We make the MONARCH engine very strong, especially those parts that take the grunt of the working stresses.

The crank shaft and connecting rod are made of high carbon steel.

Gears are semi steel.

Crank shaft bearings are slanted so that there is no strain on the bearing cap.

Guarantee

The MONARCH is backed up by the strongest possible guarantee, because we know it will fill the bill in every particular.

Why not learn all details of the "Monarch" in our new catalogue? It describes the sizes from 1½ to 35 h.p. Besides that, it is a revelation of the possibilities open, when you once get a good farm engine on your place.

We offer you the most economical and convenient farm engine made, designed so you can get the easiest and fullest convenient use from it.

Write us to-day, and secure a "Monarch" under our summer offer, to do your threshing and other work. We make easy terms of purchase, when you are buying. Afterwards, and for many years, you will have very low fuel bills, In all probability, you will not need a single repair. Probably you will not have a single difficulty in operation from the day you buy a "Monarch" until after you have had many years service.

Write us a post card. Get the "Monarch" Catalogue. Ask about our Special "Summer Offer."

CANADIAN ENGINES LIMITED
DUNNVILLE, ONTARIO
Manufacturers

THE FROST & WOOD CO., Ltd.
Montreal ST. JOHN Smiths Falls
Selling Agents Eastern Ontario.

37.05
M A Slack

PUBLISHED TWICE-A-MONTH

The MARITIME FARMER
AND CO-OPERATIVE DAIRYMAN

Published Twice-a-month in the Interests of the Farmers of the Maritime Provinces of Canada.

Vol. 18. SUSSEX, N. B., SEPTEMBER 16, 1913 No. 23

Get a "Cockshutt" Gang Plow to Suit Your Farm Soil and Your Operator

HALF the battle of a good harvest next year lies in prompt plowing immediately the fields are cleared. This prevents loss of moisture in the soil. It prevents baking. It turns the stubble under to decay. It makes the land receptive to store autumn rain. Plow promptly.

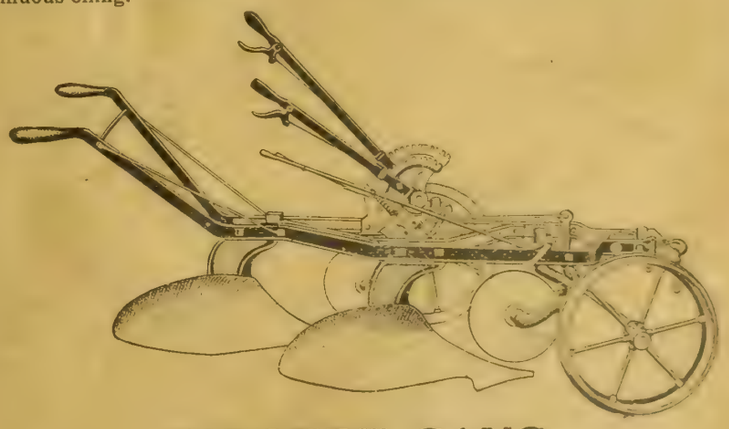
With our "Gang" plows, a single operator covers twice the ground turned by a hand plow in a day's work. With the "Maple Leaf" plow, which is adapted to all lighter soils, a man can do remarkably even and excellent plowing—wide furrows in sandy loam—narrow furrows in stony soil. With the "Crown" be can handle sod and clay soil to great advantage. One operator performs with a 3-horse team the work done in a day by two operators, two hand plows and two teams.

Learn from our agents the details of equipment supplied with either of these plows, to exactly suit the farm that will use them.

Why Not Let us Help You? Write for our plow catalogue, and let us know what kind of land you have, what you are raising, and what hired help you have. We will gladly advise you as to the plows best suited for your use. We are glad to perform this service for you. . . . . **Write Us Now!**

MAPLE LEAF GANG

This is a high-clearance plow, strong but light, and with a frame adjustable for width of furrow almost instantly. It is very easily guided, and may be had with a straightener device. Usually needs only 2 horses, but will handle the work of a 3-horse team. Ideal for a farm with varying soil and one team and operator only.—Dust-proof boxes on wheels insure continuous oiling.



"CROWN" GANG

Plow 18 acres a week in clay with this roller-bearing "Crown" Gang and a three-horse team. This famous plow is equipped with either wide or narrow bottoms for sod or stubble work. It has exceptional strength due to its thoroughly braced steel frame and substantial standards. Easy to handle under all conditions. Knife or rolling colters supplied as desired.

Head Office & Works: SMITH'S FALLS ONTARIO

The Frost & Wood Co. Limited

ST. JOHN, NEW BRUNSWICK

Branches at Montreal Que., Truro, N. S., Charlottetown, P.E.I.

SPECIAL CUT PRICE

ON ALL STYLES

SARNIA WIRE FENCE

"DIRECT FROM FACTORY TO FARM"

FREIGHT PREPAID

THE SARNIA FENCE CO., LIMITED -- SARNIA, ONT.

The enthusiastic support given our "Direct from Factory to Farm" policy of selling wire fence this year has been greater than ever. We have been again compelled to increase the enormous capacity of our plant and today our plant has a capacity equal to that of any other four fence companies in Canada. Increasing our capacity has lowered our cost of manufacturng, and in line with our policy of selling the Farmers of Canada their fence at the lowest possible cost, we are reducing our prices 2c per rod in the face of a large increase in the cost of our raw material. By comparing our present prices with the cost of plain galvanized wire you will see that they would not leave us a living profit under normal conditions. We have on hand just 2000 tons of raw matarial and finished fence that we can sell at this special price and it will be to your interest to place your order at once and make sure of getting your fence at these special prices.

Remember the agent or dealer wants you to purchase from him a fence on which he can make a commission, and makes claims of quality in an attempt to account for the tremendous difference between his price and ours. Fifty thousand Ontario farmers purchased over one thousand carloads of SARNIA FENCE during 1913, and every one of them stand ready to tell you that it is the most perfectly woven fence they ever used.

We know that our Direct from Factory to Farm method is such a dollar saving proposition that we fearlessly publish our prices which include freight prepaid by us to your nearest railroad station. Stop for one moment, and think what price you were compelled to pay for fence before the Sarnia Fence Company came into the field, and in recalling the old prices you would not need to draw very much upon your imagination to know where the price of fence would go if the Sarnia Fence Company could be gotten rid of. We want your orders whether for one bale or a carload, and we sell all our fence with the guarantee your money back, and we pay freight both ways if dissatisfied.

GUARANTEE---If you find for any reason that the fence received of us is not of the best hard steel wire, the best galvanizing, the most perfectly woven fence you ever purchased at any price, you are at liberty to return it to us. We will pay freight both ways and refund your money.

The Prices are Special and Not Permanent——Place Your Orders at Once

WE SET THE PRICE. OTHERS DEVOTE THEIR ENERGY TO TRY TO MEET OUR PRICES.	PRICE Less than Carload in Old Ontario	PRICE Less than Carload in New Ont. Que, Mar. Provinces	PRICE Carload or over in New Ont: Que, Mar Provinces
5-40-0 HORSE AND CATTLE FENCE Has 5 line wires, 40 in. high, 9 stays to the rod, all No. 9 Hard Steel wire, spacing 10, 10, 10, 10. Weight per rod 6½ lbs. Price per rod freight prepaid	17c	19c	18c
6-40-0 HORSE AND CATTLE FENCE Has 6 line wires, 40 in. high, 9 stays to the rod, all No. 9 Hard Steel wire, spacing 7, 7, 8, 9, 9, weight per rod, 7½ lbs. Price per rod freight prepaid	19c	22c	21c
7-40-0 HORSE, CATTLE AND SHEEP FENCE. Has 7 line wires 40 in. high, 9 stays to the rod, all No. 9 Hard Steel wire, spacing 5, 6, 6, 7, 7½, 8½. Weight per rod 8½ lbs. Price per rod, freight prepaid	21c	24c	23c
7-48-0 HORSE AND CATTLE FENCE Has 7 line wires, 48 in. high, 9 stays to the rod, all No. 9 Hard Steel wire, spacing 5, 6, 7, 9, 10, 11. Weight per rod, 9 lbs. Price per rod, freight prepaid	22c	25c	24c
8-34 SHEEP AND HOG FENCE. Has 8 line wires, 34 in. high, 12 stays to the rod, all No. 9 Hard Steel wire spacin 3, 3¼, 3½, 4¾, 5½, 6. 8. Weight per rod, 10 lbs. Price per rod, freight prepaid	25c	28c	27c
8-40 GENERAL STOCK FENCE. Has 8 line wires, 40 in. high, 12 stays to the rod, all No. 9 Hard Steel wire, spacing 3, 4, 5, 6, 7, 7, 8. Weight per rod 10½ lbs. Price per rod freight prepaid	26c	29c	28c
8-48 GENERAL STOCK FENCE. Has 8 line wires, 48 in. high, 12 stays to the rod, all No. 9 Hard Steel wire, spacing 4, 5, 6, 7, 8, 7, 9. Weight per rod 11 lbs. Price per rod freight prepaid	27c	30c	29c
9-48-0 GENERAL STOCK FENCE. Has 9 line wires, 48 in. high, 9 stays to the rod, all No. 9 Hard Steel wire, spacing 3, 4, 5, 5, 6, 8, 8, 9. Weight per rod 11 lbs. Price per rod freight prepaid	27c	30c	29c

CASH WITH THE ORDER SAVES EXPENSE AND YOU GET THE BENEFIT OF THE SAVING IN THE PRICE.	PRICE Less than Carload in Old Ontario	PRICE Less than Carload in New Ont Que, Mar. Provinces	PRICE Carlord or over in New Ont Que, Mar. Provinces
9-48 GENERAL STOCK FENCE. Has 9 line wires, 48 in. high, 12 stays to the rod, all No. 9 Hard Steel wire spacing 3, 4, 5, 5, 6, 8, 8, 9. Weight per rod 12 lbs. Price per rod, freight prepaid	29c	33c	32c
10-50 HORSE, CATTLE, SHEEP AND HOG FENCE. Has 10 line wires 50 in. high, 12 stays to the rod, all No. 9 Hard Steel wire, spacing 3, 3¼, 3½, 4¾, 5½, 6, 8, 8, 8. Weight per rod 13¼ lbs. per rod, freight prepaid	31c	35c	34c
7-26 HOG FENCE, Has 7 line wires, 26 in. high, 0 stays to the rod, top and bottom No. 9. Filling No. 12 Hard Steel wire, spacing 3, 3¼, 3½, 4¾, 5½, 6½ Weight per rod 6½ lbs., per rod freight prepaid	20c	23c	22c
15-50-P STOCK AND POULTRY FENCE. Has 15 line wires 50 in. high, 24 stays ot the rod, top and bottom No. 9, Filling 12 Hard Steel wire, spacing 1⅞, 1⅞, 1⅞, 1⅞, 2, 2, 2½, 3, 4, 5, 5, 6, 6, 7 Weight 12 lbs. Price per rod freight paid	35c	38c	37c
WALK GATE 3½ x 48 Freight paid.....	$2.50	$2.75	$2.50
FARM GATE, 12 x 48 Freight paid.....	3.75	4.00	3.75
FARM GATE, 13 x 48 Freight prepaid....	4.00	4.25	4.00
FARM GATE, 14x48, freight paid.....	4.25	4.50	4.25
FARM GATE, 16x48 Freight paid.....	4.75	5.00	4.75
STAPLES GALVANIZED 1¾ in per box of 25 lbs., freight paid	.75	.80	.75
BRACE WIRE No. 9 Soft, per coil 25 lbs. freight paid	.75	.80	.75
BARBED WIRE GALVANIZED, Two point, per spool of 80 rods, freight paid..	2.25	2.50	2.40
STRETCHER, All iron top and bottom, draw very heavy tested chain, extra single wire stretcher and splicer, the best stretcher made at any price, freight paid	7.50	8.00	7.50

PLEASE NOTE-The first column of prices in the above advertisement is for the fencing and gates, freight paid in less than car loads to all points in Old Ontario: The second column of prices is for fencing, freight paid in less than car loads to all points in New Ontario, Quebec and the Maratime Provinces: The third column is the price, freight prepaid to all points in car loads in New Ontario, Quebec and the Maratime Provinces: We prepay the freight on all Railroads, with the exception of Electric lines and Steamship lines. Remember these prices are not permanent and will be raised again shortly. Place your orders to-day, Remit by P. O. order, money order, or draft.

The Sarnia Fence Co., Limited, Sarnia, Ont.

Fence Put Up in 20, 30, 40 Rod Rolls Only

Tack this price list up in a conspicuous place that your neighbors may see it.

IT IS A PROTEOTION AGAINST COMBINE PRICES

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1913

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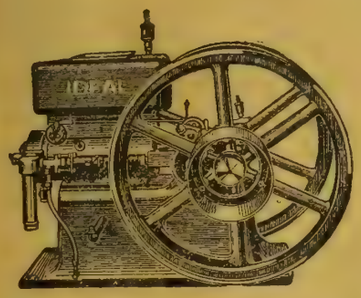

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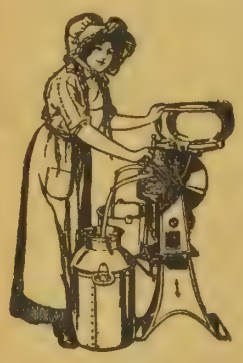

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Tuition Free to all Students from the Maritime Provinces

Students can take a full course in the various branches of Agriculture, Veterinary Science, etc., and at the same time in English, Mathematics, Book-keeping, the various science and other lines regularly studied in high schools and colleges.

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Volume 18. SUSSEX, NEW BRUNSWICK, SEPTEMBER 16, 1913. Number 23.

The Nova Scotia Provincial Exhibition

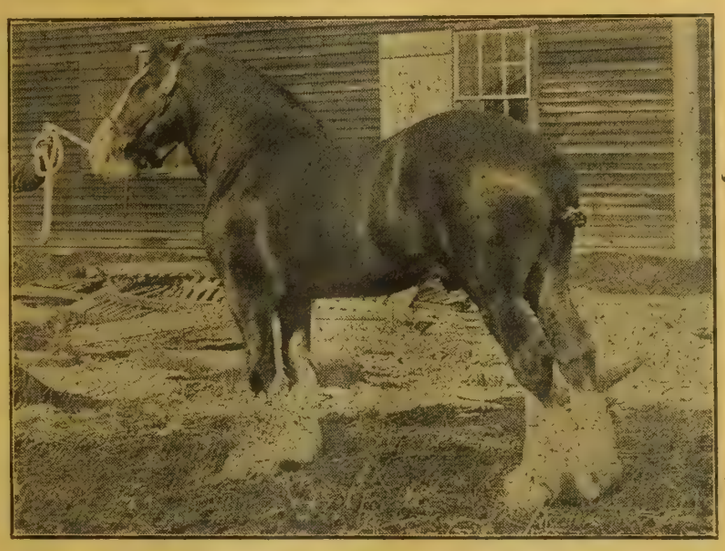
USHERED in by the best brand of exhibition weather that the weather-man could possibly hand out the Nova Scotia Provincial Exhibition threw open its doors to the public on the third inst.

No time was lost with official opening ceremonies, the gates were opened and immediately the turnstiles began to click at a lively rate and from day to day until the fair gates were closed on the night of the 11th, spectators thronged through the buildings and over the grounds where they found much of interest to them.

THE MAIN BUILDING AND ANNEX

contained tastely arranged exhibits put up by the leading mercantile and manufacturing houses of Halifax, as well as some outside firms who do considerable trade in the Maritime Provinces. There was no process work.

In the annex one of the most interesting features was an educational display and domestic science demonstration by the Nova Scotia Agricultural College, Truro. Miss Jennie Fraser, Provincial Supervisor of Women's Institutes and Mrs. Dunback were in charge of the domest science demonstrations and the vicinity of their booth was continually thronged with ladies who were very much interested in the work, as well as in the Women's Institute work that is being so well begun in Nova Scotia. The other section of the College display was in charge of several members of the faculty. It contained specimens of various garden vegetables and mounted specimens of injurious insect and weed pests, samples of various kinds of grains and grasses, in the sheaf, each accompanied by a typewritten slip containing a lot of useful information about the merits and demerits of the various samples. Ditching tile of various kinds and models of poultry houses completed the display. The whole display and demonstration were highly commended by the public and will very materially help to extend the college work. The Canadian Cow-Testing Association had a booth in charge of Messrs. Harvey Mitchell, and W. A. MacKay, where they showed the visitors how they could distinguish between the profitable and the unprofitable cows.



BARON SQUIRE.

Champion Clydesdale Stallion at the 1913 Maritime Horse Show and at the 1913 Halifax Exhibition. Owned by McFarlane Bros., Fox Harbor, N. S.

THE FISHERIES BUILDING

was well filled with the products of the deep. A couple of aquairiums containing live specimens of fish proved a source of much attraction. There were also a number of attractive models of various kinds of ships, boats, and fishermen's outfits, as well as a model fish hatchery in operation.

THE MINES BUILDING

contained exhibits representing the mineral resources of Nova Scotia and of the manufactured articles that are being produced from the raw materials.

IN THE MACHINERY HALL

Gasoline engines, cream separator, power sprayers, etc., made up the principal exhibits.

THE AGRICULTURAL SHOW

demonstrated the ability of the farmers of Nova Scotia to produce excellent specimens of the various vegetables and grains. In the centre of the hall the Maritime Experimental Farm at Nappan had a tastily arranged display of the various products of the farm, orchard and apiary. The Nova Scotia Hospital, Dartmouth, N S., also put up a very representative exhibit of roots, vegetables and other garden products, which were all very tastily arranged.

The best collections of field roots were exhibited by B. F. Chesley, Bridgetown, N. S.; Hugh A. Dickson, Truro, N. S., and Geo. A. Frame, of Shubenacacie, who captured the first, second and third monies in the order named. H. Loomer, Falmouth, N. S., had the best collection of garden vegetables followed in second and third places by collections put up by B. F. Chesley and Hugh A. Dickson. The exhibits in Agricultural Hall were judged by Mr. G. B. McGill, of Middleton, N. S.

HORTICULTURAL PRODUCTS

were judged by Prof. W. S. Blair and Mr. R. S. Starr.

The exhibit of apples was as good as could be expected, owing to the off fruit season. The showing of apples was not so large as usual and was too green looking to make an attractive display. Pears, plums, peaches and grapes in abundance were shown.

The best collection of ten commercial or export varieties of apples, five plates of each variety, five specimens on a plate, for competition for the Furness Withy Co., Limited, Steamship Agents, Halifax, Silver Tea Service to be won three times, before becoming the property of the exhibitor, which was won in 1910 and 1912 by L. C. Healy, Church Street, N. S., was again won by Mr. Healy and consequently the ownership of the trophy was vested in him.

There were six entries in the class for best and most valuable collection of 20 varieties apples. Prizes went to 1, Sea View Farm, Starr's Pt.; 2, Mrs. Wm. Sangster, Falmouth; 3, H. A. Dalmaine, Wolfville; 4, L. E. Healy, Church Street.

The best collection of ten commercial or export varieties of apples brought out five entries and prizes went to : 1, Sea View Farm; 2, Mrs. Wm. Sangster; 3, H. E. Bent, Tupperville, N. S.; 4, H. A. Dalmaine.

The best collection of five commercial or export varieties also brought out five entries. Prize winners:—1, H. E. Bent; 2, H. A. Dalmaine; 3, Mrs. Wm. Sangster; 4, Sea View Farm.

W. E. Brown, Falmouth, had the best collection of new varieties. The only other entry in this class was shown by H. A. Dalmaine.

Sea View Farm, had the best collection of Peaches. H. A. Dalmaine came in for second money.

Mrs. Sarah Starr, Wolfville, showed the best collection of grapes and again H. A. Dalmaine came in for second money.

In county collections there were representative collections from the counties of Halifax, Lunenburg, Digby, Annapolis, Kings, Hants, Cumberland, Pictou and Antigonish. The prize winners were:—

Halifax County—1, H. J. McAloney, Fairview.

Lunenburg Co.—1, H. T. Hebb, Bridgewater; 2, Melburn Wentzell, Maplewood, N. S.

Digby Co.—1, W. D. Ryerson, Bear River.

Annapolis County—1, B. F. Chesley, Bridgetown; 2, H. E. Bent, Tupperville.

Kings County—1, Seaview Farm, Starr's Point; 2, H. D. Johnson, Wolfville; 3, H. A. Dalmaine, Wolfville.

Hants County.—1, Mrs. Wm. Sangster, Falmouth; 2, Chas. A. Dill, Windsor; 3, Thos Aylward, Falmouth.

Cumberland County—1, M. B. Harrison, Athol.

Pictou County—1, Thos. C. Latham, Sylvester.

Antigonish County—1, Herbert Smith, Antigonish; 2, ———; 3, John Brown, West Lochaber.

BUTTER AND CHEESE.

The exhibits in the dairy products department were exhibits of quality although some of them had suffered somewhat from the effects of the heat while in transit. Messrs. W. A. MacKay and Harvey Mitchell placed the

awards.

There were eight entries in the section for fifty pound tubs or boxes, suitable for export, made at any creamery and the awards were as follows:

1, J. P. Simmons, Dunstaffnage, P. E. I.; 2, W. C. Lewis, Little Bass River; 3, South River Creamery Co., Loch Katrine, N. S.; 4, A. Clarke, North Tyron, P. E. I.; 5, Drink River Dairy Co., Central Bedeque, P. E. I.

Twenty-eight pound creamery export butter boxes had seven entries. Awards went to:

1, J. P. Simmons; 3, W. C. Lewis; 3, South River Creamery Co., Loch Katrine, N. S.

In twenty pound creamery prints, there were seven entries and the monies were captured by: 1, W. C. Lewis, Little Bass, River; 2, W. A. Tuttle, Wallace Bay, N. S.; 3, South River Creame(y Co., Loch Katrine, N. S.; 4, So. River Creamery Co.; 5, Sussex Cheese & Butter Co.

There was only one entry in the section for butter 4 to 8 pound tins suitable for export to West Indies. 1, Sussex Cheese & Butter Co., Sussex, N. B.

Dairy Farm, 10 pounds, prints—five entries: 1, Mrs. Isaac Hoare, Onslow Station, N. S.; 2, Mrs. J. McNeil, Cloverville, N. S.; 3, Herbert Smith; 4, F. W. Foster; 5, Mrs. A. H. Boswall, Little York, P. E. I.

Dairy farm, 20 pound crock— nine entries—1, F. W. Foster, Kingston, N. S.; 2, Herbert Smith, Antigonish; 3, Mrs. B. Fulton, Lr. Stewiacke; 4, Mrs. L. H. D. Foster, Marshfield, P. E. I.; 5, McFarlane Bros., Fox Harbor, N. S.;

Cheese, best 2 factory colored, made at any factory in Nova Scotia, five entries—1, Marydale Factory; 2, Erinville Factory; 3, Up. South River Factory; 4, Argyle Factory; 5, Glassburn Factory, all owned by George Vinten, of Lower South River, N. S

Cheese, home made, 2 entries — 1, Mrs. J. J. Chisholm, Briley's Brook, N. S.

Best 2 factory cheese, colored, made at any factory in the Maritime Provinces, eleven entries—1, Up. South River Creamery, Lr. South River, N. S.; 2, A. McInnis, Red Point, P.E.I.; Wm. Clark, Emerald, P. E. I.; 4, 4, Glassburn Cheese Factory, Lr. So. River, N. S.; 5, Argyle Cheese Factory.

HONEY AND APIARY PRODUCTS were down to almost the vanishing point. Chas. Piers and Mrs. G. W. Wheelock were the only exhibitors.

IN THE HORSE BARNS

the lovers of good horse-flesh found many horses in both the light and heavy classes to admire.

Jas. Henderson, Belton, Ontario, placed the awards in the heavy classes and Dr. H. G. Reid, Georgetown, Ontario, placed the light horse classes

There were no Thoroughbreds on the grounds.

STANDARD BREDS were out in fairly good numbers and with an abundance of substance and quality.

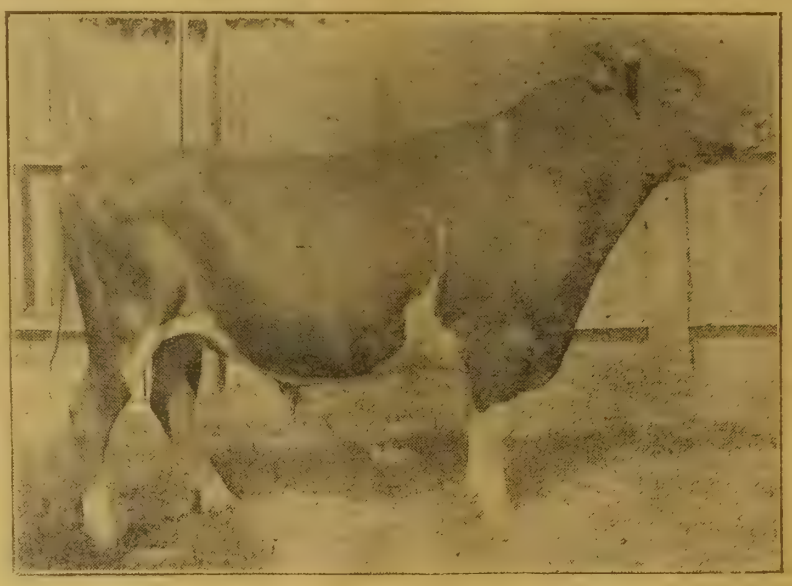
Five aged stallions faced the judge on the race track where they were judged. Mayor Todd, by Todd, owned by Hammond Kelly, Charlotetown, the winner of the red ribbon at the 1913 Maritime Horse Show, Amherst, headed the list. Todd Altora, by Todd, and owned by Angus McGillivary, New Glasgow, captured second money. Marshal M., by Ingen and owned by G. A. Wade, Mahone Bay, came in for third award King Dodd by Kalol stood in fourth position and Canadian Prince by Isle Dew was fifth in the class.

The three-year-old stallion class had only two representatives, H. C. Jewett's, Malone by Mobel and another horse owned by E. G. Hilton, Kingston Village, N. S., which were placed in first and second positions respectively.

J. L. Morse, Berwick, N. S., had the only entry in the two-year-old stallion class— Appleman by Marshal M., out of Nellie Dee, a daughter of Ferron.

In yearling stallions there were three entries:—Brenton Blanchard, Graham's Siding, N. S., showed Achille B., by Achille out of Lady Brenton, a full sister to Israel. J. L. Morse showed Alright Marshal, by Marshall M., out of an Alright dam, and E. J. McKenna, Kingston Station, showed Bendore by Marshal M., out of Nellie Dee by Ferron. The judge place them in the order named.

Brood Mares with foal at foot were also four in number. E. G. Hilton had Hallie Harding by Nuthurst out of Lady B with a Kingsborough foal at foot. Londonderry by Scawbaul out of Bustle by Absolute with an Achille foal at foot and owned by T. D. Blaikie, Great Village, N. S. J. L. Morse's Nellie Dee by Ferron out of Nellie Dee Dee with a Sabledom foal and Karava by Kremlin, out of a Nutwood dam with a foal by Baring were placed in the order named. The Kingsborough foal headed the list followed in second and third places by the Sabledom and Achille foals.



ISLAND PRINCE OF HILLSIDE.

Champion Guernsey Bull at the 1913 Halifax Exhibition.
Owned and exhibited by H. W. Corning, M. L. A., Cheggogin, N. S.

Blake Bros., Shubenacadie, N. S., had the only four-year-old filly, Lilly Lou, by Isle Dew out of Lizzie Dupe by Narrakel.

E. J. McKenna showed Maud Marshall by Marshal M., out of Nellie Dee in the three-year-old filly class.

One-year-old fillies were four in number. F. W. Foster's Oclamena by Marshal M., out of Eureka of Elmdale by Ferron, captured the red ribbon. J. L. Morse's Queenborough by Kingborough out of Hallie Harding, stood in for the blue ribbon and R. A. Corbin's Joan C., by Bahring out of Daisy Dewitt by Red Lake, took the green. Long Bird by Achille was outside the monies' pale.

ROADSTERS.—The brood mare section of the Roadster class brought out three entries. A. H. Hilton, of Kingston, N. S., captured the red ribbon with Jennie Lee by Craigg Pilot out of a Rampart dam, as well as on her foal by Kingborough.

M. S. Foster took the blue ribbon with Daisy Ferron by Ferron out of a General Knox dam and also the blue on her foal by Marico a son of Peter the Great. A. G. Drysdale, Halifax, had the green ribbon winner in a General Sherman mare out of a Charlie Ray dam with her foal by Bahring.

The three-year-old filly class had four entries. Billy-Be-Sure by Will-Be-Sure, out of a Pandyke dam, Margaret by Bahring out of a Rampart Dam, Gyp, by Bonnie C. by Sunny Clime, out of a mare of unknown breeding and Jerry K., by Kavera, out of Fannie Lambert by Resolution The placings were as mentioned. Two entries appeared in the two-year-old section, Prince Auto by Marshal M., out of Jennie Lee and Helen Patch by Frank Patch out of Queen Bess by Ferron.

Easter King by Kingborough out of Jennie Lee, Nellie K by Kavera, out of Fannie Lambert; Princess Pat by Bahring out of Queen Bess, and Ester Maud by Surveyor were placed in the order named in the one-year-old section and were owned respectively by A. H. Hilton, W. H. Musgrove and Mrs. J. B. Mitchell

There were only two pairs of matched roadsters. A. P. Elderkin's pair by Dalhousie out of Sim mares and Otis Gardiners' pair by Charlie Ray and Isle Dew. The latter pair were very poorly mated and had to go down to second place before Elderkin's snappy pair.

Ten entries were made in the single roadsters in harness class. A. Tom Medium horse headed the list. Thos. Buckley, Sydney, had the second prize winner and H. G. Fraser, Halifax, the third. The class included Achille, Kingborough, Dr. Ferron, Good Luck, Lord Alverson, Marshall M., and Tom Medium, sons and daughters.

CARRIAGE HORSES.—A Rampart mare with foal by Bahring was the only entry in the brood mare with foal section of the carriage class.

Harry by Border out of an Alright dam and owned by E. J. McKenna had no competition in the three-year-old section.

Border by Surveyor, had a similar walk-over in the two-year-old class.

Kate Larkins by Isle of Dew out of an Allie Clay dam, Birdie by Surveyor out of Lady Good Luck and Minnie G., by Maritime Prince out of a Tom Medium dam were placed in their respective order in the one-year-old class.

The first prize carriage matched pair consisted of Hackney and Thoroughbred breeding on one side of the pole and French Coach and Hackney breeding on the other. They were exhibited by A. P. Elderkin.

The second prize went to C. A. Archibald, Truro, on a pair of Cliffe Rosador colts.

The single horse in harness section had three entries. A Senator Wilkes a horse of unknown lineage, and a Kingborough.

PONIES.—The pony class was not very well filled and there was not much competition. A few Sables, and one Shetland made up the list of entries.

GENERAL PURPOSE HORSES—A Pride of Clay Crop colts led the way in the three-year-old section of the General Purpose Class, followed in second place by a horse owned by J. McDonald & Sons.

A Surveyor colt had no competition in the two-year-old section.

A Merry Monarch had a similar walk-over in the yearling class.

An Israel mare was first with a General Morgan foal in the section for brood mare with foal at foot.

Corrigan and Mercy Monarch were the sires of the first prize matched pair and Full of Fashion and a son of old Barrister, sired the second pair.

LIGHT DRAUGHTERS were few in numbers but showed a lot of good quality. A Norseman filly led the three-year-old class. A Prince of Kyle filly had no competition as a two-year-old. A Prince Sturdy mare with a Norseman foal at foot had every[illegible] way in her class.

The matched teams were two in [illegible]nber. The first prize team was a pair of colts by H. R. McMonagle's Stanley. The other team was a grey of the express horse type.

[illegible]UGHTERS. — There was only one entry, the get of Baron [illegible] in the four-year-old section [illegible] class.

[illegible] section there [illegible] A Norseman headed in second place [illegible]

The two-year-old section had only one entry and that a grade Percheron [illegible] section had two entries a Prince of Kyle colt and a [illegible] which were placed in the [illegible]

[illegible]ere were two brood mares, one by [illegible] with a Norseman foal and [illegible] mare with a Pride [illegible] foal, which were placed [illegible] first and second places respectively.

The first prize matched team were [illegible] and Montrave Ruler, the other [illegible] were imported from Ontario and of unknown breeding.

[illegible]. —With the exception of the second prize aged stallion, Sedgeforth Enterprise, shown by McFarlane Bros. R. A. Snowball had all the entries in the Hackney class. The stallion Model Performer, Chatham Lilly by Model Performer and her foal by Cock o' the North and Langton Lily, the old time champion of many shows

SHIRES—Eskham Enterprise shown by T. A. McDonald, Welsford, N. B., in the four-year-old stallion class, was the only shire on the grounds.

COACHERS—H.C. Jewett, Fredericton, N. B., had the only Coach horse on the grounds, the aged stallion, Danoas.

CLYDESDALES were quite strong in quality and in numbers. Seven aged stallions, Baron Squire, Baron Belgradden, Flash Favorite, Norseman, Vanderbilt, Baron Mac and Rory M. faced the judge. The first three mentioned captured the most coveted ribbons in the order mentioned. Baron Squire captured the male championship, and Clydesdale Association Cup for best stallion, any age.

Bob McGregor by Norseman shown by Wm. O'Brien and Sons had no competition in the two-year-old class and was a strong competitor for the championship honors.

Dundraw Lothian by Lothian Again and Hillside Favorite by Flash Favorite contested for the two-year-old stallion honors. The Lothian colt captured the red.

R. A. Snowball's May Lothian by Lothian Again with her foal by Baron Belgradden headed the brood mare list but the foal went down to second place to the foal of a Moncrieff Marquis mare by Royal Baron shown by Prescott Blanchard, Truro. May

Lothian also carried the female championship.

In the four-year-old filly class, McFarlane Bros.' Nill Bowie by Golden Chief and Bess Spencer by Sir Spencer captured the first and second monies. J. A. McKenzie, Truro, had the third prize winner in Dolly by Pride of Beacon.

R. A. Snowball's Moss Rose, by Baron Belgreddan and Wm. O'Brien & Sons' Belle of Hants by Norseman were the only contestants for three-year-old filly honors and they were placed in the order named.

In two-year-old fillies R. A. Snowball's Lady Rose and Miss Mary, by Baron Belgradden sandwiched H. S. Pipes & Son's Princess Nora by Norseman.

H. S. Pipes & Son's Fleur de Lis by Handy Andy, Wm. O'Brien & Son's Lucy Primrose by Norseman, and Snowball's Chatham Kate by Baron Belgradden were placed in their respective order.

The Silver Cup offered by the Queen Hotel, for the best five registered horses, any breed owned by the exhibitor, which was won in 1910 and 1911 by R. S. Starr, and in 1912 by R. S. Snowball, again remains in the custody of Mr. Snowball for another year.

PERCHERONS were out in stronger numbers than we ever saw them before at any Maritime show. There were no fewer than six aged stallions, but their actions in the ring showed everything but good training. H. C. Jewett's Gresham, headed the list. J. R. Collie's Coco came in for second money and Chas Symes' Lord Roberts captured the third award. Immerseif, Aubin and Nassol were further down the list.

Albert Fleming's Prudence and Prudie with their foals by Aubin and Coco stood first and second in the brood mare class with Symes' Distinguee and her foal by the Sackville Percheron stallion in third place. The foals, however, were placed in a position in reverse to that in which their dams were placed.

Wm. McManus, Upper Stewiacke, had the only entry in the four-year-old class in Jurisdiction an imported filly.

In the two-year-old section, Fleming's Birdie by Aubin out of Prudence led the way followed in second place by a filly shown by Chas Symes.

A Fleming Aubin Prudence filly had no competition in the yearling class.

Jewett's Gresham carried off the male championship and Fleming's bay Prudence carried off similar honors in the female class.

BEEF CATTLE

were judged by J. T. Gibson, Dunfield, Ont.

SHORTHORNS—In the Shorthorn class C. A. Archibald, R. A. Snowball and Dr. I. M. Lovitt put up a three-cornered contest with three splendid herds. Isaac Chipman & Sons also had a few good ones in the ring. There was no competition in the aged bull class against Archibald's Prince Ideal the winner of the coveted male championship. A Chipman bull led the two-year-old class followed in second place by Snowball's Gay Archer and in third place by Lovitt's Pontiac.

Snowball had the only junior yearling in the ring in Dunrobin Robin.

Archibald's Prince Ideal bull calves led the senior calf class and Lovitt's Lawndale Merry led the junior bull calf class. Snowball bulls captured the remainder of the bull calf monies.

There were six entries in the four-year-old cow class and the awards went to Archibald, Dr. Lovitt and Snowball in their respective order.

The three-year-old cow class had only two entries but it was in this section that Red Blossom, R. A. Snowball's Grand Champion at the 1913 Winter Fair was shown and again she was good enough to capture the championship diploma at Halifax. An Archibald cow followed in second place. Out of a class of four two-year-old heifers, Snowball had the first and second prize winners in Edith 4th and White Lady II., while Lovitt's Sailor Maid captured the remainder of the money.

A pair of Snowball heifers sandwiched Dr. Lovitt's Galatia in the senior yearling class.

Dr. Lovitt's Lawndale Maid led the junior yearling class with a pair of Snowball heifers following in second and third places and two other good ones further down the line.

Archibald's Prince Ideal heifer calves led the way in both senior and junior sections of the class and in the former Snowball calves were given second and third places, while in the latter section the remaining honors went to Dr. Lovitt's Lawndale Sylvia and Lawndale Rose.

The best three animals, get of one sire were the get of Prince Ideal, shown by C. A. Archibald. The second honors in this section went to a trio by Snowball's Dunrobin.

Dr. Lovitt's Merry Maid 1V. was the dam of the best two animals, progeny of one cow and Snowball's White Lady was the dam of the second best pair.

Snowball and Archibald had the first and second prize breeders herds, and graded herds.

HEREFORDS.—There was more competition in the Hereford class this year than ever before. Mr. W. W. Black has disposed of his herd and the contest waged between A. Bradshaw, Amherst; Wm. O'Brien & Sons, Windsor; Thos. Alward, Falmouth, and W. R. White, Fort Lawrence. All were out in good form. Bradshaw's aged bull, Prince Lad, carried off the male championship and his three-year-old captured the female honors. For full list of awards see other pages of this issue.

DEVONS—Wm. A. Pinkey, Melborne, N. S., had no competition in the Devon class but, nevertheless, his stock were out in a shape ready to stand some stiff competition.

GRADE BEEF CATTLE were out in strong numbers and in prime condition. Wm. O'Brien & Sons, A. Bradshaw, E. S. Congdon and Thos. Aylward were the principal competitors and Hereford blood predominated throughout.

FAT CATTLE.—H. F. Williams, of Clarence, N. S., swept the board in the three-year-old steer class by taking all the available cash.

A. Bradshaw and Wm. O'Brien & Sons divided the first prize honors evenly between them in the remaining sections and E. S. Congdon, S. C. Thompson and C. A. Archibald came in for a share of the seconds and thirds.

WORKING OXEN IN PAIRS were out in full force and the competition was quite keen. The Aylwards, the O'Brien's and Congdons each had a pair in each section of the class and were awarded prizes as in the published list.

DAIRY CATTLE.

The Ayrshire class was judged by Mr. D. Drummond, Ottawa. The contestants were McIntyre Bros., Sussex N. B.; Prescott Blanchard, Truro; Howard McKendy, Chatham; John McDonald and Sons, Shubenacadie; Chas. Symes, Minudie, and A. McRae & Sons, Charlottetown. The latter were out for the first time at Halifax and made a very good showing.

McIntyre Bros.' Grange Kelly, led the aged bull class and carried off the male championship. Prescott Blanchard's four-year-old Howie's White Lady, was the winner of the coveted female championship.

The first prize four animals, either sex, get of one sire were by McIntyre Bros.' Whitehill Sunrise, and were the same quartette as captured the same honor last year. The second prize quartette was shown by Prescott Blanchard and were the get of Special Spice, the second prize aged bull. The cow and heifer classes were particularly well filled and from five to ten animals were shown in the respective sections.

SCHULING SIR POSCH—3707

Grand Champion Holstien Freisian Bull at Toronto in 1909 and 1910 and at Halifax Exhibition in 1913.

Owned and exhibited by Harding Bros., Welsford, N. B.

The best two animals progeny of one cow were shown by A. McRae & Sons. They were the progeny of Mollie Bawn.

The McRae's captured the red ribbon on aged herd and the similar honor on young herd went to McIntyre Bros. The second prizes on herds went vice versa and the third prizes went to the Blanchard herd.

Holsteins were judged by Mr. R. S. Stevenson, Ancaster, Ontario. Five aged bulls came out for inspection and Harding Bros.' Schuling Sir Posch twice grand champion at Toronto, was placed in the lead, but while the old bull was showing and handling exceptionally well, the decision was not a popular one. However, Schuling Sir Posch had another championship added to his career. Lea & Clarke's Ida Rooker II. Vale was placed in second place and not a few of the old time Holstein men thought he deserved a higher place. S. Dickie & Son had Royalston Canary Major, a bull with an ancestry of big producers. His dam has a record of 116 pounds milk in one day; 6196 pounds in 60 days and 34.6 lbs. butter in seven days. He stood in for third money and W. L. Etter's Baron Posch captured the fourth and last award.

Harding Bros.' Madolyn Duchess De Kol, the first prize four-year-old cow in milk, carried off the female championship. This cow had just freshened and showed a tremendous udder.

Lea & Clarke had the first and second prize winners in the sections for three animals get of one sire and two animals, progeny of one cow. Harding Bros. captured the third award in the former class and S. Dickie snatched the similar honor in the latter class.

If the reader will refer to the list of prize winnings on another page, the awards in the various sections of the Holstein class may be found.

GUERNSEYS were shown by H. W. Corning, Hugh A. Dickson, A. H. Snide and A. McDonald.

The first prize honors in no fewer than nine of the sections went to Corning's Hillside herd. His Island Prince of Hillside, the first prize aged bull, captured the male championship and his first prize four-year-old cow in milk, Dairy Maid of Hillside, captured the female championship.

Island Prince of Hillside was first with three of his get. Dickson's Beauty of Willow, the third prize four year-old cow, in milk, was first with two of her progeny. Corning led in both aged and young herds and Dickson captured the second prizes in both.

Mr. Robert Robertson placed the awards.

JERSEYS—With a bew bull, Brampton His Reverence, at the head of their herd, H. S. Pines & Son were out stronger than ever with every animal in the pink of condition. They had no competition, however, and consequently they had to be content with only first money in each case, although they had splendid specimens in second and third places in nearly all sections.

Mr. Robert Robertson placed the awards.

GRADES.—There were good classes of Jersey, Guernsey, Ayrshire and Holstein Grades. See awards elsewhere in this issue.

SHEEP

The sheep classes at Halifax were up to the mark in point of numbers and quality. They were judged by Mr. J. T. Gibson, Dunfield, Ont. Shropshires were first in point of numbers. Oxfords, South Downs, Dorsets, Leicesters Lincolns and Cheviots were about even in numbers. Cotswolds and Hampshires were also out in fairly good numbers.

The Cheviot classes were worthy of special mention. We find that considerable new blood has been introduced into the flocks and that this splendid sheep is being very much in demand by our farmers. See list of prize winners on other pages of this issue.

The Dominion Department of Agriculture had a tent on the grounds under the supervision of Mr. Jas. A. Telfer, who had a display of the various implements used by up-to-date shepherds and other articles of interest to sheep breeders. Mr. Telfer was kept busy talking sheep and sheep management with the various interested visitors who visited his tent.

In a nearby horse stall, The Dominion Karakule-Arabia Sheep Company of Bridgetown, N. S., had a purebred ram and a half bred ram lamb of the famous Karakule variety that were viewed with interest by the visitors who are interested in the fabulous wealth that is being made in breeding for the production of Per

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Prize Winners at the Nova Scotia Provincial Exhibition.

HORSES.

STANDARD BREDS.

Stallion, 4 years old—1, Hammond Kelly, Charlottetown; 2, Angus McGillivary, New Glasgow; 3, G. A. Wade, Mahone Bay.

Stallion, 3 years old—1, H. C. Jewett, Fredericton, N. B.; 2, E. G. Hilton, Kingston Village, N. S.

Stallion, 2 years old—1, J. L. Morse, Berwick.

Stallion, 1 year old—1, Brenton Blanchard, Graham's Siding, N. S.; 2, J. L. Morse, 3, E. J. McKenna, Kingston Dtation, N. S.

Brood mare with foal by side—1, E. G. Hilton; 2, T. D. Blaikie, Great Village, N. S.; 3, J. L. Morse.

Fi,ly, 4 years old—1, Blake Bros., Shubenacadie.

Filly, 2 years old—1, E. J. McKenna.

Filly, 1 year old—1, F. W. Foster, Kingston, N. S.; 2, J. E. Smith, Kingston, N. S.; 3, R. A. Corbin, Halifax.

Foal of 1913—1, E. G. Hilton; 2, J. L. Morse; 3, T. D. Blaikie.

ROADSTERS.

Brood mare with foal—1, A. H. Hilton, Kingston, N. S.; 2, M. S. Foster, West Torbrook, N. S.; 3, A. G. Drysdale, Halifax.

Filly or Gelding, 3 years old—1, C. B. Chapman, Amherst, N. S.; 2, H. S. Pipes & Son, Amherst, N. S.; 3, W. H. Musgrove, Halifax.

Filly or Gelding, 2 years old—1, A. H. Hilton; 2, Mrs. J. B. Mitchell, Halifax.

Filly or Gelding, 1 year old—1, A. H. Hilton; 2, W. H. Musgrove; 3, Mrs. J. B. Mitchell.

Foal of 1913—1, A. H. Hilton; 2, M. S. Foster.

Pair Matched Roadsters—1, A. P. Elderkin, Amherst; 2, Ottis Gardiner, Shubenacadie.

Single Horse in harness—1, Spurgeon Gammon, New Glasgow; 2, Thos. Buckley, Sydney; 3, H. G. Fraser, Halifax.

CARRIAGE HORSES.

Brood mare with foal—1, J. D. McLellan, Halifax.

Filly or Gelding, 3 years old—1, E. J. McKenna.

Filly or Gelding, 2 years old—1, J. F. Grant, Dartmouth.

Filly or Gelding, 1 year old—1, John Dalyrmple, Milford Sta., N. S.; 2, John McDonald & Son.

Foal of 1913.—1, J. D. McLellan.

Pair matched carriage horses—1, A. P. Elderkin; 2, C. A. Archibald, Truro.

Single horse in harness—1, John Dalyrmple; 2, P. Neville, Halifax; 3, L. B. Dodge, Middleton.

PONIES.

Stallion over 12 hands—1, Ottis Gardiner; 2, J. Fisher, Halifax.

Mare or Gelding over 13 hands—1, J. D. McLellan, Halifax; 2, Leo Dunn Halifax; 3, Mrs. Garnier, Halifax.

Shetland Stallion, not exceeding 10½ hands—1, W. B. Smith, Halifax.

GENERAL PURPOSE HORSES.

Mare or Gelding, 3 years old—1, Earnest Wardrobe, Milford Sta.; 2, John McDonald & Sons.

Mare or Gelding, 2years old—1, Chas. Morton, Halifax.

Mare or Gelding, 1 year old—1, Richard Kidson, Halifax.

Brood mare with foal—1, E. J. Garrety, Halifax.

Foal of 1912—E. J. Garrety.

Matched team—1, John R. McKenzie, Shubenacadie.; 2, Earnest Wardrobe.

CLYDESDALE HORSES.

Stallion, 4 years old—1, McFarlane Bros., Fox Harbor, N. S.; 2, R. A. Snowball, Chatham, N. B.; 3, H. R. McMonagle, Sussex, N. B.

Stallion, 3 years old—1, Wm. O'Brien & Sons.

Stallion, 2 years old—1, H. W. King, Granville Ferry, N. S.; 2, Prescott Blanchard.

Brood mare with foal—1, R. A. Snowball; 2, Prescott Blanchard.

Filly, 4 years old—1 and 2, McFarlane Bros.; 3, J. A. McKenzie, Truro.

Filly, 3 years old—1, R. A. Snowball; 2, Wm. O'Brien & Sons.

Filly, 2 years old—1, R. A. Snowball; 2, H. S. Pipes & Son.

Filly, 1 year old—1, H. S. Pipes & Son, 2, Wm. O'Brien & Sons; 3, R. A. Snowball.

Foal of 1913—1, Prescott Blanchard; 2, R. A. Snowball.

Stallion, any age—1, McFarlane Bros.

Mare, any age—1, R. A. Snowball.

Stallion and 3 of his get.—R. A. Snowball.

ENGLISH SHIRES

Stallion, 4 years old—1, T. A. McDonald, Welsford, N. B.

PERCHERONS

Stallion, 4 years old—1, H. C. Jewett, Fredericton, N. B.; 2, J. R. Collie, River John, N. S.; 3, Chas. Symes, Minudie, N. S.

Brood mare with foal—1 and 2, Albert Flemming, Truro, N. S.; 3, Chas. Symes.

Filly, 4 years old—1, Wm. McManus, Up. Stewiacke.

Filly, 2 years old—1, A. Flemming; 2, Chas. Symes.

Filly, 1 year old—1, Albert Flemming.

Foal of 1913—1, Chas. Symes; 2 and 3, A. Flemming.

Stallion, any age—H. C. Jewett.

Mare, any age—Albert Flemming.

LIGHT DRAUGHTERS.

Mare or Gelding, 4 years old—1, S. Ascott & Sons, Halifax.

Mare or Gelding, 3 years old—1, Wm. O'Brien & Sons.

Filly or Gelding, 2 years old—1, Chas. Morton, Halifax.

Filly or Gelding, 1 year old—1, Norman A. Weldon, Berwick, N. S.

Brood mare with foal—1, Wm. O'Brien & Sons.

Foal of 1913—1, Wm. O'Brien & Sons.

Matched team—1, Frank Archibald, Truro; 2, Robinson Bros., Halifax.

HEAVY DRAUGHTERS.

Mare or Gelding, 4 years old—1, Wm. O'Brien & Sons.

Mare or Gelding, 3 years old—1, Wm. O'Brien & Sons; 2, John R. McKenzie; 3, Geo. O. West, Berwick.

Filly or Gelding, 2 years old—1, A. A. Sutherland, Oxford, N. S.

Filly or Gelding, 1 year old—1, Fred Whitman, Aylesford; 2, J. F. Grant, Dartmouth.

Brood mare with foal—1, Wm. O'Brien & Sons; 2, Chas. Wier, South Rawdon.

Foal of 1913—1, Wm. O'Brien & Sons; 2, Chas. Wier.

Matched team—1, Wm. O'Brien & Sons; 2, Wm. McManus, Up. Stewiacke.

HACKNEYS.

Stallion, 4 years old—1, R. A. Snowball; 2, McFarlane Bros., Fox Harbor, N. S.

Brood mare with foal—1, R. A. Snowball.

Filly, 4 years old—1, R. A. Snowball.

Foal of 1913—1, R. A. Snowball.

Stallion, any age—R. A. Snowball.

Mare, any age—R. A. Snowball.

Hackney Society Special Medals for Champion Stallion and Champion Mare—R. A. Snowball.

COACH HORSES

Stallion, 4 years old—1, H. C. Jewett, Fredericton, N. B.

BEEF CATTLE.

SHORTHORNS.

Bull, 3 years old and upwards—1, C. A. Archibald, Truro, N. S.

Bull, 2 years old—1, Isaac Chipman & Sons, Chipman's Cor., N. S.; 2, R. A. Snowball, Chatham, N. B.; 3, Dr. I. M. Lovitt, Yarmouth, N. S.

Bull, junior, yearling—1, R. A. Snowball.

Bull, senior calf—1 and 2, C. A. Archibald; 3, R. A. Snowball.

Bull, junior calf—1, Dr. I. M. Lovitt; 2, R. A. Snowball.

Cow, 4 years old and upwards—1, C. A. Archibald; 2, Dr. I. M. Lovitt; 3, R. A. Snowball.

Cow, 3 years old, in milk—1, R. A. Snowball; 2, C. A. Archibald.

Heifer, 2 years old—1 and 2, R. A. Snowball; 3, Dr. I. M. Lovitt.

Heifer, senior yearling—1 and 3, R. A. Snowball; 2, Dr. I. M. Lovitt.

Heifer, junior yearling—1, Dr. I. M. Lovitt; 2 and 3, R. A. Snowball.

Heifer calf, senior—1, C. A. Archibald; 2 and 3, R. A. Snowball.

Heifer calf, junior—1, C. A. Archibald; 2 and 3, Dr. I. M. Lovitt.

Champion bull—1, C. A. Archibald.

Champion female—R. A. Snowball.

Best 3 animals, get of one bull—1, C. A. Archibald; 2, R. A. Snowball.

Best 2 animals, progeny of 1 cow—1, Dr. I. M. Lovitt; 2, R. A. Snowball.

Best Breeders herd—1, R. A. Snowball; 2, C. A. Archibald.

Best graded herd—1, R. A. Snowball; 2, C. A. Archibald.

HEREFORDS.

Bull, 3 years old—1, A. Bradshaw, Amherst, N. S.; 2, Wm. O'Brien & Sons, Windsor Forks, N. S.

Bull, 2 years old—1, Thos. Aylward, Falmouth, N. S.

Bull, senior yearling—1, Wm. O'Brien & Sons.

Bull, junior yearling—1, A. Bradshaw.

Bull, senior calf—1, A. Bradshaw.

Bull, junior calf—1, A. Bradshaw, 2, Wm. R. White, Fort Lawrence, N. S.

Cow, 4 years old—1 and 3, A. Bradshaw; 2, Wm. R. White.

Cow, 3 years old in milk—1 and 2, A. Bradshaw.

Heifer, 2 years old—1, A. Bradshaw; 2, Wm. O'Brien and Sons.

Heifer, senior yearling—1, A. Bradshaw, 2, Wm. O'Brien & Sons; 3, Wm. R. White.

Heifer, junior yearling—1, A. Bradshaw; 2, Wm. R. White; 3, Wm. O'Brien & Sons.

Heifer, senior calf—1, A. Bradshaw; 2, Wm. R. White, 3, Wm. O'Brien & Sons.

Heifer, junior calf—1, Wm. O'Brien & Sons; 2 and 3, A. Bradshaw.

Champion bull—A. Bradshaw.

Champion female—A. Bradshaw.

Female and two of her offspring—A. Bradshaw.

Aged herd—A. Bradshaw.

Breeders young herd—1. A Bradshaw; 2, Wm. O'Brien & Sons.

DEVONS.

All prizes in this class went to Wm. A. Pinkey, Melbourne, N. S.

GRADE BEEF CATTLE

Cow, 4 years old—1, Thos. Aylward; 2, Wm. O'Brien & Sons; 3, E. S. Congdon, Berwick, N. S.

Cow, 3 years old—1, A. Bradshaw; 2, Wm. O'Brien & Sons; 3, E. S. Congdon; 4, Thos. Aylward.

Heifer, 2 years old—1, E. S. Congdon; 2, Wm. O'Brien & Sons; 3, V. Aylward.

Heifer, yearling—1, A. Bradshaw; 2 and 3, Wm. O'Brien & Sons; 4, Thos. Aylward; 5, E. S. Congdon.

Calf, under 1 year—1, A. Bradshaw; 2, Wm. O'Brien & Sons; 3, Thos. Aylward.

Steer, 3 years old—1, Wm. O'Brien & Sons; 2, E. S. Congdon.

Steer, 2 years old—1, Wm. O'Brien & Sons; 2, Thos. Aylward; 3, E. S. Congdon.

Steer, 1 year old—1, Wm. O'Brien & Sons; 2, A. Bradshaw; 3, V. W. Aylward; 4, Thos. Aylward.

Calf, under 1 year—1 and 2, A. Bradshaw; 3, Thos. Aylward; 6, Wm. O'Brien & Sons.

Herd—1, A. Bradshaw; 2, Wm. O'Brien & Sons; 3, E. S. Congdon.

Cow and 3 of her progeny—1, Wm. O'Brien & Sons.

FAT CATTLE

Ox or Steer, 3 years old—1, 2 and 3, H. F. Williams, Clarence, N. S.

Steer, 2 years old—1, A. Bradshaw; 2, S. C. Thompson, Halifax; 3, E. S. Congdon.

Steer, 1 year old—1, Wm. O'Brien & Sons.

Steer, calf—1, A. Bradshaw.

Cow or heifer, 3 years old—1 and 2, A. Bradshaw; 3, C. A. Archibald.

Heifer, 1 year old—1, Wm. O'Brien & Sons; 2, S. C. Thompson; 3, E. S. Congdon.

Pair fat oxen or steers over 3 years—1, Wm. O'Brien & Sons; 2, S. C. Thompson; 3, E. S. Congdon.

Pair fat oxen or steers under 3 years—1, S. C. Thompson; 2, E. S. Congdon.

WORKING OXEN AND STEERS IN PAIRS.

Pair oxen, 4 years old—1, Thos. Aylward; 2, Wm. O'Brien & Sons, 3, E. S. Congdon.

Pair oxen, 3 years old—1, E. S. Congdon; 2, Wm. O'Brien & Sons; 3, V. W. Aylward.

Pair oxen, 2 years old—1, E. S. Congdon; 2, Wm. O'Brien & Sons; 3, V. W. Aylward.

DAIRY CATTLE

AYRSHIRES

Bull, 3 years old—1, McIntyre Bros., Sussex, N. B.; 2, Prescott Blanchard, Truro, N. S.

Bull, 2 years old—1, A. McRae & Sons, Charlottetown, P. E. I.; 2, Howard McKenzie, Chatham, N. B. 3, McIntyre Bros.

Bull, senior yearling—1, A. McRae & Sons; 2, Prescott Blanchard; 3, J. McDonald & Sons, Shubenacadie.

Bull, junior yearling—1, McIntyre Bros.; 2, Chas. Symes, Minudie, N. S.

Bull, senior calf—1 and 2, McIntyre Bros.; 3, Prescott Blanchard.

Bull, junior calf—1, McIntyre Bros.; 2, J. McDonald & Sons.

Cow, dry, 4 years old—1 and 3, Prescott Blanchard; 2, McIntyre Bros.

Cow, 4 years old, in milk—1 and 3, McIntyre Bros.; 2, A. McRae & Sons.

Cow, 3 years old—1, A. McRae & Sons; 2 and 3, McIntyre Bros.

Heifer, 2 years old—1 and 2, A. McRae & Sons; 3, McIntyre Bros.; 4, Prescott Blanchard.

Heifer, senior yearling—1 and 3, A. McRae & Sons; 2, Prescott Blanchard; 4, McIntyre Bros.

Heifer, junior yearling—1 and 2, McIntyre Bros.; 3, J. McDonald & Sons.

Heifer, Senior calf—1, McIntyre Bros.; 2, A. McRae & Sons; 3, Prescott Blanchard.

Champion bull—McIntyre Bros.

Champion female—Prescott Blanchard.

Four animals, either sex—1, McIntyre Bros.; 2, Prescott Blanchard.

Two animals, either sex—1, A. McRae & Sons; 2, Prescott Blanchard.

Herd, aged—1, A. McRae & Sons; 2, McIntyre Bros.; 3, Prescott Blanchard

Breeders' young herd—1, McIntyre Bros.; 2, A. McRae & Sons; 3, Prescott Blanchard.

HOLSTEINS.

Bull, 3 years old—1, Harding Bros., Welsford, N. B.; 2, Lea & Clark, Victoria, P. E. I.; 3, S. Dickie & Son; 4, W. L. Etter, Shubenacadie.

Bull, 2 years old—1, Lea & Clark; 2, Harding Bros.

Bull, senior yearling—1, Lea & Clark.

Bull, junior yearling—1, Lea & Clark; 2, Harding Bros.

Bull calf, senior—1, Harding Bros.; 2, Lea & Clark; 3, W. L. Etter.

Bull calf, junior—1 and 2, Lea and Clark; 3, S. Dickie & Son.

Cow, dry, 4 years old—1, Harding Bros.; 2, Lea & Clark; 3, S. Dickie & Son.

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Agricultural Developments in P. E. I.

The summer of 1913 has been marked by great activity in Prince Edward Island agricultural circles.

A flower show was held. Live stock meetings at which the care and handling and judging of various classes of live stock and agriculture in general, were discussed by Messrs. Reid, Robertson, Ross and many interested farmers. Mr. Benson of the Poultry Department, was kept busy forming egg circles and doing everything in his power for the advancement of the poultry industry.

Mr. Williams, of the Horticultural Department, held orchard meetings at which spraying and pruning demonstrations were given and modern orchard practices were expounded.

Mr. Mitchell went throughout the length and breadth of the land expounding the merits of the work that is being done by the members of the Cow Testing Association and all those who follow the principles laid down by them.

Mr Le Lacheur preached the gospel of good seed and his work in this line will have a far reaching effect in promoting the good work that has already been so well begun under the uplifting influences of the seed fairs and members of the Seed Growers' Association.

Superintendent Clark of the Experiment Station, was also kept busy with his station work and conducting visitors to the farm through the various plots and explaining the why and wherefore of the various operations of crop growing.

A recent issue of the Charlottetown Guardian has the following account of what various picnic parties who visited the Experimental Station saw:—

"Nearly every day during the past two months farmers' picnics have been held at the Experimental Station. So popular has the institution become that not infrequently farmers in some district or other will make up their minds on short notice, and with their wives and women folk drive to the Station, without even the preliminary of a telephonic message they are coming. Superintendent and Mrs. Clark are always ready for them, and welcome the farmers and their wives with a heartiness good to see nd feel. Not only are they favored with picnics. Individual visitors are always popping in, and one day recently, Mr. Clark and his staff had to pilot no fewer than 187 visitors over the Station.

In order to obtain some idea of the attractions of the Station for so many visitors a representative of The Guardian visited there the other day. Fortunately, a surprise picnic party of farmers and their wives came upon the scene, so The Guardian had the pleasure of doing the Station in the orthodox manner.

FIRST ESSENTIAL.

Luncheon is the first consideration, and this is discussed in the sylvan retreat of the picnic grove. The tables are hardly cleared before the Superintendent gets to work. Drainage is the important subject upon which he first addresses the gathering, and this is followed by equally important advice on the methods of sowing.

BEES.

Then an adjournment is made to the barn where the Superintendent demonstrates a new type of bee hive, and gets his audience alive to the possibilities of profit in keeping bees and producing honey. The style of hive exhibited is so made that a separator can beused to keep the queen bee below and allow the workers to produce honey without queen cells.

The frames are so made as to allow the honey to be removed without injury to the combs. Later on the Superintendent showed the situation of the hives that are being experimented with at the Station, and in reply to a question as to the profitableness of keeping bees, stated that a really good hive costs only $7 to be put into working shape, while the clover fields and apple trees will provide all the honey material for the bees that may be desired. From a hive such as he had the day before he removed a super conatining 15 lbs. of honey, while there were two other supers on the hive which were then nearly full.

POULTRY INCUBATOR.

From bee hives attention turned to another interesting experiment— the incubator, or egg-hatching machine. That installed at the Experimental Station will hatch daily 1,200 eggs, or even more and the intention of the Superintendent is, if the farmers would fall in with the idea, to get them to send their eggs to the Station to be hatched, and the chickens despatched immediately to their respective owners. As the newly-hatched chicken requires no food for forty-eight hours, they can easily be sent from the Experimental Station to any part of the Island direct from the incubator. Newly hatched chickens, a day old, are being sent daily in hundreds from England to all parts of the Continent without any difficulty or loss. The Superintendent made it clear, however, that only pure-bred eggs would be accepted for incubation.

POULTRY SHED.

From the incubator the next step naturally was to the poultry shed, where two large and excellent broods of chickens were seen, one lot being a few weeks old, and the other lot several months old. They were Plymouth Rock breed and the Superintendent explained that they were the only breed raised at the Station, as he considered them more suitable for farmers to raise than any other, being both excellent layers and suitable for table purposes, and a hardy lot.

HEDGES AND GRAIN.

Some experimental hedge growths of different varieties were seen on the way to the grain plots, whither the party, led by Superintendent Clark, now wended its way.

As it passed along plot after plot of carefully cultivated and beautifully growing grain, the Superintendent drew rapid attention to them, giving a concise explanation of the features of the growth, the results of the experiments and his opinion as to the suitability of the particular grain discussed, also throwing in valuable advice as to methods of treatment against fungus or insect diseases. With regard to this, in a field of Red Point wheat in which there was the presence of a good deal of rust, he showed that the rust was confined to the leaves, and said that as long as that was the case and the rust did not communicate itself to the stalks, the wheat would not suffer any damage.

WASTE LOTS BEAUTIFIED.

The water lily pond was the next thing that came under notice on the way along the fields, and served amply to demonstrate to the onlookers how simple and how easy it was to beautify neglected spots. In the pond were five different varieties of pink and white lilies. They were procured from Kentucky in 1910 and were in full bloom at the time of this visit, making a very pretty show, which did not fail to impress the visitors.

TURNIPS AND ROTATION.

A field of turnips were next inspected, and there the effect of club-root disease was shown on portions of the crop, and the remedy it was explained, that proved efficacious against this disease, which is often spread by means of bacteria infested manure, is the plentiful use of lime.

At this stage the Superintendent explained he method of rotation of crops employed at the Station and its necessity and value. There were both three year and five year rotations, and the Superintendent demonstrated how with these short rotations of crops it became easier and gave a better growth of their crops. A five year rotation, for example, might consist of turnips, wheat, hay, oats and then hay again. In no case, however, where rotation of crops is employed will the oxide daisy be able to remain long. With a longer rotation the daisy would thrive.

BARLEY AND OATS.

A barley plot, with excellent growth, corn-field, showing the result of the ravages of pigeons, were next passed in quick succession, and then came a plot of White Fife wheat in splendid growth and a fine crop of Victoria oats—the plots being all acre—more oats, the old Island Black, the Daubeney white oat, very similar in shape to the Island Black, which had been sowed after the Black but had ripened ahead of it.

A plot of mangels appeared at every four rows.

Mandschuri barley was another attractive cultivation, as also a plot of Banner oats. And right here the Superintendent explained that at the Station they were very careful to keep their seed pure. As this spot, too, he pointed out a piece of ground which not lomg before had been a pond but which had been filled up and prepared until it was in excellent condition for planting.

SHRUBS.

A cut across fields took the party, without exploring the further grain crops, beyond the railway line, to the front of the grounds running parallel with the railway line, where an immense array of shrubs is planted in two long rows on a flat, grassy strip of land. There are twelve hundred varieties of shrubs in this avenue, which is about three-quarters of a mile long. Besides fulfilling the purpose of demonstrating which shrubs are the most suitable to the climate, and the most attractive this avenue serves as an ornamentation to that part of the Station as a splendid road runs along it within the farm. A nice drive is thus formed, and it may be stated that the Station is always open to the public, carriages being allowed to drive around it. From this wonderful collection of shrubs, it should be possible for every farmer to find his taste in the beautifying of lawns or approaches of farm-houses. One of the best growing shrubs proves to be a variety that was obtained from Thibet, bearing a plentiful growth of small scarlet berries. It presents a very attractive appearance. This variety and others of the largest shrubs grow to a height of about ten feet and thus make a good windbreak.

CULTURE EXPERIMENTS

On the other side of the railway line the Superintendent pointed out the new land which had been taken in for the purpose of culture experiments, such as planting in certain depths, harrowing in certain directions, and for the general experimental use in plowing and rolling. He intended dividing the land into 75 different plots for the purpose of these experiments. The land has to be drained first, and for this purpose there are several miles of tile drains to be laid down.

The party continuing along cultivated fields, a field of barley was pointed out showing the effects of ploughing and top-dressing manures. The grain in the area treated in the former case was of superior and more forward growth than the grain top-dressed. One farmer was not, however, convinced that ploughing in is the best methad, and he expressed the decided opinion that the top-dressed grain would yet surpass the growth of the other. Mr. Clark promised to let him know the result in the fall.

CUT WORM.

An instance of the destructive work of the cut worm among the cultivation was at this stage observed, the worms having eaten clean patches in two fields, but treatment with bran mash and Paris Green, said the Superintendent soon got rid of the pests.

POTATOES.

Potatoes were next sighted, and a plot was pointed out which had beeen cultivated entirely with rows of different varieties. The name of each variety is indicated at the end of each row, for the benefit of those not acquainted with the particular kind. Gold Coin and Carmen No. 1, said the Superintendent, were two of what they counted their best white potatoes, being the best keepers, the best for table purposes, and taking everything into consideration, yield, quality, smoothness and color, they were not surpassed. If potatoes were, said Mr. Clark, planted more on the top, they would be found to grow larger.

APPLES

The apple orchard followed, there being a number of different varieties planted to test the best for winter purposes, and the best autumn apples, for table use before Christmas. In connection with the growth of apples, the Superintendent recommended the planting of cover crops in the orchard, of a nature such as clover, for the purpose of hardening up the wood of the apple tree in the fall. The cover crop would take the moisture up around the apple trees, which would therefore thrive better.

VEGETABLES.

Plots of sugar beets, cabbages and carrots were next inspected, all in excellent state of thriving. With regard to the carrots, there was some indication of rust in the plants, and it was explained that an effective treatment for this was, as soon as they came out of the ground, to spray them with kerosene emulsion, or black tobacco water.

ALFALFA.

Five varieties of Alfalfa in excellent condition are in cultivation at the Station, and the Superintendent considers this plant better than red clover for feed purposes. Also shown to the visitors were various plots of grasses that are being experimented with for feed purposes, and it was stated that savings are being made for seeds for the farmers.

VEGETABLES AND SMALL FRUIT.

The vegetables and small fruits plots were the next in the order of things. Commercial white beans, tomatoes, cucumbers, sweet currants, pumpkins, turnips, were passed in rapid order. It was stated by Mr. Clark that if tomatoes were planted three feet apart, which gave them a lot of room to grow, they would get a lot of ripe fruit. He considered the Sparks Earliana, and the Bonney Best the varieties that ripen best in this climate. He thinks that more turnip seed should be grown here, as with the use of P. E. Island turnip seed they will get much better turnips.

The grape vines came next under inspection. There are nine varieties

(Continued on page 840.)

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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R. D. Robinson Publishing Co., Limited

Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

SEPTEMBER 16, 1913.

DATES OF ISSUE.

September 16-30
October ....14-28.

WHO GETS THE PROFITS ?

Geo. L. Gleason, of Essex Co., Massachusetts, writing under the caption of "Who Gets the Profits," in a recent issue of The New Emgland Homestead in which article he sets up a plea for closer co-operation between the people of our rural districts says:

"It is alleged on good authority that 65 p. c. of the value of the crops put on the markets of this country is dropped somewhere between the producer and consumer. The consumer pays 100 p. c. and the producer gets 35 p. c. Who gets this lion's shrre ? Who is becoming rich, and how can a portion of this vast sum be divided between the two interested parties ?

"Ask the carriers. The truckmen will tell you that the margin of profit is diminishing with them every year. Horses at $500 to $800 per pair teamsters at $2.50 or $3.00 per day, and the wear and tear of equipment leave a small margin to the proprietors. Railroad officials aver that they are not able to pay expenses, dividend on (watered) stocks and the large demands of their employees and make ends meet, to say nothing about expansion and improvements. They demand an increase of freight rates, or bankruptcy is inevitable. This demand apparently will soon be granted. Their employees claim that their wages are inadequate, and an increase is demanded. Those who spend a little more than they earn annually always finds wages inadequate.

"But do you say that the middlemen are the leeches that are sucking the life blood out of producers and consumers? The wholesaler will tell you that it must be the retailer who is making the money. Certainly he is not. The jobber and commission merchant say that they lose much on perishable goods, that many are not graded, and come in such bad condition that they make no money. This may be true of many honest dealers, but not of the land sharks.

"But the retailer, the grower and provision dealer comes in as the chief offender, and is the one who makes the money. Examine some of the facts. His plant, equipment and running expenses are double what they were 10 years ago. The ungraded goods received which have to be sorted, the enormous loss on perishable goods, and the unreasonable demand of customers leave no margin. He is willing to sell out at a loss, if he can find a customer. See the long list of grocers who become bankrupt or are forced out of business. Thus, apparently, all these classes are doing business at a loss, and there is an appeal to congress to do something to reduce the cost of living, give the farmer something for his labor, and the laboring man more than a bare existence.

"This is not a cheerful picture, and it may be overdrawn. But what is the remedy? The evils are patent, but how to remove and overcome them is not so obvious. It must come someway through co-operation. But the most of the attempts in this direction in our country have either been a failure or only partially successful. Municipal markets have been opened in some cities where the farmer and his customers can deal directly. But the best farmers do not avail themselves of these opportunities, and the purchasers do not always find what they want, and no provision is made for delivery. Co-operation thus far has not been a success in our country.

"The reason is that we are not ready to co-operate. Every man has been in business for what there was in it. Most men labor for what they get out of it, whereas co-operation means mutual sacrifice and advantage. More co-operative schemes have died than are now in existence, and for this very reason. Some 20 years ago I saw a great opportunity for the establishment of a co-operative grocery. It was in a growing section of a thrifty city. A fit building at a nominal price was available, and it was admirable in its location. I visited and studied the working of one of the most successful and conspicuous co-operative stores in New England. But it was absolutely impossible to get the people interested, and to find efficient men who were willing to give the time and work necessary to make it a success. The scheme was abandoned. I see now that this was my good fortune. The time was not ripe for this movement.

"But co-operation must come in this country, as it has in England, and especially in Geemany. The enormous sums absorbed by the middlemen, and apparently not wholly to their profit, must be saved. A large portion of it should be divided between the farmers and the housewives. The middlemen, like our soldiers should be put to work, become producers. We have too many grocers, provision dealers, milkmen and commission merchants. Housekeepers should be less exacting and extravagannt. To telephone for a head of lettuce or bunch of radishes that was overlooked in the order, demanding immediate delivery, is an imposition. Grocers and other dealers cover too much territory. The grocer who has the largest trade in the section of a city where I resided nearly 20 years came from a neighboring town. And the dealer who cut prices in the rural neighborhood where I now live has his store five miles away.

"Greed is the curse of business in this country. We are now fully alive to the fact that we have too many churches, that many of them have been self-centered and animated by sectarian aim and spirit. Many are being abandoned and are dying in all parts of our land. We are learning that a church has no right to live unless it ministers to the material, social and spiritual well-being of the community and the world. And why should any business be established in a community unless it is needed and can minister to the needs of the people? Wnat life is worth living that does not touch and help other lives? We are all members one of another, and should all regard the well-being of our neighbors as commensurate with our own."

The United Fruit Companies of Nova Scotia, The Farmers' Produce and Dairy Company of New Brunswick and the organization of egg circles in various sections of the Maritime Provinces show the value of co-operation to farmers in these parts.

ADVERTISING POULTRY

A well known poultryman advises: "September is none too soon to begin advertising breeding stock for sale, which should now be disposed of to make room for the growing youngesters. Neither is it too early to advertise young stock for sale, especially surplus cockerels, as by the time you begin to get inquiries the cockerels will be really large enough to sell, if early hatched. By beginning early you may wait a short time for inquiries, but remember the buyer is studying the advertisements before making his choice where to inquire, and the names he has noticed first and longest are the names that impress upon his memory. The man or woman who advertises early and late is the name that tells him, "Here is one with plenty of the goods to make choice from."

Now is the time to begin bunching up the growing pullets and roosters if you keep the pure-bred—and the majority of farm residents are making a strong endeavor to do so these days—and culling out the undesirables for the table, while you set aside the best and earliest to keep over, then next the best and earliest to sell, for the pullets at least, to your neighbors by the dozen. Did you know that in every neighborhood there are farmer wives desirous of getting at least a dozen young pullets every fall from some good flock. If you only let it be known abroad that you will save the pullets from out your flock to sell by the dozen as breeders or builders of blood in the flocks about, we find that there will be no necessity for you to bunch up your surplus young stock and sell to the commission trade at any price that is on the market at the time.

THINK WELL ON'T

Some time ago we referred in these columns to a sale of Holsteins and Holstein grades made by Lea & Clarke, Victoria, P. E. I., to Messrs. Logan and Robertson, Edmonton, Alta. The greater number of animals included in the sale were good grades, there were also a few good pure breds. At the recent Dominion exhibition, held in Brandon, Man., Messrs. Logan and Robertson captured 1st, 2nd and 4th prizes with some of the grades in the aged class. 1st in the three-year-old class, and 1st in the two-year-old class.

Jacoba Johanna, well-known in Maritime show circles, won second in a class of fourteen, and she is not due to calve until December. A Lea & Clarke three-year-old stood in second place. A Lea & Clarke senior bull calf was third in a class of twelve and was sold afterwards for $150.00. Jacoba Johanna was re-sold at Brandon for $1000.00, which is a good price for an Island bred cow.

The grades made a good showing; four of them averaged Messrs. Lea & Clarke $100.00 each. One of them at the time of the sale was giving 60 pounds of 4.5 per cent milk.

Messrs. Lea & Clarke's success in breeding such high quality grades and realizing such good prices for them, should be an incentive for other farmers to be more consistent in their breeding operations. It did not cost these thriving farmers any more to raise their $100.00 cows than it would to raise as many unprofitable scrubs. Think well on't.

A FORTUNE ON THE FARM

What an inspiration for boys is the success of F. M. Jones, who developed the new world's champion cow and sold her for $10,000. His success is phenomenal, and only goes to show that a young man with brains, push and energy can do on the farm when given a chance. Not many fathers are willing to step one side in favor of a 22-year-old son and not many boys have the clear-headed vision to strike out on new lines, and stick to it in opposition to father and neighbors. In half a dozen years this young farmer, not yet 30 years old, has made a greater fortune than 99 per cent of the boys who leave the farm will ever make in town or city. And the best still lies before him.

LIVE STOCK IS THE FOUNDATION

Did you ever hear of scrub hogs making money out of high-priced feed ?

Did you ever hear of scrub cows paying a profit on high-priced land ?

Did you ever hear of a farmer buying more land, building more barns or painting the old ones without live stock on his farm ?

Did you every hear of any farmer, any place, getting anywhere without good stock, and —

Did you ever notice that the man who does "arrive"; who "gets there"; who has "money to burn," and who rides in an automobile, is always the man who raises good live stock?

Tolerably good live stock is like a tolerably good egg.

LET'S BOOST, NOT KNOCK

Show your faith in your own neighborhood, county, and province. Make the most therein of your own labor, brains, capital. Have confidece in your fellows. Remember that your people here in your own region possess the ability and means to develop the most perfect civilization right where you live. Constructive working together is vastly better than destructive criticism. It is easy to find fault, but difficult to build up. Be a booster, rather than a knocker.

Dairying in Nova Scotia as a Business.

Increasing signs give evidence that the farmers of Nova Scotia are realizing the immense possibilities there are in the province for the development of dairying as the most successful and profitable branch of farming than any other and that there are many advantages here over any of the middle Provinces of the Dominion of Canada.

Comparisons have been carefully made between the natural climatic and soil conditions of the province and of Denmark, the greatest dairy country in the world where they are now exporting over $90,000,000 annually through the medium of the dairy cow after feeding a population of 2,500,000 people, and where now they have an annual production per cow of between 8000 and 9000 lbs. of milk realizing their owners nearly on the average $100 per cow per year.

Comparisons show that the soil and climatic conditions there are very similar to those in the province here and that fifty years ago were very similar to what they are here at the present time. Viz. a mixed farming community with a worn out soil through excessive crop growing and not returning the fertility to the soil and an average production per cow of about the same as ours is now, about 3300 lbs. milk per annum.

It is a very interesting study to find out how these people made what might be looked on as an almost miraculous change in such a comparatively short space of time,, but when we study their methods we find that it was only brought about through putting the whole business on a good basis and the inauguration of a system that immediately found out where the leaks were and the consequent overcoming of the leaks, discarding the parts of the business that were not profitable and strengthening the parts that were showing a margin of profit to make it show at a still larger margin. Starting first with the production end, finding out which were the profitable and unprofitable cows in each herd, weeding out the poor ones, replacing with better, breeding the best cows in the herd to the best sire obtainable of a good milking strain. Then studying the feeding proposition finding out which feed gave the largest margin of profit, discarding the unprofitable feeds and feeding more profitable ones, following out this system year after year and then all co-operating together for the more economical production of their milk products and the marketing of same at the most profitable times. This simply has been the system that has been carried on for the last half of a century and the figure quoted above indicate clearly whether it has been a profitable enterprise or not.

Then when we realize that the whole Kingdom of Denmark is scarcely two-thirds the size of Nova Scotia, it shows in an instant what immense possibilities we have within our grasp in this province.

To show that the people are realizing more strongly than ever the immense possibilities that are before them and that they are co-operating more strongly together, there are a number of farmers supplying cream to a Creamery in Pictou County that five years ago only had an average per cow cash out of the creamery of from $25 to $30 per annum, while in 1912 they had an averagee per cow cash out of the creamery of over $60 per cow for quite a number and one herd running up to $76.28 per cow.

The people surrounding the new creamery in wntigonish County are taking hold with a vim and determination. Their first month's business in the creamery being nearly 9000 lbs. butter and already they have bought some farm supplies through the same source saving themselves the money.

The people that started last year in a co-operative way are showing a big increase this year. For instamce the creamery in Yarmouth County, that started in 1912, is now doing treble the business that it did at this time last year and promises to end up the year as one of the largest creameries in the Maritime Provinces and a stronger co-operative spirit among the people than ever before. The farmers there are systematizing their work and we will ere long hear of many herds in that section of the high producing type that not only pay for their board but show a good margin of profit and with it up comes the fertility of the soil at a much more rapid rate.

Not only is this spirit prevading among the English speaking people, but the French speaking people in Digby County have arisen to the opportunities there are for them in the splendid area of country that they occupy almost exclusively along the shores of the Bay of Fundy, where for many years they carried on their fishing and lumbering operations to the detriment of the agricultural possibilities, but this year they established in their centre two creameries that already are proving an incentive to better farming conditions and more interest in the cultivation of the soil.

The people here are perhaps at the present time the most enthusiastic in the province over the dairy business and the determination and zeal that they are showing points out clearly that they mean business and will eventually rival our best dairymen in the province. These two creameries have already the patronage of over 200 herds and have made a remarkable showing for a beginning.

Other centres are also taking hold stronger than before and there are very many places where the soil has almost been lying dormant for many years that are particularly adapted for this business and where no doubt the people will soon take hold of the opportunities and get the business systematized realizing that the production is the most important end of the whole business and that to make it a profitable one, the average production per cow must be raised a good deal higher than it is at present and that the co-operative system of making and marketing the products lends an incentive to a higher and more profitable production. When this takes place, we will never hear again the one time much used saying, "The cheese factory and creamery doesn't pay."—W. A. McK.

Women's Institute Movement Organized in Nova Scotia.

Without the heavy headlines in the daily papers that usually herald any undertaking in these days of newspaper publicity, a movement has been set on foot that is bound to have a steadily growing influence for good in the homes of Nova Scotia. This movement is the establishing of the society of home-makers and housekeepers known as the Women's Institute.

This movement was established first in Ontario about fifteen years ago and in 1980 there were twenty-three Institutes with a membership of 1,600, which ,today, has grown to a membership of 25,000 and the Institutes number 750, an average growth of 50 institutes per year. Besides the growth in Ontario the movement has spread as far west as British Columbia and as far east as Prince Edward Island. It may naturally be supposed from this splendid development that the work undertaken by the Institute filled along-felt want and was found to be a necessity by the women of the different provinces. That there is still work to be done is proven by the extension of the organization each year and the enthusiastic interest constantly manifested in the older societies.

To show the scope of the work undertaken by Women's Institutes from the hand book of the Ontario Women's Institutes, the following excerpt:

"The objects of Women's Institutes shall be the dissemination of knowledge relating to domestic economy, including household architecture, with special attention to home sanitation; a better understanding of the economic and hygienic value of foods, clothing and fuel, and a more scientific care and training of children with a view to raising the general standard of the health and morals of our people; or the carrying on of any line of work, which has for its objects the uplifting of the home, or the betterment of conditions surrounding community life. The motto adopted by the organization conveys in a word its objects: "For Home and Country."

"All institutes organized under the Act shall be strictly non-partisan and non-sectarian in every phase of their work, and no Institute shall be operated in the interest of any party sect or society, but for the equal good of all citizens.

"No subject shall be presented at an Institute meeting, nor discussion allowed, of a political or secterian nature; nor shall any speaker be allowed in her lecture, essay or speech, or in any discussion to advertise wares or schemes in which she has a direct or indirect pecuniary interest."

Realizing the grand work that had been done in the sister provinces and feeling that the women of Nova Scotia were deserving of any good thing that could be obtained for them it was decided to start a campaign in the interests of Women's Institutes, anticipating the establishing of the organization in Nova Scotia. Two ladies were asked to carry on this campaign— Mrs. Laura Rose Stephen of Huntingdon, Que., one of the pioneer organizers and workers in Institute work in Ontario and well known all over Nova Scotia, as the first lecturer and demonstrator with the travelling dairy, and Miss Jennie Fraser, of New Glasgow, N. S., a graduate of the School of Household Science, Macdonald College, Ste. Anne's, Que.

The counties of Pictou, Colchester and Cumberland were chosen as the first to be visited and meetings were arranged at three sections in Pictou, two in Colchester and three in Cumberland. Three weeks was all the time at the disposal of Mrs. Stephen and Miss Fraser, and as two meetings were held in almost every section and many calls made, all the territoty was covered that the time would allow.

It was thought that all that could be done this summer would be the placing of the objects and aims of the Institute before the ladies in the different sections and that possibly the actual organizing would not take place until the following year. To the great gratification of the workers it was found that the ladies were both willing and ready to take up the work and an Institute was formed in each section, with one exception, with a strong executive and a good membership role. The exception was Alma, Pictou Co., where the weather proved so disagreeable as to prevent a good attendance of ladies at the second meeting; officers were appointed, however, and Miss Fraser goes back in August to assist the president in establishing this Institute on a stronger footing.

The work in these three counties has just been begun as preliminary work and as soon as possible the whole province will be visited and the ladies of the different counties given an opportunity to say whether they care to have an Institute formed in their section. Arrangements are now being made to do some work in the western part of the province, during September, when it is hoped that several more Institutes will be added to the list. It has been decided to hold a convention at the Agricultural College in Truro from January 13th to 16th, during the session of the Winter Short Course, when addresses and demonstrations on the many subjects pertaining to home-making will be presented and opportunity afforded for discussion in the development of Institute work.

The following is alist of the Institutes organized to date with their officers, number of members and day of meeting.

Saltsprings—Organized July 17th; membership 17; meets third Wednesday of each month. President, Mrs. Warren Gass; Vice-Pres., Mrs. J. Colquehon; Sec-Treas., Miss Etta Maxwell; Directors, Mrs. Annie McLeod, Mrs. John Bell, Mrs. Rod Fraser, Mrs. W. H. McKay, Mrs. Clarence Fraser.

Alma—Organized July 15th. President, Mrs. Edwin Archibald; Vice-Pres., Mrs. Douglas; Sec.-Treas, Mrs. Murray Porter. Directors to be elected. Meets second Wednesday of each month.

Scotsburn—Organized July 22; membership 17; meets third Thursday of each month. President, Mrs. Rod. Smart; 1st Vice-Pres., Mrs. Robert Stewart; 2nd Vice-Pres., Mrs. Campbell; Sec.-Treas., Miss Mary McLean; Directors, Mrs. Douglas, Mrs. Stirling, Mrs. D. W. MacKay, Mrs. Ferguson, Mrs. Grant.

Brule—Organized July 24th; membership 22; meets second Thursday of each month. Pres., Mrs. I. McLanders; Vice-Pres., Mrs. John Semple; Sec.-Treas., Miss Daisy Swan. Directors, Mrs. McLeod, Mrs. Cox, Mrs. C. Langille, Mrs. A. Stevenson.

Tatamagouche—Organized July 26; membership 20; meets second Thursday of each month. President, Mrs. C. B. Clark; Vice-Pres., Mrs. E. Langille; Sec-Treas., Miss Margaret Patterson. Directors, Mrs. J. Bonyman, Mrs. Wm. Forbes, Mrs. Wiley, Mrs. Donaldson, Mrs. D. McKay, Mrs. S. Clarke.

Wallace Bay—Organized July 28th; membership 18; meets first Wednesday of each month. Pres., Mrs. Wm. Treen; Vice-Pres., Mrs. R. Brown; Sec.-Treas., Miss Clara Wells; Directors, Mrs. H. Tuttle, Miss Ada Brown, Miss Anna Wells, Mrs. S. Tuttle, Mrs. Blair, Mrs. D. Brown.

Middleboro—Organized July 30th; membership 15; meets second Wednesday of each month. President, Mrs. Chas. Fountain; Vice-Pres., Mrs. E. Howard; Sec.Treas., Miss Bertha Howard. Directors, Mrs. Reid Smith Mrs. Geo. Colter, Mrs. Murray O'Brien, Mrs. David Mitchell.

East Leicester—Organized Aug. 1st; membership 24; meets third Wednesday of each month. Pres., Mrs. Botsford Gillis; Vice-Pres., Mrs. Fred Trerice; Sec-Treas, Miss Mabel Blair; Directors, Mrs. Milford Lowther, Miss Florence McElwin, Mrs. Thos. Bird, Miss Mabel Lockhart, Mrs. James Adshade, Mrs. Heyward.

HORTICULTURE.

The San Jose Scale Itself.

If we consider the San Jose scale from its own standpoint we shall be obliged to concede that it is a great success, despite the vast army of fruit growers who are always battling with it. In fact, it would be far easier for the fruit growers to subdue an incursion of elephants than to conquer this tiny foe. And for this reason it may prove a matter of interest to observe somewhat more closely the tactics of this minute enemy of the fruit trees.

We will begin our study with the young scale insects just pushed out into the world from their mother's tent. They are tiny, orange-yellow creatures, each provided with a pair of antennae, two perfectly good eyes, a mouth in the form of a long sucking-tube and with three pairs of very active and efficient legs, on which each scampers around on the bark of the tree.

Settling for life, in the case of the young scale-bugs, consists in finding the unoccupied place where it can thrust its sucking tube through the bark and into the living cells of the tree, whence it can draw the juices for its food. It is no easy matter to push this tiny, thread-like tube through the tough bark of the tree, and the process often requires so much time that we should admire the patience of this little creature and its perseverance in the effort, for it always keeps on pushing until finally the mouth tube is in up to the hilt. Then, in utter satisfaction, the little creature folds its antennae and legs beneath its body, which soon contracts and assumes a circular form. But it is a soft and delicate body and unless protected would soon be injured; so straightway the insect begins the making of its tent, and surely no other tent was ever so wonderfully woven. All over the tiny body are pores through which waxy threads are pushed out, threads finer than a spider's silk, and which soon cover the insect in a downy, white coverlet. After a little the waxy threads melt together and form a tent with a raised pole at the center, and if there were a tent-pole holding it up; but through a connection with the insect's body this tent stays well in place without pole or pegs to hold it.

Tomatoes from Cuttings.

Where one wishes to grow tomatoes in a hothouse or in pots for home use, it is more satisfactory to make cutting from mature plants late in August than to grow plants from seed. Tomato-slips are very easily rooted. Cut from vigorous stalks in pieces four inches long, and plant these in a bed of good soil. When the roots are an inch long remove the plants from the bed to four-inch pots. Whether for the window sill or the more ample greenhouse, the plants should remain in these small pots till buds have developed, when they may be transplanted to the bench or into larger pots. Cuttings handled in this way will make stockier plants and will mature much quicker than plants grown from seed. Cuttings may be secured from tomato plants at any time during the growing season, or until the vines are killed by frost.

Orchard Dentistry.

Whether it is a shade or fruit tree, a little judicious treatment of a cavity will often save the tree for many years of usefulness. Whether it be a branch or the main trunk, the treatment will be the same. First, all decayed or apparently decaying or diseased wood should be removed with a sharp chisel or knife until perfectly sound heart-wood is exposed. Immediately wash the wound with a solution of copper sulphate, in the proportion of one pound of sulphate to five gallons of water.

As soon as this has been done, fill the cavity with a thin mortar made by mixing one part of cement with three parts of clean sand. When it has become stiff but not hard, face it on the outside with thin cement, using a trowel to smooth the cement over all parts that have become injured. If a cavity or split should occur near a fork of the tree, it would be an additional safeguard to put a long bolt through both branches so as to hold them together. When the cement hardens in a cavity, the trunk will be perfectly solid, and decay will be arrested.—H. F. G.

Of Interest to Apple Packers.

Middleton, N. S., July, 1913.
To Whom it May Concern:

As the apple packing season is drawing near, I would like to call the attention of growers and packers to the fact that the Inspection and Sale Act calls for a barrel holding not less than ninety-six quarts, with dimensions as follows; 26½ inches between the heads, 18½ inches in the bulge, and 17 inches in the head, inside measurement, and any violation of the Act in this regard will be followed by prosecution. Ib

In view of the fact that the Department of Agriculture has given ample notice both last season and the year before, with reference to small barrels, no doubt a word as a reminder will be all that will be necessary.

Yours truly,
G. H. VROOM,
Chief Fruit Inspector, District No. 1.

Provincial Horticulturist Weds.

Mr. Raymond P. Gorham, of the Horticultural Branch of the New Brunswick Provincial Agricultural Department, was married at Joliette, P. Q., last week to Miss Marie J. Tanner, youngest daughter of Mr. and Mrs. Henry Tanner, Joliette. The ceremony was performed by Rev. A. Gailey, an uncle of the bride, assisted by Rev. Mr. Langois, Joliette. The groomsman was Mr. Summerby, of Macdonald College, and Miss Corinne Nessot, a cousin of the bride, acted as bridesmaid. The bride was the recipient of a number of beautiful and costly presents. Mr. and Mrs. Gorham will reside on Smythe Street Fredericton.

The Maritime Farmer and its readers extend their hearty congratulations to Mr. and Mrs. Gorham.

Saw six Generations of the Starr Families.

The following news item appeared in a recent issue of one of our Kentville exchanges:

"A lew days ago I found a notice "in an old paper that Mr. Robert "Harrington, Kentville, had seen five "generations of the Webster and the "Moore families, of Kentville. I have "seen five generations in each of two "branches of the Starr family, of "Starr's Point, namely— Joseph, who "died in 1840, Samuel, John E., Rufus, Carle. Second branch—Joseph, "Richard, Robert W., Arthur C. and "Cecil, who is 17 years old and Carle "is 19. I was 10 yearsold when my "grandfather Joseph died, I remember "him very well."

The writer of the foregoing item is Mr. R. W. Starr, of Wolfville, the veteran fruit grower and judge. We trust our venerable friend may be spared to see many more years of usefulness.

Roofing As Attractive in Price —As in Color

You'll admit this roof looks attractive—in distinctive colors of red or green. But for most home builders its *chief* attraction lies in its remarkable economies. Let's begin with its first cost. NEPONSET **Proslate Roofing** costs *less* to buy than good shingles. Greatly reduces the cost of repairs. No shingles to split, crack or "curl up." Remember, the shingles of today aren't the shingles of 20 years ago. NEPONSET **Proslate Roofing** makes a water-tight blanket. And best of all, resists fire—is "spark-proof." Its protection from fire-hazard alone is worth all its cost. Its first cost is its only cost, too. Can you afford NOT to have NEPONSET **Proslate Roofing** on *your* roof?

NEPONSET

Waterproof Building Products

Roofings
NEPONSET roofings are a fire protection, leak-proof and long lived. Anyone can laythem. NEPONSET Paroid Roofing is for general use. NEPONSET Proslate Roofing is an ornamental roofing for dwellings. Attractive colors.

Building Papers
If NEPONSET Waterproof Building Papers are built into walls and floors, the building will be warmer, will cost less to heat and will last years longer. Recommended by architects, engineers and building owners everywhere.

Wall Board
NEPONSET Wall Board is a scientific product which takes the place of lath and plaster; comes in sheets 32 inches wide. Remember, it is the only wall board with waterproofed surfaces that requires no further decoration. Anyone can put it up.

Are you going to build? Write for more facts about the products in which you are interested. Send for samples, free booklet and name of nearest NEPONSET dealer.

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[F. W. BIRD & SON] Montreal St. John, N. B. Winnipeg Vancouver

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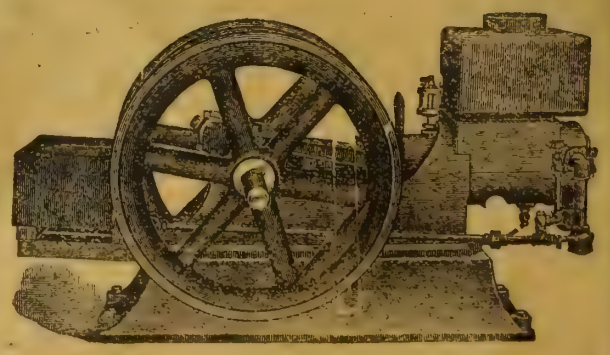
A well built engine of extremely simple construction and especially adapted for all Farm purposes.



It is made in 1 1-2, 2 1-2 4, 6, 8, 12 h.p. Impossible to freeze up in cold weather. Every engine guaranteed for five years.

Can run on either kerosene, gasolene or natural gas. Write for catalog at once. It is Free.

THE SUSSEX MOTOR COMPANY, LTD.

Sussex, N. B.

We want agents in a few unrepresented districts.

Prize Winners at the Nova Scotia Provincial Exhibition.

(Continued from page 820)

Cow, 4 years old in milk—1, Harding Bros.; 2 and 3, S. Dickie & Son.

Cow, 3 years old— 1 and 2, Lea & Clark; 3, S. Dickie & Son.

Heifer, 2 years old—1 and 3, Lea & Clark; 2, Harding Bros.

Heifer senior yearling—1 and 4, Lea & Clark; 2, Harding Bros.; 3, S. Dickie & Son.

Heifer, junior yearling—1, Lea & Clark; 2, Harding Bros.; 3, W. L. Etter.

Heifer calf—1, Harding Bros.; 2 and 3, Lea & Clark.

Champion bull—Harding Bros.

Champion female—Harding Bros.

Three animals, any age—1 and 2, Lea & Clark; 3, Harding Bros.

Two animals, any age—1 and 2, Lea & Clark; 3, S. Dickie & Son.

Herd, aged—1, Harding Bros.; 2 and 4, Lea & Clark; 3, S. Dickie & Son.

Breeders' young herd—1, Lea & Clark; 2, Harding Bros.; 3, W. L. Etter; 4, S. Dickie & Son.

GUERNSEYS

Bull, 3 years old—1 and 2, H. W. Corning, Chegoggin, N. S.; 3, A. H. Snide, Shubenacadie.

Bull, 2 years old—Hugh A. Dickson, Truro, N. S.

Bull calf, senior 1, H. W. Corning; 2, H. A. Dickson.

Bull calf, junior—1, H. W. Corning; 2, A. McDonald, Shubenacadie; 3, H. A. Dickson.

Cow, dry, 4 years old—1, H. A. Dickson; 2, H. W. Corning.

Cow, 4 years old—1 and 2, H. W. Corning; 3, H. A. Dickson.

Cow, 3 years old—1, H. A. Dickson; 2, J. McDonald & Son.

Heifer, 2 years old—1, 2 and 3, H. W. Corning.

Heifer, senior yearling—1 and 2, H. A. Dickson; 3, J. McDonald & Son.

Heifer, junior yearling—1 and 2, H. W. Corning; 3, H. A. Dickson.

Heifer calf—1 and 3, H. A. Dickson; 2, H. W. Corning.

Champion bull—H. W. Corning.

Champion female—H. W. Corning.

Bull and 3 of his get—H. W. Corning.

Female and 2 of her offspring—1, H. A. Dickson.

Herd—1, H. W. Corning; 2, H. A. Dickson.

Breeders young herd—1 and 3, H. W. Corning; 2, H. A. Dickson.

JERSEYS

All the prizes to H. S. Pipes & Son, Amherst, N. S.

GRADE JERSEYS AND GRADE GUERNSEYS

Cow, 4 years old—1, 3 and 4, A. McDonald; 2, H. A. Dickson.

Cow, 3 years old—1, A. McDonald.

Heifer, 2 years old—1, A. McDonald.

Heifer, 1 year old—1 and 5, H. A. Dickson; 3 and 4, A. McDonald; 2, John F. Dempster, Halifax.

Heifer calf—1 and 3, H. A. Dickson; 2, A. McDonald.

Herd—1, A. McDonald.

OTHER GRADES

Cow, 4 years old—1, 2 and 3, A. McDonald.

Cow, 3 years old—1, A. McDonald.

Heifer, 2 years old—1, A. McDonald.

Heifer, 1 year old—1, McFarlane Bros., Fox Harbor, N. S.; 2 and 3, A. McDonald.

Heifer calf—1, McFarlane Bros.; 2, A. McDonald.

Herd—1, A. McDonald.

SHEEP

LEICESTERS

Ram, 2 shears and over—1, A. S. Boswall, Pownal, P. E. I.

Ram, shearling—1, S. L. Boswall, Pownal; 2, A. S. Boswall; 3, Geo. Retson, Truro.

Ram, lamb—1, Geo. Retson; 2, A. S. Boswall; 3, S. L. Boswall.

Ewe, 2 shears and over—1 and 3, A. S. Boswall; 2, S. L. Boswall.

Ewe, shearling—1, A. S. Boswall; 2 and 3, S. L. Boswall.

Ewe lamb—1, Geo. Retson; 2, A. S. Boswall; 3, S. L. Boswall.

Aged pen—1, A. S. Boswall; 2, S. L. Boswall; 3, Geo. Retson.

Pen lambs—1, A. S. Boswall; 2, Geo Retson; 3, S. L. Boswall.

COTSWOLDS.

With the exception of second prize on aged ewe and first prize on ewe lamb which went to Geo Retson, all the prizes in this class were awarded to Mr. Servant, Overton, N. S.

LINCOLNS.

Ram, 2 shears and over—1, Albert Boswall; 2, Almon Boswall, Marshfield, P. E. I.; 3, C. Pugsley, Barronsfield.

Ram, shearling—1, Albert Boswall.

Ram, lamb—1, Albert Boswall; 2, C. Pugsley.

Aged ewe—1, Albert Boswall; 2, Almon Boswall; 3, C. Pugsley.

Ewe, shearling—1, Albert Boswall; 2, C. Pugsley; 3, Almon Boswall.

Ewe, lamb—1, Albert Boswall; 2, Almon Boswall; 3, C. Pugsley.

Pen—1, Albert Boswall; 2, C. Pugsley.

Pen lambs—1, Albert Boswall; 2, C. Pugsley.

SHROPSHIRES.

Ram, 2 shears and over—1, Geo. L. Boswall, Pownal; 2, Cephas Nunn, Winsloe Road, P. E. I.; 3, A. McDonald, Shubenacadie.

Ram, shearling—1, Geo. L. Boswall; 2 and 3, Cephas Nunn.

Ram, lamb—1 and 2, Geo. L. Boswall; 3, Cephas Nunn.

Aged ewe—1 and 3, Geo. L. Boswall; 2, John McDonald & Son.

Ewe, shearling—1 and 2, Geo. L. Boswall; 2, Burder Goodwin, Baie Verte.

Ewe lamb—1, 2 and 3, Geo. L. Boswall.

Pen—1 and 2, Geo. L. Boswall; 3,

(Continued on page 828)

The Charlotte County Exhibition

The fifth Charlotte County Exhibition was held in the pretty town of St. Stephen on the 9th to 12th inst. The fair grounds are ideal in location and for a comparatively young association the buildings and fixtures are a credit to the town and county.

To Mr. W. S. Stephen, the energetic secretary of the fair, is due a great share of the credit for the success of the fair, and associated with him on the managing board are some of the most prominent business men of the town, who consider time and money well spent in promoting the best interests of the agriculturists of their county.

The fair grounds are well equipped. The main building, or Agricultural Hall, contains the Secretary's office and this year all the floor space was taken up with exhibits by the manufacturers, who do business in Charlotte county. Included in the number was a good display of vegetables and various fertilizing elements, singly and in mixture by the Dominion Chemical Fertilizer Company of St. Stephen. The Molassine Meal Company of Canada also had an exhibit.

The Ladies' department was upstairs in the main building and there a grand aggregation of cookery, and other household arts was displayed.

The Floricultural department was located at one end of the hall and the arrangement was most attractive. Mrs. Elwell DeWolfe had the best collection of foliage plants, ferns excluded, as well as the best collection of Exotic Ferns. In the latter class Miss Beatrice Vroom had the second best collection. Mrs. DeWolfe had the best display in the class. One feature of particular interest was that several of the most beautiful ferns in the collection had been grown from the fronds by the exhibitors.

Mrs. Caroline McGibbon and Mrs. Arthur White, Moore's Mills, had the first and second largest and best variety of cut flowers separately displayed.

At the other end of the hall there was a good exhibit of manual training work and a very commendable school garden exhibit.

THE FISHERY EXHIBIT

was located under the new grand stand and it was the most comprehensive that we have seen for many days. On the tables were excellent exhibits of cod, hake, pollock, etc. Then there was some barrelled fish of various kinds and on shelves around the walls were preserved specimens of many of the denizens of the deep.

HONEY AND APIARY.

The honey and apiary supplies were judged by Mr. H. B. Durost, of the Provincial Department of Agriculture. The principal exhibitors in the class were Martin Reed, Leverville, John Logan, Town Hill, and Wilfred Todd, Milltown, who were awarded prizes in the order named in the comb honey section.

DAIRY PRODUCTS.

were judged by Mr. C. W. McDougall, Provincial Dairy Superintendent and prizes were awarded as follows:

Tub Butter—1, Arthur Clayxton, Oak Bay; 2, Mrs. J. L. Weatherby, St. Stephen; 3, A. T. Reid, Leverville; 4, Harris Milberry, St. Stephen; 5, Freeman Lever, Leverville; 6, Mrs. W. E. McCarlie, Oak Bay; 7, Mrs. Eri Sawyer, Leverville.

Print Butter—1, Mrs. J. Weatherby; 2, Arthur Claxton; 3, Freeman Lever; 4, A. T. Reid; 5, Alice Nixon Waweag, 6, Harris Millberry, St. Stephen; 7, Joe Trundle, Oak Bay; 8, W. A. Smith, Woodward Cove; 9, W. B. Simpson, Waweig.

Butter in Granular—1, A. T. Reid; 2, Arthur Claxton; 3, Freeman Lever.

Special. B. N. S. prize.

Tub Butter—1, Mrs. J. Weatherby, Old Ridge; 2, A. T. Reid; 3, Harris Millberry.

Special. Frank Littlefields.

21 lbs. Butter—1, Beatrice Simpson, Oak Bay; 2, Vivian Peacock, Rolling Dam; 3, Louise McCarlie, Oak Bay.

HORTICULTURAL PRODUCTS.

The showing of horticultural products was very creditable indeed. S. L. Peters, Queenstown, N. B., placed the awards. D. L. Martin & Son, Deer Island and Frank Scott, Honeydale, had the two best collections of ten varieties apples.

Dr. J. B. Nason, St. Stephen, Mrs. Wilfred Boyd, St. Stephen, and Mrs. Arthur White, Moore's Mills, had the first, second and third prize boxes of apples.

The best collection of preserved fruits were shown by W. B. Simpson, Waweig, Mrs. George Young, Oak Bay, and Mrs. Abbie Graham, Tower Hill. Mrs. Walter Robinson, St. Stephen had the best collection of jellies and pickles in jars. Mrs. H. D. McKay and Mrs. Holmes Maxwell, St. Stephen, made a good showing of canned vegetables while Mr. Frank Scott, Honeydale, showed the most artistic and comprehensive exhibit of fruit grown on any one farm in Charlotte county.

THE AGRICULTURAL PRODUCTS.

were judged by Mr. S. L. Peters and the showing made of roots, grains and grasses was ample proof of the agricultural possibilities of Charlotte county. W. R. Simpson, Oak Bay, W. B. Simpson, Oak Bay and Eri Sawyer, Leverville, had the best collections of grains in the straw. There were some very fine sheaves of alfalfa and if we judge aright we believe Charlotte county will ere long be a large producer of this valuable crop.

W. B. Simpson, Oak Bay, John Webber, St. Stephen and Harry Leeman, St. Stephen had the three prize winning assortments of potatoes.

Frank Scott, Honeydale, led the way in best collection of field roots. Mrss. Eri Sawyer, Oak Bay, Mrs. Caroline McGibbon, Moore's Mills and H. D. McKay, St. Stephen, put up the best collection of garden vegetables.

HORSES.

were out in strong numbers and with not a little amount of quality. J. T. Prescott, Sussex, placed the awards without fear or favor and in cases where hereditary unsoundness were in evidence he made no hesitation in withholding prizes. Some of the classes were particularly well filled. Following is a list of the prize winners:

HORSES.

STANDARD BREDS.

Stallion—1, Robert Todd, Milltown.

Brood Mare with foal—1, Will McGibbon, More's Mills.

Filly—1, W. McGibbon.

Filly, Standard Bred—1, W. H. Keys, St. Stephen.

Foal, 1913—1, Will McGibbon.

CARRIAGE HORSES TO HALTER.

Brood Mare, foal by side—1, Archie Maxwell; 2, Wilmot Hall, St. Stephen; 3, Wm. Johnson, DeWolfe.

Mare to halter—1, Chas. Maxwell, Bayside.

Gelding, 2 years upwards—1, Clarence Maxwell, St. Stephen.

Bay Filly, 1 year—1, Wilfred Todd, Milltown; 2, Frank Littlefield.

Foal 1913—1, Will McGibbon; 2, Wm. Johnson DeWolfe; 3, Archie Maxwell, Old Ridge.

It's Cheaper to Repaint than to Repair

Good painting is an investment—not an expense, for paint saves expenses in repair bills.

If you would lengthen life and add usefulness to every building, every vehicle and every implement on the farm, PAINT UP before repairs are necessary. *It pays.* The better the paint, the better it pays. That's why

IT PAYS TO USE

MARTIN-SENOUR 100% PURE PAINT

"The Paint For Wear and Weather"

There is a dealer in your neighborhood who carries the complete line of Martin-Senour Paints and Varnishes. Write for his name and a "Farmer's Color Set", which will assist you in choosing just the right paint and colors for your every requirement. This set is free for the asking. Write for it today. 5

Martin-Senour Co., Limited

299 MOUNT ROYAL AVENUE, MONTREAL, P.Q.

FREE TO YOU—MY SISTER

FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.

I am a woman.
I know woman's sufferings.
I have found the cure.

I will mail, **free** of any charge, my **home treatment** with full instructions to any sufferer from women's ailments. I want to tell **all** women about this cure — **you**, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourselves at home without the help of a doctor. Men **cannot** understand women's sufferings. What we women know **from experience**, we know better than any doctor. **I know** that my home treatment is a safe and sure cure for **Leucorrhoea** or **Whitish discharges, Ulceration, Displacement** or **Falling** of the **Womb, Profuse, Scanty** or **Painful Periods, Uterine** or **Ovarian Tumors** or **Growths,** also **pains in the head; back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weaknesses peculiar** to our sex.

I want to send you a **complete 10 days' treatment entirely free** to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that **it will cost you nothing** to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. **Just send me your name and address,** tell me how you suffer, if you wish, and **I** will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you **free of cost,** my book—**"WOMAN'S OWN MEDICAL ADVISER"** with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it, and learn to **think for herself.** Then when the doctor says—"You must have an operation," you can decide for yourself. Thousands of women have cured themselves with my home remedy. **It cures all, old or young.** To **Mothers of Daughters,** I will explain a simple home treatment which speedily and effectually cures Leucorrhoea, Green Sickness and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use.

Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this **Home Treatment** really **cures** all woman's diseases and makes women well, strong, plump and robust. **Just send me your address,** and the free ten days' treatment is yours, also the **book.** Write to-day, as you may not see this offer again. Address:

MRS. M. SUMMERS, Box H. 309 - - - - WINDSOR, Ont.

CARRIAGE HORSES to HARNESS

Mare to harness—1, Jos. Robinson, St. Stephen; 2, D. R, Chowen, Milltown.

FARM TEAM.

Brood Mare, foal by side—1, Neil Sinclair, Flume Ridge; 2, James Kinney, Oak Bay; 3, J. L. McComb, Leverville.

Gelding—1, Levi Stuart DeWolfe; 2, Howard Trafton, Moore's Mills; 3, Harry Tourtilootte, St. Stephen.

Filly—1, Stirling Babb, St. Stephen 2, Lewis Acker, St. Stephen.

Filly—1, Neil Sinclair; 2, Alden Davidson, Oak Bay.

Gelding—1, E. Wilfred Todd, Milltown.

Foal, 19Q3—1, Andrew Lindsay, Old Ridge; 2, J. L. McComb; 3, James Kinney.

Farm or Work Team—1, Harry Mann, St. Stephen.

HEAVY DRAFT HORSES.

Brood Mare and foal— 1, . James Kinney.

Mare, 4 years—1, Will McGibbon; 2, and 3, Hugh Hill, Oak Bay.

Foal—1, James Kinney.

Matched Team—1, Harry Mann; 2, Hugh Hill.

CLYDESDALES.

Clydesdale Stallion—1, George H. Budd, St. Stephen.

Clydesdale Mare—1, Levi Stuart, De Wolfe; 2, Forest Robinson, St. Stephen.

Clydes Matched—1, Levi Stuart.

Draft Competition—1, David Johnson, St. Stephen; 2, F. S. Devlin, Oak Bay; 3, Harry Mann.

PONIES.

Dunlap Pony—1, Jack Pike, St. Stephen.

Shetland Pony—1, Carmen Ganong; 2, Whidden Ganong, St. Stephen.

THE DAIRY CATTLE

were judged by Messrs. Andrew Elliot and S. M. Fiske, Florenceville. Ayrshires, Holsteins, Jerseys, Guernseys, Canadians, Dutch Belted cattle and their grades were shown in small herds. As yet the competion is not very keen but ere many more exhibition seasons elapse we predict some lively competition at St. Stephen.

The dairy test was in charge of Mr. H. N. Flewelling, New Brunswick, Representative of the Canadian Cow-Testing Association. Following are the rules governing the 48 hours test and the result: —

1.—Cows to be milked morning and evening on the second and third days of the Fair.

2.—Cows must have freshened at least one month prior to the date of test.

3.—One point allowed for each five pounds of milk and five points for each pound of butterfat. One point allowed for each week cow has been milking over one month (limit 10 points).

Wimot Hall's grade Jersey, freshened July 4, 1913, gave 62.5 pounds milk testing 4.3 per cent. butter fat and yielding 2.68 pounds fat scored 25.9 points and captured the first prize.

Harry Tourtillotte's grade Holstein freshened April 1, 1913, gave 48.5 lbs. milk testing 3.9 per cent butter fat, and yielding 1.89 pounds fat scored 21.1 points and captured the second money.

E. Emmerson's Ayrshire cow freshened January 1, 1913, milked 24.5 lbs. milk, testing 4.2 per cent. butter fat, yielding .92 pounds fat and scored 14.6 points was third in the competition.

Thos. McClures' Jersey, freshened on August 22, 1913, milked 55.0 lbs. milk, testing 4.4 per cent. butter fat, yielding 2.40 pounds fat, scored 23 points, but although she scored second in the contest, she was outside the money, owing to the rule governing date of freshening.

Following is a list of prize winnings in the various breed contests:

DAIRY BREEDS

JERSEYS.

Aged Bull—1, Hugh McGregor, Bocabec Cove.

Bull, yearling—1, Wilfred Todd.

Heifer, 1 year—1, Ed. Hanson, St. Stephen; 2, Wm. Moffitt, St. Stephen.

Heifer, under 6 mos.—1, Wm. Moffitt; 2, W. R. Simpson, Oak Bay; 3, A. D. Ganong, St. Stephen.

AYRSHIRES.

Bull, 2 years—1, W. Edward Towers, Oak Bay; 2, Edwell Nmerson, Greenock; 3, A. T. Reid, Leverville.

Bull Calf, 6 mos.—1, Edwell Emerson.

Bull Calf, under 6 mos.—1, John Logan.

Cow, 3 years old—1, Edwell Emerson.

Heifer, 12 mos. to 24.—1, John Logan, Tower Hill; 2, A. T. Reid; 3, Edwell Emerson.

Heifer Calf.—1, J. L. McComb; 2, Edwell Emerson; 3, Freeman Lever.

Heifer Calf, under 6 mos—1, A. T. Reid.

Breeder's Young Herd—1, Edwell Emerson.

HOLSTEINS.

Bull, 2 years old—1, Chas. Maxwell.

Bull, under 2 years—Levi Stuart.

Bull, 6 mos.—Albion Moffitt, St. Stephen; 2, John Trafton, Lynnfield.

Cow, 3 years old—1, Levi Stuart.

Cow, 2 years—1, J. W. McBride, St. Andrews.

Heifer Calf, under 6 mos—1, Levi Stuart; 2, Levi Stuart.

Heifer, 6 mos.—1, J. W. McBride; 2, Manzer Moffitt, St. Stephen.

Heifer, under 6 mos.—Manzer Moffitt.

GUERNSEYS.

Guernsey Cow—1, W. R. Simpson, Oak Bay.

Guernsey Calf—1, Leander Simpson, Oak Bay.

DUTCH BELTED CATTLE.

All the entries in the Dutch Belted Class were shown by Sir Wm. Van Horne, Coven Hoven, St. Andrews.

CANADIANS.

With the exception of first prize on aged bull, which went to W. S. Poole, St. Stephen, and first on a yearling heifer, which went to Wm. Moffitt, St. Stephen, the remainder of the prizes in this class went to Sir Wm. Van Horne.

W. S. Poole showed a nice bull calf which he imported from the Experi-

(Continued on page 843)

BEST ALL-YEAR LIVESTOCK FEED

MOLASSINE MEAL

Made in England

ROYAL WARRANT

After supplying the Royal Stables for several years, His Majesty King George V has granted a Royal Warrant to the makers of MOLASSINE MEAL

MR. POPE WRITES:

FERNDALE FARM, Auburndale, Mass.

Auburndale, Mass., May 21st, 1913

Molassine Co. Ltd.
Boston, Mass.

Gentlemen—I want to tell you that the "MOLASSINE MEAL" that I bought and commenced to feed some two months ago has proved to be the best food I have ever used. It certainly has proved wonderful results in our cows, calves and horses. Each one of our horses has gained more than fifty lbs. and it has given them the slickest coat they have ever worn. It certainly has put the bloom on the cows and calves. Our cows never kept up so well in their milk supply as they have this spring. "MOLASSINE MEAL" keeps their system in the pink of condition.

Yours very truly,
(Signed) Frank H. Pope, Manager

You can obtain the same results as stated above by regular feeding of "MOLASSINE MEAL"—Try it.

Look for this Trade Mark

on every bag

Put up in bags containing 100 lbs. Ask your Dealer or write us direct.

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can be depended upon to make concrete that will last for generations.—There is only one grade—the best that science and skill can make.

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Has Imitators But No Competitors.

Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Toronto, Ont.

Prize Winners at the Nova Scotia Provincial Exhibition.

(Cuntinued from page 825)

Cephas Nunn.

Pen lambs—1, Geo. L. Boswall; 2, Cephas Nunn.

SOUTH DOWNS.

Ram, 2 shears and over—1, Cephas Nunn; 2, F. W. Keasby, Chester, N. S.

Ram, Shearling—1, J. E. Baker & Sons; 2, Cephas Nunn.

Ram, lamb—1, J. E. Baker & Sons; 2, Cephas Nunn; 3, F. W. Keasby.

Aged ewe—1 and 3, J. E. Baker & Sons; 2, Cephas Nunn.

Ewe, shearling—1 and 3, J. E. Baker & Sons; 2, Cephas Nunn.

Ewe, lamb—1 and 3, J. E. Baker & Sons; 2, Cephas Nunn.

Pen—1, J. E. Baker & Sons; 2, Cephas Nunn.

Pen lambs—1, J. E. Baker & Sons; 2, Cephas Nunn.

OXFORD DOWNS.

Ram, 2 shears and over—1, J. E. Baker & Sons; 2, Burder Goodwin.

Ram, shearling—1 and 3, J. E. Baker & Sons; 2, Burder Goodwin.

Ram, lamb—1 and 3, J. E. Baker & Sons; 2, Burder Goodwin.

Aged ewe—1 and 2, J. E. Baker & Sons; 3, Burder Goodwin.

Ewe, shearling—1 and 2, B. Goodwin; 3, J. E. Baker & Sons.

Ewe, lamb—1 and 2, B. Goodwin; 3, J. E. Baker & Sons.

Pen—1, J. E. Baker & Sons; 2 and 3, B. Goodwin.

Pen lamb—1, B. Goodwin; 2, J. E. Baker & Sons.

Oxford special—J. E. Baker & Sons.

HAMPSHIRE DOWNS.

Ram, 2 shears and over—1, Cephas Nunn.

Ram, shearling—1, Cephas Nunn.

Ram, lamb—1, Almon Boswall, Marshfield, P. E. I.; 2, Cephas Nunn.

Aged ewe—1, Cephas Nunn; 2, Oliver Nunn, Winsloe Road, P. E. I.

Ewe, shearling—1, Cephas Nunn; 2 and 3, A. Boswall.

Ewe lamb—1 and 2, Cephas Nunn; 3, Oliver Nunn.

Pen—1, Cephas Nunn.

Pen lambs—1, Cephas Nunn.

CHEVIOTS.

Ram, 2 shears and over—1, Cephas Nunn; 2, Chas. Symes.

Ram, shearling—1, Cephas Nunn; 2 and 3, Chas. Symes.

Ram lamb—1 and 3, Chas Symes; 2 Cephas Nunn.

Aged ewe—1, Cephas Nunn; 2 and 3, Chas. Symes.

Ewe, shearling—1, Cephas Nunn; 2 and 3, Chas. Symes.

Ewe lamb—1, Cephas Nunn; 2 and 3, Chas. Symes.

Pen—1, Cephas Nunn; 2 and 3, Chas. Symes.

DORSETS.

Ram, 2 shears and over—1, Alfred Servant & Son, Overton, N. S.

Ram, Shearling—1, Geo. L. Boswall; 2, Oliver Nunn.

Ram lamb—1, Geo. L. Boswall; 2, Oliver Nunn; 3, A. Servant & Son.

Aged ewe—1 and 3, Geo. L. Boswall; 2, Oliver Nunn.

Ewe, shearling—1, Oliver Nunn; 2 and 3, Geo. L. Boswall.

Ewe lamb—1, Geo. L. Boswall; 2 and 3, A. Servant & Son.

Pen—1, Geo. L. Boswall; 2, A. Servant & Son.

Pen lambs—1, Geo. L. Boswall; 2, A. Servant & Son.

ANY OTHER PURE BREED.

Ram, 2 shears and over—1, Albert Boswall.

Ram, shearling— 1, A. Boswall; 2, Almon Boswall.

Ram, lamb—1, A. Boswall; 2, Almon Boswall.

Aged ewe—1 and 3, A. Boswall; 2, Almon Boswall.

Ewe, shearling—1 and 3, A. Boswall; 2, Almon Boswall.

Ewe lamb—1 and 3, A. Boswall; 2, Almon Boswall.

Pen—1, A. Boswall; 2, Almon Boswall.

Pen lambs—1, A. Boswall.

GRADES OR CROSSES (LONG WOOL)

Ewe, 2 shears and over—1, C. Pugsley; 2, Chas. Symes; 3, Geo. Retson.

Ewe, shearling—1 and 3, Geo. Retson; 2, Chas. Symes.

Ewe lamb—1, Geo. Retson; 2 and 3, Chas. Symes.

Pen—1, Geo. Retson; 2, Chas. Symes.

GRADES OR CROSSES (MEDIUM WOOL)

Ewe, 2 shears and over—1 and 2, J. E. Baker & Sons; 2, A. McDonald.

Ewe, shearling—1 and 2, J. E. Baker & Son; 3, A. McDonald.

Ewe, lamb—1, J. E. Baker & Sons.

Pen—1, J. E. Baker & Sons.

FAT SHEEP (LONG WOOL)

Wether shearling—1, S. L. Boswall; 2, C. Pugsley; 3, A. S. Boswall.

Wether lambs—1, C. Pugsley.

Ewes—1, Chas. Symes; 2, C. Pugsley; 3, Almon Boswall.

FAT SHEEP (MEDIUM WOOL)

Wether shearling—1, J. E. Baker & Sons; 2, Cephas Nunn; 3, Geo. L. Boswall.

Wether lambs—1, Cephas Nunn.

Ewes—1, Cephas Nunn; 2 and 3, Burder Goodwin.

SWINE

BERKSHIRES.

Sow. over 2 years—1, H. W. Corning.

YORKSHIRES.

Boar, over 2 years—1, McLeod Linton, Halifax; 2, J. W. Calbeck, Summerside, P. E. I.; 3, Chas. E. Fulton, Bass River, N. S.

Boar, over 1 year and under 2 years—1, J. W. Calbeck; 2, Jas. Nicholson, Halifax; 3, McLeod Linton.

Boar, over 6 months and under 1 year—1, C. J. Keilor, Dartmouth, N. S.; 2 and 3, J. W. Calbeck.

Boar, over 3 months and under 1 year—1 and 3, J. W. Calbeck; 2, C. J. Keilor.

Sow, over 2 years—1, C. J. Keilor; 2, McLeod Linton; 3, J. W. Calbeck.

Sow, over 1 year and under 2 years—1, J. W. Calbeck; 2, McLeod Linton; 3, C. J. Keilor.

Sow, over 6 months and under 1 year—1 and 2, J. W. Calbeck; 3, C. J. Keilor.

Sow, over 3 months and under 6 months—1 and 2, J. W. Calbeck; 3, C. J. Keilor.

Breeding sow with litter—1, J. W. Calbeck; 2, C. J. Keilor; 3, KcLeod Linton.

Herd, boar and 3 females, any age —1 and 2, J. W. Calbeck.

WHITE CHESTERS

Boar, over 2 years—1, Jas. Nicholson; 2, H. W. Corning.

Sow, over 6 months and under 1 year—1 and 2, Jas. Nicholson.

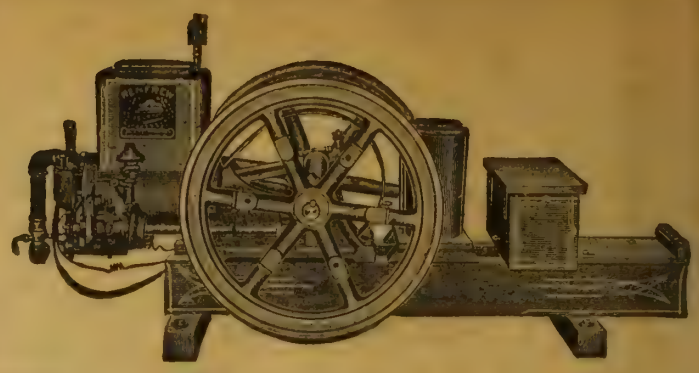
Breeding sow with litter—1, Jas. Nicholson.

Herd—Jas. Nicholson.

POLAND CHINAS.

Boar, over 2 years—1, A. Servant & Son; 2, Chas. Symes.

(Continued on page 836)



The Engine Henry McKay Bought

Henry McKay is a shrewd, honest, progressive farmer, and one of the fairest men we ever did business with. His farm is one of the best kept, most profitable in the Dominion. His farm machinery is the most modern. And he was one of the first men in the country to get a Renfrew Standard gasoline engine. When asked why he chose the

Renfrew Standard
It starts without cranking

engine in preference to many others on the market he said:

"Well, what impressed me most was the fact that the engine started without cranking. I thought it must be a mighty good engine to be able to do that. Then I liked that fly-ball governor. It controlled the speed of the engine better than I had ever seen an engine controlled before."

"I figured out, too, that the construction of the mixer on the engine was very simple and unlikely to get out of order and also would be very economical on gasoline. I was also very strongly impresswith the general appearance of the engine. It looked as though it was made by careful workmen, and seemed very simple."

"There were other things about the Renfrew Standard engine, that no doubt influenced me in its favor. But those I mentioned are the ones that really did the business."

Since Mr. McKay bought this Renfrew [Standard Engine, hundreds of others have followed in his footsteps. Every month the demand for this remarkable engine keeps growing. Every month we send out more booklets and circulars. Will your name be on our mailing list this month? It will if you are a progressive man like Henry McKay.

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Udder Troubles.

Garget in cattle is most often met with where bad milkers are employed or the udders are not properly stripped. This is the most prolific cause of udder troubles, to say nothing of the loss that arises from the cow drying off prematurely. So often are udder troubles due to bad milking, that when an unusual number of bad udders appear in a herd it is safe to make a change in the milker, so that it be for the better, or to threaten that if any more cases occur there shall be a prompt discharge. It is a good plan to go round the cows occasionally and see that they are clean stripped, or if the milk is weigned it will afford some indication of whether cow and milker are each doing their duty. There can be no manner of doubt that in the majority of cases the minor forms of inflamed udder, the hard quarters so commonly met with, can be prevented by ordinary care and attention. Symptoms vary somewhat with the severity of the case; but happily acute mammitis is not often met with. The first symptoms noticed are generally purely local—the gland is swollen, feels hard and hot, is very tender and painful, as evidenced by the behavior of the cow, and the milk veins are very much distended. Fever runs high, and there is no disease in which the temperature goes up so rapidly, or I

The Value of a Piano

should never be determined by the price asked. Nor should you be influenced one iota by the testimonials of well known musicians. As a matter of fact testimonials, in 90 cases out of 100, are paid for and merely add to the cost of the instrument. There only a **few really great** pianos on the Canadian market. The

Sherlock - Manning 20th Century Piano

is conceded to be **one** of them by every **unbiased** and **competent** judge. The **brilliancy** and the **permanency** of its tone is unsurpassed. It is the **supreme** product of one of the world's **greatest** piano makers—an instrument of **enduring** quality and well worthy of the title:

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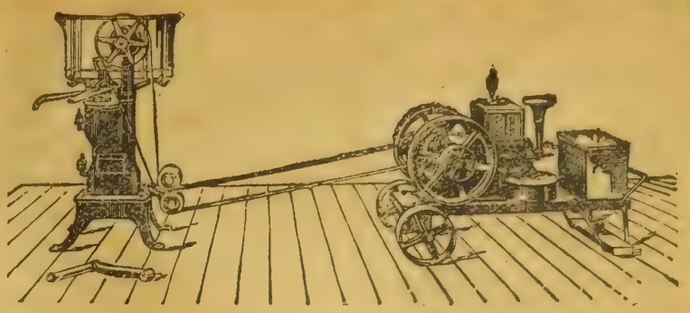
Dr. de Van's Female Pills
A reliable French regulator; never fails. These pills are exceedingly powerful in regulating the generative portion of the female system. Refuse all cheap imitations. **Dr. de Van's** are sold at $5 a box, or three for $10. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

Few, if any, medicines, have met with the uniform success that has attended the use of Chamberlain's Colic, Cholera and Diarrhoea Remedy. The remarkable cures of colic and diarrhoea which it has affected is almost every neighborhood have given it a wide reputation. For sale by all dealers.

may add falls so quickly. As high as 109 deg. Fahr. has been registered a few hours after an acute attack, a reading I have never met with in any other disease, few survivals of 107 deg. coming within the range of my experience, and then after a few doses of saline in combination with aconite there would be a drop of 5 or 6 degrees. Besides the general signs of ill-health, rigors, loss of appetite, cessation of rumination, etc., there is, as a rule, considerable constipation, tion of diarrhoea prevails. The secretion of milk is diminished and perverted, being either curdled and watery and streaked with blood, or only a thin dirty serous fluid can be got from the teats. Later it becomes yellowish from admixture of pus. There may be recovery on a cessation of the acture symptoms, but very often an abscess forms, which, if not opened, bursts, and pus is discharged through the ragged opening. Occasionally mortification of a quarter takes place, and if not surgically removed it has to slough out. Gangrene is said to occur with greater frequency in Jersey or Guernsey cows or other breeds that are narrow between the thighs, which press upon the inflamed and swollen udder. In an acute attack the whole gland may be involved, but this is rare, and it is not often that more than two quarters are affected in the same animal. In the chronic form, or those milder types of inflammation known as "hard" quarter, it is rare to find more than one affected. In these cases the matter is not so urgent, and the trouble is of importance as affecting the yield of milk rather than the life of the animal, for there is generally permanent loss of function in the whole or part of the quarter, while abcess and suppuration sometimes occur.

LOST QUARTERS.

The loss of a quarter is an important matter, because it means loss of function in a fourth part of the secreting apparatus, and, I believe, a corresponding reduction in the quantity yielded. There are some who affirm that a three-papped cow is as good as any other, or almost as good, the suggestion being that the other quarters takes on the function which disease has destroyed in the fourth, and that the yield suffers no material diminution. There are two people who believe most strongly in the three-papped cow doing about all she was capable of with four—the man who has got one to sell when the prospective purchaser discovers it, and the man who has bought one without knowing it. But no one is willing to give anything like as much money for a cow with three quarters as for a similar animal with a sound udder. The wise man, before buying, examines the udder carefully, draws every pap to see that it is free, or, if the cow is in calf, but dry or just springing, see that there is no sign of induration in any of the quarters. There is always an element of danger in calving a cow that has lost a quarter, or the use of part of it, in a previous attack of inflammation before being dried off, or in the process of doing so. With a portion of the quarter active and occlusion of the duct existing, the milk that is secreted cannot be drawn, and the retention results in acute mammitis, the formation of pus, and possibly gangrene. The few fatal cases of mammitis that I have met with have mostly had their origin in this way. I think that the best course is to fatten the three-papped cow as soon as she becomes unprofitable to milk, or to sell her as a barren to go on grass for beef. In many cases the cow is already in-calf before the mischief happens, and then, of course, there is nothing but to make the best of a bad business.



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THERE was a time when all farmers hitched up every other morning—part of the year every morning—and took their milk to the creamery. Today many of them use cream separators, because they find more advantages, fewer difficulties, and much profit in the modern way.

Do you still plod the uncertain creamery route, or have you the efficient little team shown above at work for you? This outfit, an

I H C Cream Separator
Dairymaid, Bluebell, or Lily

and a one-horse power back-geared I H C engine, will save you, in cream, from five to fifteen dollars per year on every cow milked, separate your milk and cream cleanly and thoroughly, and give you clean, fresh, warm skim milk to feed that will build up fat, healthy pigs and calves. I H C separators are the best separator bargains you can buy, because they will do better work and last longer than others.

Then the engine half of the team is always ready to pump water for you, run the grindstone, washing machine, sausage grinder, churn, and other machines. It is economical, sturdy, steady and reliable.

The I H C local agent will show you the outfits. Write for catalogues and full information to the

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Our Spring Samples are now out for you Inspection.

Style Quality and Prices Cannot be Beat.

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LIVE STOCK.

Showing Sheep at Fairs.

The show season is now here, and it may be of interest to the amateur sheepman and showman to offer a few brief suggestions on the fitting of the breeding flock for the fall fairs. All stockmen know that livestock has been exhibited at fairs and shows for many years and we find that the present standard of perfection in breed development is due in a greater part of the efforts of the loyal live stock showman and breeder. We are mistaken if we picture the breeder as merely showing his live stock for the prizes that are offered. Although the prizes are always acceptable, the thorough stockman cares less for the cash remuneration than for the blue ribbon signifying the superiority of his own stock.

It is quite essential to offer cash premiums at the several fares so as to offer some inducement in defraying the expenses of taking the sheep to the shows. The chief benefit that the live stock men receive from fairs is not the premium money that they have won, but it is the stimulation to breed better live stock. Hundreds of thousands of stock growers attend the many fairs that are an annual event, and at these fairs the real students of animal breeding enter their stock in competition with those of their neighbors and perhaps those of their more distant friends with whom they have become acquainted on the fair circuit.

Twice as much can be learned regarding live stock breeding by the young breeder if he enters his stock in competition with that of the older and more experienced breeders, because in this way he personally meets the best stockmen and becomes familiar with the stock and the best methods of showing and handling them.

KNOW WHAT TYPE IS.

Let me here suggest that amateur showmen made as thorough a study of the respective breeds that they handle as possible. Such a study will familiarize them with the strong and weak points of the breeds. In regard to fitting animals for show much can be learned by the study of the experience of the older breeders. Let us take as an illustration the amateur sheepr breeder. He possibly has decided to show some of his breeding ewes at the fall fairs.

This young breeder might possibly have purchased prize-winning ewes the year previous and he feels confident he will win with them again. Now there is this much to be said: An animal in order to gain proper recognition must be in good condition. A breeding ewe will not gain first place this year solely because she stood at the head the previous year.

In judging one of the Shropshire classes at a fair last fall I immediately noted the splendid type and conformation displayed by one of the breeding ewes on exhibition. This ewe was extremely fat and in general appearance had a "cinch" on first place in the class, but to my utter disappointment when I placed my hands on her I was rather reminded of a rubber water bag, her flesh was so soft and flabby. Here then is a splendid example of overfitting. In all probability this splendid looking Shropshire ewe would have stood first in her class had she not been overdone, but unfortunately she sought her place at the foot. These are the points with which our young showmen should familiarize themselves more thoroughly. It is quite an expense to send stock to the fairs and it is a rather hard blow to the earnest and industrious young breeder to find out only when to late that the animal is overfitted.

Many young stockmen show their animals for one or two seasons and then if unsuccessful they drop from the ranks of the showmen. Such men as these do not show the proper attitude. If we were to look back over the records of America's best show fitters we would in nine out of 10 cases find that these persistent stockmen started out with a similiar record.

It sometimes happens that the live stock judge does not please everyone by his decisions. Some breeders unfortunately get the idea that their animals are going to win and regardless of any and everything; they are dissatisfied with the judges' decision if not in accord with theirs. It is true many times in close competition that one judge might place a class of animals different than another good live stock judge would place them, but this does not necessarily encourage criticism. Often we run across a judge who is incompetent it is true, but it is also true that our best stockmen take defeat like men and do not create a disturbance at the ringside.

To sum it all up then a live stock fair or show encourages the breeding of more and better live stock in the community. The best breeders assemble at these fairs to display their stock and have a general good time also. This offers a splendid opportunity to compare your stock with that of your neighbor and to see wherein the animals differ. The weak points of a specimen stand out prominently when compared with a nearer perfect specimen. The man who is the most successful competitor will tell you how to raise good stock and how to fit them for show.

There are perhaps many young inexperienced stockmen who are contemplating showing stock at some of the fairs this fall, but possibly they hesitate because they are afraid their animals will not win. Do not let such a thought hinder you. If you are desirous of securing further information as to some particular breed and the methods to be employed in fitting them, write to your agricultural college for the desired information and you will be fully repaid for your trouble. A man primarily shows his stock for advertising purposes and if persistent he will meet with success eventually, even though at the first few fairs his stock does not attract much attention.—J. M. Jones, Secretary New Hampshire Sheep Association, in N. E. Homestead.

Wean the Lamb Early.

I always wean my early spring lambs when they are about three and one- half months old. Some sheep men advocate allowing them to continue to run with the ewes, but in my experience I have found that the latter will do much better without the lambs, and with plenty of good pasture the lambs will make better growth if they are separated from the ewes. I separate the lambs entirely away from the mothers. I make the distance between the ewes and lambs so great that neither can hear the other bleat. This reduces the worry considerably and makes the weaning a little easier.

The ewes require some attention at this time. They need to be carefully dried off in milk-giving. To do this I put my ewes in the shortest pasture and allow them to have no grain until the secretion has dried off. During the time the ewes are being dried off in milk flow, every two or three days I look them over carefully to see if any of them need milking out. In case they do, I stand astride their necks and reach down either side to the udder and milk them out very quickly. I regard milking them out an important matter, and not to be neglected under any circumstances. In this regard my reason for being so particular is that it is the best milker and the most desirable mother ewe that is most persistent, consequently I would not have her udder spoiled for a little lack of care at the time, writes W. H. Underwood in Indiana Farmer.

MANAGEMENT OF THE EWES.

As soon as the milk secretion has ceased the ewes are turned onto plenty of good pasture. I do not fatten the ewes, but put them into a

It Needs No Painting

THOSE neat sparkling roofs with their crushed mineral shining in the sun—you see them all over the country—they are Amatite roofs.

The fact that Amatite *needs no painting* means a great saving to those who use it.

It is also a great convenience not to have to paint roofs.

Many buyers have adopted the policy of using nothing but Amatite owing to this economy and satisfaction.

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Creonoid *Lice Destroyer and Cow Spray*

Creonoid sprayed on cows keeps away flies and prevents insect torment. Equally useful in the hen house to destroy lice and keep them at a distance. The cost is trifling.

Everjet Elastic Paint

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Ford
THE UNIVERSAL CAR

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Six hundred dollars is the new price of the Ford runabout; the touring car is six fifty; the town car nine hundred—all f. o. b. Ford, Ont., complete with equipment. Get catalog and particulars from the Ford Motor Company of Canada, Limited, Ford, Ont.

PEERLESS FENCE HOLDS

Made of heavy Open Hearth steel wire well galvanized. Wire intersections securely locked together with our Peerless lock. They can't slip. Peerless fence is guaranteed to be weather proof and stock proof. Write for catalog. Agents wanted in open territory.

Banwell-Hoxie Wire Fence Co., Ltd.
WINNIPEG, MAN. HAMILTON, ONT.

Any little girl can do the churning with

MAXWELL'S

Favorite Churn.

It makes the smoothest, richest, most delicious butter you ever tasted.

The roller bearings—and hand and foot levers—make churning an easy task, even for a child.

All sizes from ½ to 30 gallons.

Write for catalogue if your dealer does not handle this churn and Maxwell's "Champion" Washer.

David Maxwell & Sons, St. Mary's, Ont.

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THE ORIGINAL AND ONLY GENUINE

BEWARE OF IMITATIONS SOLD ON THE MERITS OF MINARD'S LINIMENT

Minard's Liniment Co., Limited

For Diarrhoea, Dysentery, Cholera, Cholera Morbus

AND ALL

Pains and Cramps, Children or Adults

There is Nothing Just as good as——

Gates' Certain Check

MESSRS C. GATES, SON & CO.

Dear Sirs:

I have been thinking for some time that I should write and let you know what your "Certain Check" has done for my son. He had such a bad case of Cholora that he was reduced to a skeleton. We tried doctors, drugs and many other remedies but without avail. Finally we tried your Certain Check and we believe it saved our boy's life, as it cured atter everything else had failed.

Your Life of Man Bitters and Invigorating Syrup also cured me of lung trouble, I consider your medicines superior.

W. I. CURTIS, Newcastle, N. B.

Certain Check never fails and it is sold everywhere at only 25c per bottle.

plump condition preparatory to entering the breeding period and the winter. The lambs, on the other hand, are pushed rapidly, as quick maturity is a matter of considerable impotance if a good profit is to be made from them. I find that the lambs make a better growth while young at less cost a pound, and taking all things into consideration it is more desirable to get them off to market at the earliest possible moment.

I allow my ewes the run of a good mixed pasture with access to a little clover, and they do exceedingly well with this and a little grain. The flock is provided with good, pure water in plenti ul supply which is very essential, as a discouraging outcome is apt to be the result if they are allowed to drink water that is impure. I feed the lambs a small quantity of oats, mixed with some bran as an appetizer, and allow them the run of a fresh clover pasture which keeps them growing nicely.

Frequent change of pasture is a great help with sheep, particularly with lambs, which are rather particular about what they eat. If they are turned into a new pasture after a shower it will be surprising to see how thoroughly they will go over the grass again, even though it has been cropped closely before.

KEEP WATCHFUL EYES ON EWES AND LAMBS.

I watch my lambs and ewes closely for any indications of stomach worms or other insect pests. I keep the stable darkened and accessible, so they may get away from the flies in muggy weather. Flies are more annoying to sheep than many would suppose and every possible precaution should be taken to prevent the attacks of these pests,

In order to make sheep growing profitable the ever-watchful eye of the flockmaster is most necessary. There are farmers who give their sheep good pasturage during the grass season, but they overlook the importance of going among the flock two or three times a week to see that all are on foot , and doing well and have plenty of good, clean water to drink. It is just as necessary to see that the sheep have a plentiful supply of good water, especially during hot weather, as it is to supply plenty of suitable, palatable food.

The animals should also be regularly supplied with salt. A flock of sheep salted regularly do far better, remain in more thrifty condition and make a greater gain than those which are supplied with this element at irregular intervals.

Protecting the animals from the heat is an important feature. They do not suffer greatly from the heat, provided they have plenty of shade and fresh water. I am fortunate in having shade trees and running streams of good water in my pasture. The sheep bunch up in the shade during the hottest portion of the day, and graze in the late evening and early morning. If there are not trees in the pasture, a good shade can be built easily and cheaply by setting up a double row of posts four feet high and eight feet apart each way. A smooth wire is then fastened along the top of the posts and a few leafy branches placed across the wire.

A Remedy for Bloating Animals.

Last season I lost one heifer with Bloat, as she was down before I noticed her, then a calf bloated, I stuck her with a knife, made hole too small and lost her. A third one, a cow in milk bloated next, I stuck her, made a hole about one inch long with a big blade; saved her but dried her up.

Give her a chance

A Cow's daily work is to produce milk. If she rests well and breathes pure air—if you make her comfortable—she does more and better work—she gives more and better milk. We had a book printed about this very thing, "The Proper Housing of Cows."

20

Every farmer interested in the profit end of the dairy business can have a free copy of this book by writing for it.

Canadian Potato Machinery Co., Limited, Box F. GALT, ONT.

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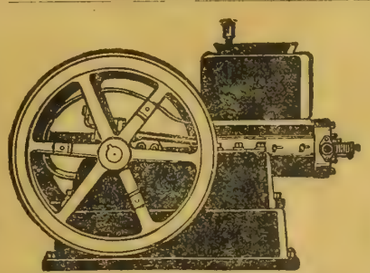
This company has been making ammunition for fifty years. We produce metallics for every standard make of arm—and every Remington-UMC cartridge is tested in the arm for which it is made.

May we send you a booklet explaining simply many of the technical points of ammunition manufacture. Your name and address on a post card will bring it by return mail.

Remington Arms-Union Metallic Cartridge Co., Windsor, Ontario 6



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and balance in easy instalments

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Gilson Mfg. Co., Ltd. 207 York Street, Guelph, Ontario, Canada

This season I have had eight bloat, but saved them all. This is my remedy now: I watch them closely, when I see signs of bloat I put cow in the stanchion, put a gag—a round stick one foor long and three inches in diameter—in her mouth and fasten it like a bit on a horse's bridle. Then take a rubber hose, one-half inch in diameter and three feet long, and slowly work it down cow's throat. The gas will come off, in five or ten minutes remove hose, leave gag in mouth ten or fifteen minutes longer, or until bloat has gone down, take off gag, turn cow out, and inside of one-half or three-quarters of an hour from time I start on cow she is out eating again. I have lost none nor dried up any with this treatment.

At first I gave turpentine and oil but have discontinued that as I find they do all right as outlined. This may not be a scientific treatment, but my experience has been that it is practical.—J. A. Harrington.

THE FARM HOME.

This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue.)

As I did not even know where Miss Betsy lived, I wrote a long letter to Peggotty, and asked her, incidentally if she remembered; pretending that I had heard of such a lady living at a certain place I named at random, and had a curiosity to know if it were the same. In the course of that letter, I told Peggotty that I had a particular occasion for half a guinea; and that if she could lend me that sum until I could repay it, I should be very much obliged to her, and would tell her afterwards what I wanted it for.

Peggotty's answer soon arrived, and was, as usual, full of affectionate devotion. She enclosed the half guinea (1 was afraid she must have had a world of trouble to get it out of Mr. Barkis's box), and told me that Miss Betsy lived near Dover, but whether at Dover itself, at Hyde, at Sandgate or Folkstone, she could not say. One of our men, however, informing me on asking him about the places, that they were all close together, I deemed this enough for my object, and resolved to set out at the end of that week.

Being a very honest little creature, and unwilling to disgrace the memory I was going to leave behind me at Murdstone and Grinby's, I considered myself bound to remain until Saturday night; and, as I had been paid a week's wages in advance when I first came there, not to present myself at the counting-house at the usual hour to receive my stipend. For this express reason, I had borrowed the half-guinea, that I might not be without a fund for my travelling expenses. Accordingly, when the Saturday night came, and we were all waiting in the warehouse to be paid, and Tipp the carman,who always took precedence, went in first to draw his money, I shook Mick Walker by the hand; asked him, when it came to his turn to be paid, to say to Mr. Quinion that I had gone to move my box to Tipp's; and, bidding a last good night to Mealy Potatoes, ran away.

My box was at my old lodgings over the water, and I had written a direction for it on the back of one of our address cards that we nailed on the casks: "Master David, to be left till called for, at the Coach House, Dover." This I had in my pocket ready to put on the box, after 1 should have got it out of the house; and as I went towards my lodgings I looked about me for some one who would help me to carry it to the booking office.

There was a long-legged young man with a very little empty donkey-cart, standing near the Obelisk, in the Blackfriars Road, whose eye I caught as I was going by, and who, addressing me as "Sixpenn'orth of bad ha'pence," hoped "I should know him again to swear to"—in allusion, I have no doubt, to my staring at him I stopped to assure him that I had not done so in bad manners, but uncertain whether he might or might not like a job.

"Wot job?" said the long-legged young man.

"To move a box," I answered.

"Wot box?" said the long-legged young man.

"I told him mine, which was down that street there, and which I wanted him to take into the Dover coach office for sixpence.

"Done with you for a tanner!" said the long-legged young man and directly got upon his cart, which was nothing but a large wooden tray on wheels, and rattled away at such a rate, that it was as much as I could do to keep pace with the donkey.

There was a defiant manner about this young man, and particularly about the way in which he chewed straw as he spoke to me, that I did not much like; as the bargain was made, however, I took him upstairs to the room I was leaving, and we brought the box down, and put it in the cart. Now, I was unwilling to put the direction card on there, lest any of my landlord's family should fathom what I was doing, and detain me; so I said to the young man that I would be glad if he would stop for a minute, when he came to the dead-wall of the King's Bench prison. The words were no sooner out of my mouth, than he rattled away as if he my box, the cart, and the donkey, were all equally mad; and I was out of breath with running and calling after him, wden I caught him at the place appointed.

Being much flushed and excited, I tumblae my half-guinea out of my pocket in pulling out the card. I put it in my mouth for safety and though my hands trembled a good deal, had just tied the card on very much to my satisfaction, when I saw my half-guinea fly out of my mouth into his hands.

"Wot!" said the young man, seizing me by my jacket collar, with a frightful grin. "This is a pollis case, is it? You're going to bolt are you? Come to the pollis, you young warmin come to the pollis!"

"You give me my money back, if you please," said I, very much frightened; "and leave me alone."

"Come to the pollis!" said the young man. "You shall prove it yourn to the pollis."

"Give me my box and money, will you?" I cried, bursting into tears.

The young man still replied: "Come to the pollis!" and was dragging me against the donkey in a violent manner, as if there were any affinity between that animal and a magistrate, when he changed his mind, jumped into the cart, sat upon my box, and, exclaiming that he would drive to the pollis straight, rattled away harder than ever.

I ran after him as fast as I could, but I had no breath to call out with, and should not have dared to call out, now, if I had. I narrowly escaped being run over, twenty times at least, in half a mile. Now I lost him, now I saw him, now I lost him, now I was cut at with a whip, now shouted at, now down in the mud, now up again, now running into somebody's arms, now running headlong at a post. At length, confused by fright and heat, and doubting whether half London might not by this time be turning out for my apprehension, I left the young man to go where he would with my box and money; and, panting and crying, but never stopping, faced about for Greenwich, which I had understood was on the Dover Road; taking very little more out of the world, towards the retreat of my aunt, Miss Betsy, than I had brought into it, on the night when my arrival gave her so much umbrage.

CHAPTER XIII.

For anything I know, I may have had some wild idea of running all the way to Dover, when I gave up the pursuit of the young man with the donkey-cart, and started for Greenwich. My scattered senses were soon collected as to that point, if I had; for I came to a stop in the Kent Road, at a terrace with a piece of water before it, and a great foolish image in the middle, blowing a dry shell. Here I sat down on a door-step, quite spent and exhausted with the efforts I had already made, and with hardly breath enough to cry for the loss of my box and half-guinea.

It was by this time dark; I heard the clocks strike ten, as I sat resting. But it was a summer night, fortunately, and fine weather. When I had recovered my breath, and had got rid of a stifling sensation in my throat, I rose up and went on. In the midst of my distress, I had no notion of going back. I doubt if I should have had any, though there had been a Swiss snow-drift in the Kent Road.

But my standing possessed of only three-halfpence in the world (and I am sure I wonder how they came to be left in my pocket on a Saturday night!) troubled me none the less because 1 went on. I began a picture to myself, as a scrap of newspaper intelligence, my being found dead in a day or two, under some hedge; and I trudged on miserably, though as fast as I could, until I happened to pass a little shop, where it was written up that ladies' and gentlemen's wardrobes were bought, and that the best price was given for rags, bones and kitchen stuff. The master of this shop was sitting at the door in his shirt sleeves, smoking; and as there were a great many coats and pairs of trousers dangling from the low ceiling, and only two feeble candles burning inside to show what they were, I fancied that he looked like a man of a revengeful disposition, who had hung all his enemies, and was enjoying himself.

My late experiences with Mr. and Mrs. Micawber suggested to me that here might be a means of keeping off the wolf for a little while. I went up the next bye-street, took off my waistcoat, rolled it neatly under my arm, and came back to the shop-door. "If you please, sir," I said, "I am to sell this for a fair price."

Mr. Dolloby—Dolloby was the name over the shop-door, at least—took the waistcoat, stood his pipe on its head against the door post, went into the shop, followed by me, snuffed the two candles with his fingers, and spread the waistcoat on the counter, and looked at it there, held it up against the light, and looked at it there, and ultimately said:

"What do you call a prcie, now for this here little weskit?"

"Oh! you know best, sir!" I returned modestly.

"I can't be buyer and seller, too," said Mr. Dolloby. "Put a price on this here little weskit."

"Would eighteenpence be?" — I hinted after some hestitation.

Mr. Dolloby rolled it up again, and gave it back to me. "I should rob my family," he said, "if I was to offer ninepence for it."

This was a disagreeable way of putting the business; because it imposed upon me, a perfect stranger, the unpleasantness of asking Mr. Dolloby to rob his family on my account. My circumstances being so very pressing, however, I said I would take ninepence for it, if he pleased. Mr. Dolloby, not without some grumbling gave ninepence. I wished him good night, and walked out of the shop, the richer by that sum, and poorer by a waistcoat. But when I buttoned my jacket, that was not much.

Indeed, I foresaw pretty clearly that my jacket would go next, and that I should have to make the best of my way to Dover in a shirt and a pair of trousers, and might deem myself lucky if I got there even in that trim. But my mind did not run so much on this as might be supposed. Beyond a general impression of the distance before me, and of the young man with the donkey cart having used me cruelly,I think I had no very urgent sense of my difficulties when I once again set off with ninepence in my pocket.

A plan had occurred to me for passing the night, which I was going to carry into execution. This was, to lie behind the wall at the back of my old school, in a corner where there used to be a haystack. I imagined it would be kind of company to have

Better Than Spanking.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box W. 309, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money but write her today if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

SUFFERED EVERYTHING

For Years, Restored To Health by Lydia E. Pinkham's Vegetable Compound.

Canadian women are continually writing us such letters as the two following, which are heartfelt expressions of gratitude for restored health:

Glanford Station, Ont.—"I have taken Lydia E. Pinkham's Vegetable Compound and never found any medicine to compare with it. I had ulcers and falling of womb and doctors did me no good. I suffered dreadfully for years until I began taking your medicine. I also recommend it for nervousness and indigestion." — Mrs. HENRY CLARK, Glanford Station. Ont.

Chesterville, Ont. — "I heard your medicines highly praised, and a year ago I began taking them for falling of womb and ovarian trouble.

"My left side pained me all the time and just before my periods which were irregular and painful it would be worse. To sit down caused me pain and suffering and I would be so nervous sometimes that I could not bear to see any one or hear any one speak. Little specks would float before my eyes and I was always constipated.

"I cannot say too much for Lydia E. Pinkham's Vegetable Compound and Liver Pills, for there are no medicines like them. I have taken them and I recommend them to all women. You may publish this testimonial." — Mrs. STEPHEN J. MARTIN, Chesterville, Ontario, Canada.

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OF
DOAN'S KIDNEY PILLS
PUT HER ON HER FEET.

MRS. ED. BOYER, Nokomis, Sask., writes:—"I had been troubled with weak back and kidneys. I had terrible dizzy headaches, and could not sleep at night. In this I way suffered for ten years, until I read about DOAN'S KIDNEY PILLS. I purchased two boxes, and as they helped me, I sent for two more, and they put me on my feet, and I have been able to work ever since."

For Backache, Lame Back, Weak Back, or any other Kidney Trouble, there is no remedy to equal DOAN'S KIDNEY PILLS.

They have been on the market for 20 years and therefore must be a staple article.

Price 50 cents per box, 3 boxes for $1.25. May be obtained at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

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W. L. ARCHIBALD, Ph.D.,
WOLFVILLE, - - NOVA SCOTIA.

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We would greatly enjoy one, but as many of our students come from long distances and are anxious to be ready for situations as soon as possible, our classes will continue without interruption.

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Students can enter at any time.

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the boys, and the bedroom where I used to tell the stories, so near me; although the boys would know nothing of my being there, and the bedroom would yield me no shelter.

I had had a hard day's work, and was pretty well jaded when I came climbing out, at last, upon the level of Blackheath. It cost me some trouble to find out Salem House; but I found it, and I found the haystack in the corner, and I lay down by it; having first walked round the wall, and looked up at the windows, and seen that all was dark and silent within. Never shall I forget the lonely sensation of first lying down without a roof above my head!

Sleep came upon me as it came on many other outcasts, against whom housedoors were locked, and housedogs barked that night— and I dreamed of lying on my old schoolbed, talking to the boys in my room; and I found myself sitting upright with Steerforth's name upon my lips, looking wildly at the stars that were glistening and glimmering above me. When I remembered where I was at that untimely hour, a feeling stole upon me that made me get up, afraid of I don't know what, and walk about. But the fainter glimmering of the stars and the pale light in the sky where the day was coming, reassurred me; and my eyes being very heavy, I lay down again and slept—though with a knowledge in my sleep that it was cold—until the warm beams of the sun, and the ringing of the getting-up bell at Salem House, awoke me. If I could have hoped that Steerforth was there, I would have lurked about until he came out alone; but I knew he must have left long since. Traddles still remained, perhaps, but it was very doubtful; and I had not sufficient confidence in his discretion or good luck, however strong my reliance was on his good nature, to wish to trust him with my situation. So I crept away from the wass as Mr. Creakle's boys were getting up, and struck into the long, dusty track which I had first known to be the Dover Road, when I was one of them, and when I little expected that any eyes would ever see me the wayfarer I was now, upon it.

What a different Sunday morning from the old Sunday morning at Yarmouth. In due time I heard the church-bells ringing as I plodded on; and I met people who were going to church; and I passed a church or two where the congregation were inside; and the sound of singing came out into the sunshine, while the beadle sat and cooled himself in the shade of the porch, or stood beneath the yew-tree, with his hand to his forehead, glowering at me going by. But the peace and rest of the old Sunday morning were on everything, except me. That was the difference. I felt quite wicked in my dirt and dust, with my tangled hair. But for the quiet picture I had conjured up, of my mother in her youth and beauty, weeping by the fire, and my aunt relenting to her, I hahdly think I should have had courage to go on until next day. But it always went before me, and I followed.

(Continued next issue.)

The implicit confidence that many people have in Chamberlain's Colic, Cholera and Diarrhoea Remedy is founded on their experience in the use of that remedy and their knowledge of the many remarkable cures of colic, diarrhoea and dysentery that it has effected. For sale by all dealers.

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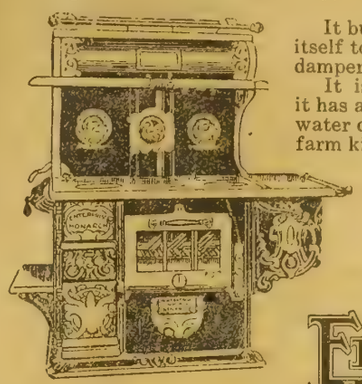
With its recent improvements, it is for perfection of equipment, beauty of design, economy and durability, second to no steel range MADE IN CANADA.



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We could tell you more about it if space permitted but add just this—

We Guarantee every Monarch sold.

It will therefore pay you to write us for circular and particulars before purchasing any other range.

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JESSE A. CASE, Dept. 461, Brockton, Mass. U. S. A

Running up and down stairs, sweeping and bending over making beds will not make a woman healthy or beautiful. She must get out of doors walk a mile or two every day, and take Chamberlain's Tablets to improve her digestion and regulate her bowels. For sale by all dealers.

Bright's Disease.

is a term applied to a class of diseases of the kidneys. There are two varieties—acute and chronic, the former representing the inflammatory and the latter the degenerative forms of kidney disease. Causes: An acute attack commonly arises from exposure to cold, from alcoholic intemperance, or as a complication of certain acute diseases such as erysipelas, diptheria, and especially scarlet fever, of which it is one of the most frequent and serious consequences. Symptoms: These are of a severe character. Pain in the back, vomiting, and slight fever generally usher in the attack. Dropsy, varying in degree from slight puffiness of the face to general swelling all over the body. The urine is reduced in quantity, is of a dark smoky colour and full of albumen. The complexion is pale and pasty. Treatment: The greatest care must be taken of a person showing for the first time the symptoms of acute Bright's disease, because, although the condition is seldom fatal in a first attack, if it be allowed to pass on to the chronic form the person must in future live the life of a semi-invalid. The patient must be kept in bed, carefully protected from chills, and sleep in blankets or woollen sheets. The diet must be chiefly confined to milk or thin gruel, with large quantities of water, which assist in washing out the impurities from the kidneys. Various alkaline drinks such as lemonade, citrate of potassium in water are given for the same reason. Local means of relieving congestion of the kidneys such as warm fomentations are sometimes adopted. Free action of the skin is essential. Free movement of the bowels is also important. During the period of convalescence from this disease all animal food should be strictly avoided, also stimulants. A change to a dry, warm climate is often beneficial.

Precaution.

What I have been preaching to you all these last score of years is timely home treatment of ailments that unless promptly checked, rapidly lead on to death through the long list of what physicians call "preventable diseases."

You should clean out the well and the cistern, and if you did not build a sanitary privy last year, as I told you to do, see to it that one is built right away, and that a generous lot of quick lime is constantly thrown into the old one until the new one is ready. Also in cleaning out the barns and dairy and poultry houses, see that all of the various corners are cleaned and that the walls are thoroughly whitewashed with the government formula of whitewash in which is the proper amount of cresolin.

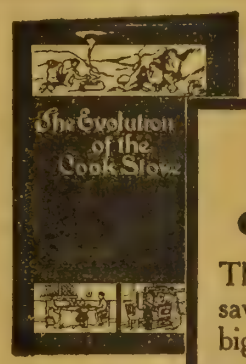
Don't you know that with an ordinary spray pump (such as you must use in your orchard if you expect a crop of fruit instead of a crop of worms) you can spray a large barn with a fine coat of whitewash in a few hours, thus rendering it clean, light and sanitary? Then clean the cellar and whitewash it also, and fill up that dirty hole in the back yard where the water stands in a filthy pool.

Don't neglect the sore throat, or the inflamed eyes, the falling hair, the itching scalp or the persistent constipation. That yellow tinge in your skin may mean something more than a simple attack of biliousness, while neglected constipation may force you to go to the hospital and be operated upon for appendicitis. Don't be afraid to ask questions about the little annoying symptoms. This department of the paper is maintained for the purpose of rendering

Rich AND Mellow

You'll Like the Flavor

35¢-40¢-50¢ Per Pound



Let us send you our book "The evolution of the Cookstove"—an interesting history of cooking. It also gives a clear, simple description of the Dominion Pride Range—complete in every detail. Reading this book is like examining the range itself.

Send for a copy.

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Canada Malleable & Steel Range Manufacturing Co., LIMITED
OSHAWA.

Send a free copy of your book "The Evolution of the Cookstove."

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Save 30% on your New Range

That's about $20.00 isn't it? And you can save it by ordering direct from the factory (the biggest malleable range plant in Canada.)

Dominion Pride Range is the range you would choose at any price—a beautiful steel range with unbreakable doors, castings and lids of malleable iron—a range that saves coal—a range so solidly built that with care it will last a lifetime.

And you can secure a Dominion Pride Range by making a small payment with your order—the balance on terms to suit your convenience.

Dominion Pride Range

Thousands upon thousands of Canadians have sent to us direct for their ranges, and we have yet to hear a complaint. Our unconditional guarantee goes with every range.

We pay Freight

A SURE CURE FOR WOMEN'S DISORDERS

Ten Days' Treatment Free

ORANGE LILY is a certain cure for all disorders of women. It is applied locally and is absorbed into the suffering tissue. The dead waste matter in the congested region is expelled, giving immediate mental and physical relief; the blood vessels and nerves are toned and strengthened, and the circulation is rendered normal, as this treatment is based on strictly scientific principles, and acts on the actual location of the disease it cannot help but effect a cure of all forms of female troubles, including delayed and painful menstruation, leucorrhoea, falling of the womb, etc. Price, $1.00 per box, which is sufficient for one month's treatment. A Free Trial Treatment, enough for 10 days, worth 35c. will be sent Free to any suffering woman who will send me her address. Enclose 3 stamps and address, MRS. FRANCES E. CURRAH, Windsor, Ont.

For Sale By Leading Druggists Everywhere

The butter makers who win the first prizes use Windsor Dairy Salt

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service to its readers, and the more that avail themselves of the service, the better for them and the more surely will we know that the work is of value to you and appreciated accordingly. Dr. David H. Reeder, Chicago.

Household Uses for Sour Milk.

The acid in sour milk is very helpful in removing certain stains from white clothes; it will remove ink if the stained part, before it is dry, is dipped in the milk, and rubbed to wash out as much of the ink as possible; if there is still a discolouration, leave it to soak until the ink is quite absorbed by the milk.

Any article scorched in ironing should be immediately covered with sour milk and left overnight.

A white undershirt muddied or much soiled at the back will wash more easily if soaked overnight in diluted buttermilk.

Fruit stains yield readily to this simple solvent, and sometimes newly contracted ironrust spots can be removed by soaking in the same way. The advantage of buttermilk over chemicals is that, in a farmhouse, it is always available, and that there is no danger in its use.

White goods that have become yellow through age, or from having lain unused for some time, or through bad washing, should be first wrung out of warm water, then covered with buttermilk, and left to soak in it for some days, then washed in the usual way.

Wash linoleum with clean warm water—no soap—and then go over it with a clean cloth dipped occasionally in good thick buttermilk. ...

The Nova Scotia Provincial Exhibition

(Continued from page 819)

sian lamb fur. They also had several little pelts on exhibition.

SWINE.

It is many years ago since there was such a good showing of swine as was made at Halifax this year.

Berkshires were very few in numbers. Yorkshires, White Chester, Tamworth, Duroe Jersey and Pollard Chinas were out in strong numbers, and there were very few inferior pigs in the lot. W. T. Gibson, Dunfield, Ont., and Jas. Henderson, Belton, Ont., placed the awards as published elsewhere in this issue.

POULTRY.

A great many of the old poultry exhibitors were not present at Halifax this year and consequently the entries were not so well filled as we have seen them on previous occasions. The quality of the birds shown was A 1, and quite creditable to the exhibitors.

Fred Watson, Nashua, New Hampshire, placed the awards. The heaviest entries were in the Brahmas, Rock, Wyandotte, Leghorn, Minorca, Orpington and Rhode Island Red sections. There was a good showing of turkeys, geese and ducks. The list of prize winnings will be found on other pages of this issue.

THE ART GALLERY was filled with paintings and drawings of exceptional merit and many were the favorable comments of the visitors.

THE LADIES HANDWORK and DOMESTIC SCIENCE DEPARTMENT was well filled with works of skill in needlework of various kinds, that was a credit to the exhibitors.

The visitors found much to interest them on the grounds, while all those who patronized the grand stand saw some good racing and one of the best stage programmes of athletic feats and comedy ever put on in Halifax.

"Don'ts" for Motorists.

Don't think the street is solely for your convenience.

Don't imagine that every pedestrian has acquired nimbleness in getting out of the way—a few may have rheumatism or sciatica, and upset your calculations as to their speed.

Don't forget when coming to a crowded corner to "stop, look, listen."

Don't allow your reckless boys and girls to drive the car. A little restraint exercised with children prevents accidents.

Don't forget that the "young nuisance"—the child on the street—whom you take chances of running down, is "somebody's darling, so young and so fair."

Don't think that your motor car conveys to you a privilege of making people scatter out of tne way like a flock of chickens.

Don't forget that carelessness or recklessness will get you sooner or later into trouble—either a smashed machine, an action for damages, bodily injury, a police court fine, or a healthy pummeling from some pedestrian whom you have contemptuously disregarded.

Library Paste.

To make a paste equal to what one buys under various names, take a cup of water, put into a small saucepan, add a piece of alum as large as an almond, let it come to a boil; when the alum is dissolved, thicken with flour stirred into cold water; use about two teaspoonfuls of this thickening. Let boil up. Take from stove and beat until nearly cold; add about ten drops of carbolic acid and pour into jars.

Seven Solid Reasons

SEVEN solid reasons why each farm needs a manure spreader are these, in the words of a farmer who has devoted much time to correct soil feeding. 1. It saves disagreeable and hard work. 2. It pulverizes and mixes the manure mass. 3. It distributes manure evenly over the field, insuring a good even stand of grain. 4. It prevents loss of nitrogen through fermentation or leaching in the pile when manure is hauled directly from the stable. 5. With it manure can be put on plowed ground in winter to be disked as soon as the ground is fit in spring. 6. It will put manure on meadows as a moisture-preserving mulch and to furnish the grass roots with the liberated plant food. 7. Indirectly, the ease with which it can be handled encourages the owner to care for the manure and place it where it will do most good instead of dumping it anywhere for lack of time or inclination.

I H C Manure Spreaders

Deering and McCormick

will do all these things for their owners. They will do them well and satisfactorily. Choose the right machine for your work and conditions from the complete I H C line. You will find them all styles and sizes, high and low, endless apron or reverse.

I H C manure spreaders are exceedingly durable, strong, correctly built to stand all conditions and all strains they may meet. Each feature has its purpose. Uphill or down, or cutting corners, they spread all kinds of manure evenly, in a light or heavy coat at the choice of the driver. The beater drive is strong and simple, beater teeth are square and chisel pointed to pulverize the manure, and the large diameter of the beater prevents winding. The wide-rimmed rear wheels, carrying a large percentage of the load, insure ample tractive power.

But see all these things yourself at your local agent's. He will explain each one, and many more we have not space to mention here. The agent has catalogues for you, or, write the

International Harvester Company of Canada, Ltd

EASTERN BRANCH HOUSES
At Hamilton, Ont; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

$200.00 IN GOLD GIVEN AWAY FREE

LPAPE	HREOCA	UPML	ATSWRYREBR
CPAHE	RCYREH	YBRAPRSRE	ERPA

Can you arrange the above sets of jumbled letters into the names of eight well known fruits. If so, YOU CAN SHARE IN THE DISTRIBUTION OF THE ABOVE PRIZE. It is no easy task. But by patience and perseverence you can probably make out 5 or 6 of them. To the person who can make out the largest number we will give the sum of One Hundred Dollars. To the person making out the second largest number the sum of Fifty Dollars. To the person making the third largest number the sum of Thirty Dollars. To the person making the fourth largest number the sum of Twenty Dollars. Should two persons send answers equally correct, the first two prizes will be divided between them, (each receiving $75.00) Should three send in equally correct answers, the first three prizes will have to be divided, (each receiving $60.00). Should four persons send equally correct answers, the whole sum of $200.00 will be equally divided (each receiving $50.00), and so on in like proportions, provided they comply with a simple condition about which we will write as soon as answers are received. WE DO NOT WANT A CENT OF YOUR MONEY WHEN YOU ANSWER THIS ADVERTISEMENT. If you can make out anything like a complete list, write us at once enclosing 2-cent stamp for our reply, DO NOT DELAY, WRITE AT ONCE. Address, CANADIAN MEDECINE CO., Dept. 51 MONTREAL, QUE.

WHAT IS THIS PROVERB?

STY, S

cy.

$50 GOLD PRIZE

the EST

ALSO A PRIZE OF $10 for NEATEST SOLUTION. Somebody who sends for particulars of this Puzzle Contest telling us WHAT "PROVERB" IS REPRESENTED by the above Sketches, will receive a $50 GOLD WATCH or .. .. .. $50 IN GOLD MONEY! as stated in the certificate of entry, and in the event of a tie between two or more persons for the prize, a prize identical in character and value with that tied for will be given to each person tied. Try at once. It may be you. Use your Brains. Send no Money. Write your answer on a Postcard or letter, giving name and address plainly.

BRITISH WATCH CO., Dept. 9 Montreal, Canada

Prize Winners at the Nova Scotia Provincial Exhibition.

(Continued from page 828)

Boar, over 3 months and under 6 months—1, A. Servant & Son.

Sow, over 2 years—1, A. Servant & Son; 2, Chas. Symes.

Sow, over 1 year and under 2 years—1, A. Servant & Sons.

Sow, over 6 months and under 1 year—1, A. Servant & Son.

Sow, over 3 months and under 6 months—1, A. Servant & Sons, 2, Chas. Symes.

Breeding Sow, with litter—1, Chas. Symes.

Herd—A. Servant & Son.

TAMWORTHS.

Boar, over 1 year and under 2 years—1, W. J. Gibson, Marshfield, P. E. I.

Boar, over 6 months and under 1 year—1, W. J. Gibson; 2, A. McRae & Sons.

Boar, over 3 months and under 6 months—1, A. McRae & Sons; 2, W. J. Gibson.

Sow, over 2 years—1, W. J. Gibson.

Sow, over 1 year and under 2 years—1, A. McRae & Sons.

Sow, over 6 months and under 1 year—1, W. J. Gibson.

Sow, over 3 months and under 6 months—1, A. McRae & Sons; 1, W. J. Gibson.

Herd—W. J. Gibson.

DUROE JERSEYS

With the exception of second prize on yearling boar which went to E. C. Griffin all the prizes awarded in the Duroe Jersey class went to J. E. Baker & Sons.

GRADES.

Sow, over 2 years—1, C. J. Keilor; 2 and 3, McLeod Linton.

Sow, over 1 year—1 and 2, McLeod Linton; 3, C. J. Keilor.

Sow over 6 months—1 and 2, McLeod Linton; 3, C. J. Keilor.

Sow, over 3 months—1, McLeod Linton; 2 and 3, C. J. Keilor.

Breeding sow with litter—1 and 3, McLeod Linton; 2, C. J. Keilor.

FAT PIGS.

Fat hog, largest and fattest—1, E. C. Griffin; 2, McLeod Linton; 3, Jas. Nicholson.

Spring pig—1 and 2, McLeod Linton 3, J. W. Calbeck.

BACON HOGS

Best pen of 2 pure bred hogs, most suitable for export bacon—1, W. J. Gibson; 2, J. W. Calbeck.

Best pen of 2 pure bred hogs, any cross or grade most suitable for export bacon—1, C. J. Keilor; 2, McLeod Linton.

POULTRY

C. cock; h. hen; r. cockerel; p. pullet.

Brahmas, Light—E. C. Griffin, Port Williams, N. S., 1c, 2r, 1p; Herbert Fader, Halifax, 2c; Thos. C. Latham, Sylvester, N. S. 1 and 2h, 2p; Geo. Foster, Halifax, 1c; A. C. Murphy, Port Williams, 3h.

Brahmas, Dark—Thos. C. Latham, 1 and 2c, 1h, 2r, 2p.

Cochins, Buff—Thos. C. Latham, 1 and 2c, 1 and 2h, 1 and 2r, 1 and 2p.

Cochins, A. O. V.—E. J. Armstrong, Port Williams, 1c, 1h, 1r, 1p; Thos. C. Latham, 2c, 2h.

Plymouth Rocks, Barred—Thos. S. Kyle, Sussex Corner, 1c, 3 and 5h; Thos. C. Latham, 2c, 1h; Burder Goodwin, Baie Verte, N. B., 3c, 2r, 3 p; Sanborn & Griffin, Halifax, 4c, 2 and 6h, 1r, 1p; Gordon R. Carter, Halifax, 4h; W. Bevis, Halifax, 3r, 2 p.

Plymouth Rocks, Buff—Arthur Simmons, Halifax, 1c, 2h, 2r; Thos. C. Latham, 2c, 1h, 2p; Alan Simmons, Halifax, 1r, 1p.

Plymouth Rocks, White—Geo. A. Calbeck, Summerside, 1c, 2h, 1r, 1 and 2p; Albert Boswall, French Fort, P. E. I., 1h, 2r; John T. Ives, Pictou, N. S., 2c.

Langshans, Black—Wm. Mitchell, Halifax, 1c, 1 and 2h, 2r, 1p; Albert Jeans, Halifax, 1r, 2p.

Langshans, White—Thos. C. Latham, 1c, 1h, 1 and 2r, 1 and 2p.

Wyandottes, Silver—John D. Fraser Pictou, 1c, 2h, 2r, 1p; Thos. S. Kyle, 2c, 3h, 1r, 2p; Thos. C. Latham, 1h.

Wyandottes, Golden—Thos. C. Latham, 1c; Sandborn & Griffin, 1 and 2 h.

Wyandottes, White—F. W. Pickles, Hebron, N. S., 1c, 2h; R. R. Black, Amherst, N. S., 2c, 3h, 2r, 1p; Wolfville Poultry Yards, Wolfville, N. S., 3c, 1h, 1r, 2p; Miss A. Piers, Dutch Village, N. S., 3r, 3p.

Wyandottes, Buff—Wm. Beazley, Beazley, 2c, 3h, 2r, 1 and 3p; Gordon R. Carter, Halifax, 1c, 1h, 1r, 1 and 2p; J. Feetham, Halifax, 2r, 3p; L. Feetham, 3r.

Javas, Black—Thos. C. Latham, 1 and 2c, 1 and 2h.

Red Caps—Thos. C. Latham, 1c, 1 and 2h, 1r, 1p; John W. Pickering, Halifax, 2c.

Hamburgs, Spangled—Thos. C. Latham, 1 and 2c, 1 and 2h, 1r, 1p.

Dorkings, Silver Grey—R. R. Black, 1c, 1h, 1r, 1p.

Spanish, White Faced—Thos. C. Latham, 1 and 2c, 1h.

Andalusians—Chas. A. Dill, Windsor, N. S., 1c, 1h, 1r, 1p.

Leghorns, White S. C.—Maritime Poultry and Supply Co., Moncton, N. B., 1 and 3c, 2h, 1 and 3r, 2p; Wm. Leghorns, Brown S. C.—Thos. C. Latham, 1c, 2h; Gordon R. Carter, 2 r, 1p; Wolfville Poultry Yards, 1r, 1p; Burder Goodwin, 2r, 2p.

Leghorns, Buff—W. W. Osborne, New Glasgow, N. S., 1c, 3h; Thos. C. Latham, 2c, 1h; Maritime Poultry & Supply Co. 2h; Wm. Beazley, 1r, 2p; P. W. Thomas, Halifax, 2r, 1p.

Leghorns, White R. C.—Thos. C. Latham, 1c, 1 and 2h, 1 and 2r, 1 and 2p.

Anconas—Thos. C. Latham, 1c, 1h; Chas. A. Dill, 1p.

Minorcas, Black S. C.—Maritime Poultry & Supply Co., 1c, 3h; Miss A. Piers, 2c, 1h, 1r, 2p; J. Feetham, 3c;

Continued on page 842

Horsemen Attention!

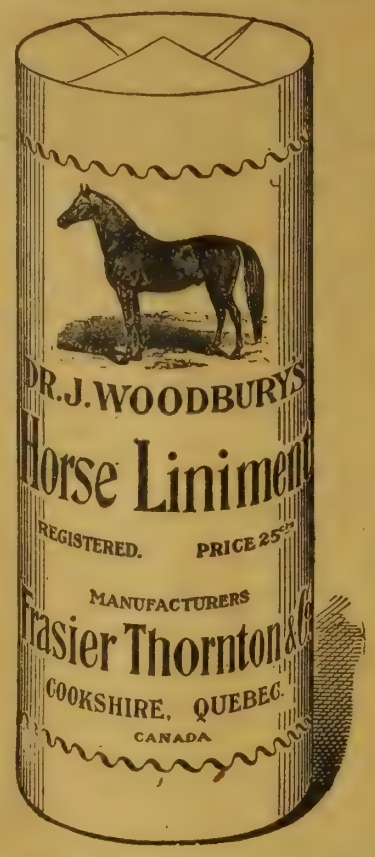
Dr. J. Woodbury's Horse Liniment and Dr. J. Woodbury's Condition Powders will save and preserve the life of your horses. Thier use will cure and prevent the disease common to horses, such as Cough, Colds, Distemper, Glanders, Spavins, Pinkeye, Splints, Curbs, Enlargements, Cracked Hoof, Kidney Troubl, Fevers, Cuts, Sores and will remove bunches of all kinds.

BEFORE USING

Why have a sick or lame horse, when you can get a reliable and warranted remedy? The leading horsemen of the Dominion endorse Dr. J. Woodbury's Horse Liniment.

For Sale all Dealers

Price 25 cents



Do you know that "Dr. J. Woodbury's Horse Liniment" is endorsed by all the leading horsemen of the Dominion. Save and preserve the life of your horses by its use. It will cure and prevent disease common among horses.

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DR. J. Woodbury's

Horse Liniment

AFTER USING

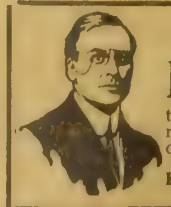
Use this preparation thoroughly for all and every disease of the horse for which it is recommended. Criticise it closely. Carefully watch, mark and notice, its effects, and, honestly judging it on its merits, you will be compelled to endorse it.

Improve Your Farm

FARMERS of Canada, whenever you find it necessary to set up new gates on your farm, investigate the "Clay" Steel Farm Gate. This Gate has features not possessed by any other gate. These features have commended "Clay" Gates to nearly all the leading stockmen of Eastern Canada and have led to their purchase by the Oniario Agricultural College, Guelph; the Government Experimental Farm at Ottawa; the Model Farm in connection with MacDonald College, Quebec.

Clay Steel Farm Gates

have been bought by some thousands of Canada's best farmers. 30,000 "Clay" Gates were sold in 1912. This extensive appreciation of "Clay" Gates is the soundest possible evidence of the immense superiority of this Gate. If it costs a little more than the ordinary Gate it is worth more—much more. Then consider this: Farmers who have had this Gate "on trial" have never given it up. Read our guarantee.



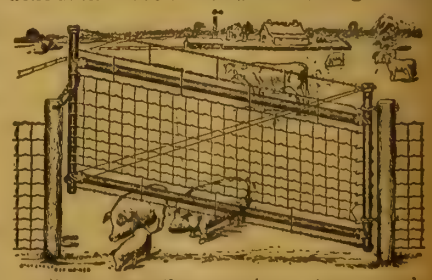
Guarantee

I guarantee every "Clay" Gate to be free from any defects whatsoever in material or workmanship. I will replace FREE any gate giving out for such reasons.

H. RALPH STEELE, Manager

THIS GATE

WON'T sag, bend, break, burn, blow down or rot. Positively keeps back breachy cattle. Can be raised as shown. Will last a life time. Made of tubular steel of large diameter (far stronger than gas pipe or tee or angle iron), and heavy wire mesh fabric. A Gate for every purpose All sizes. **60 DAYS FREE TRIAL** One or a dozen "Clay" Gates will be sent on 60 days' Free Trial. State width of opening. Try them before buying them. Send today for illustrated Price List.



The Canadian Gate Co., Ltd., 54 Morris Street **Guelph, Ont.**

Agent for Maritime Provinces—F. E. COPP, Oxford, N. S.

POULTRY.

Milk Feeding Poultry.

Poultrymen have found that milk and buttermilk are practical assets in poultry yield. Financially, they can receive great remuneration from the use of milk and buttermilk fed to chickens.

It is rather a lamentable fact that few farmers put poultry in a marketable condition before it is placed on the market. They would hardly think of placing on the market a steer right off the range, and call that steer in a prime condition; neither is a chicken when it is picked up at random and placed in a crate fit for the market. But if a little attention is paid to the poultry business there is no reason why it should not be profitable and every reason why it should make increased gains for the money invested.

It takes 14 days to put a chicken in prime condition, if placed in a fattening coop. A great many feeds are used, but among the principal ones are buckwheat, oatmeal, middlings and shorts. In general these are consumed with buttermilk. In crate fattening I think the majority prefer to use buttermilk for the wet part of the mash, probably because it has in it the lactic acid ferment. Sweet milk fed to poultry may be all right and may bring good returns for the expense.

I think we can safely say that milk can be fed to chickens profitably at a cost as high as 50 cents a 100 pounds for skim milk. That is a high enough figure I think, as buttermilk can be profitably fed at a cost of as much as 25 cents a 100 pounds. There was a time, not long ago, when we could purchase buttermilk for 20 cents a 100 pounds. A great many figures are based on that price, but in many places the price has increased to 25 cents a 100 lbs., and yet feeders find it profitable to use.

One man who manufacturers a fattening coop, advocates a mash composed of corn meal, middlings and oatmeal mixed with buttermilk. He says: "Do not try to substitute anything for the buttermilk. Nothing is so good for fattening poultry. It will cause digestion in three hours."

Here are a few figures given out at the Ontario agricultural col,ege by Prof. Graham, who has been working three year on milk compared with other feeds for the value of eggs, not only as regards production, but fertility. In feeding he found by giving the chickens buttermilk he could produce more eggs to the flock than he could with meat in the form of 10 p. c. of scrap feed in the mash. In the form of meat the chickens would eat in addition to the green cut bone always at hand. The latter and former cost $3 a 100 pounds. If we figure buttermilk at 20 cents a 100 pounds we have to use 15 pounds of buttermilk to equal one pound of meat value. In using this we found we might feed larger amounts of buttermilk and perhaps with a little more actual cost sometimes than the meat, but while the cost may be a little more on the investment there is enough added profit from the increase of the eggs to pay.

I presume most farmers never figure it costs them anything to keep chickens, because what they feed would be wasted otherwise. But I think that is not a good policy, because they might give some attention to the chickens and make more out of them. In one section of the country, not very far from here, very few produce buyers care to buy poultry of poultry producers, because the quality is not good enough. But in another sertion, not over 30 miles away, there will be three or four buyers, because it is known that the people are producing better eggs and the eggs are known to be fresh, and the chickens are in better shape.

Think of putting on the market chickens which have been fed on buttermilk and have made a good gain in weight and also much in quality, when the market price is 10 or 11 cents a pound, and in putting them on the market alomgside of scrawny looking hens at the same price.

There have been a good many experiments in various stages along these poultry lines relative to skim milk as opposed to buttermilk. Buttermilk is easily digested and the lactic acid in it makes the birds eat a little more. It is like feeding the cows all they can eat and then giving them 10 pounds of roots.

There is alittle difference in the quality of buttermilk also in the quality of skim milk. In feeding it is never safe to advocate feeding sweet milk one day and sour or buttermilk the next day. I would feed continually the buttermilk ration and if I had to change, make the change a gradual one to the other. Loppered milk is an excellent food and will give practically the same results as butter milk. If that milk is a cent a quart and if only one more egg is produced to the quart, when eggs are worth 40 cents a dozen, it will be worth some money to feed milk to the chickens. Of course, when eggs are 20 cents a dozen one cannot even make anything if it costs that much to feed the chickens.

Poultry Paragraphs.

Feeding fowls in the summer time requires careful judgment. For this reason old fowls and young chicks should not be allowed to run together, as they require widely different methods of feeding and managing. During hot weather, good comfortable shade must be provided and very little heating or fattening food should be fed; use mostly oats and wheat or other non-fattening grains. Feed little or no corn until late in the fall, but give the growing chicks all the corn they want as it is hard to fatten growing chicks at the best.

The farmer who fails to save some of his choicest second-growth clover for the hens during the winter will miss one of the best egg-producing feeds he cauld use.. Itis not a difficult task to cut with a sharp hatchet enough clover for one hundred hens; or, a regular clover and hay cutter may be purchased for $5 to $10, that will perform the work easily and well. Clover contains more lime and nitrogenous matter than almost any other feed that can be given to poultry.

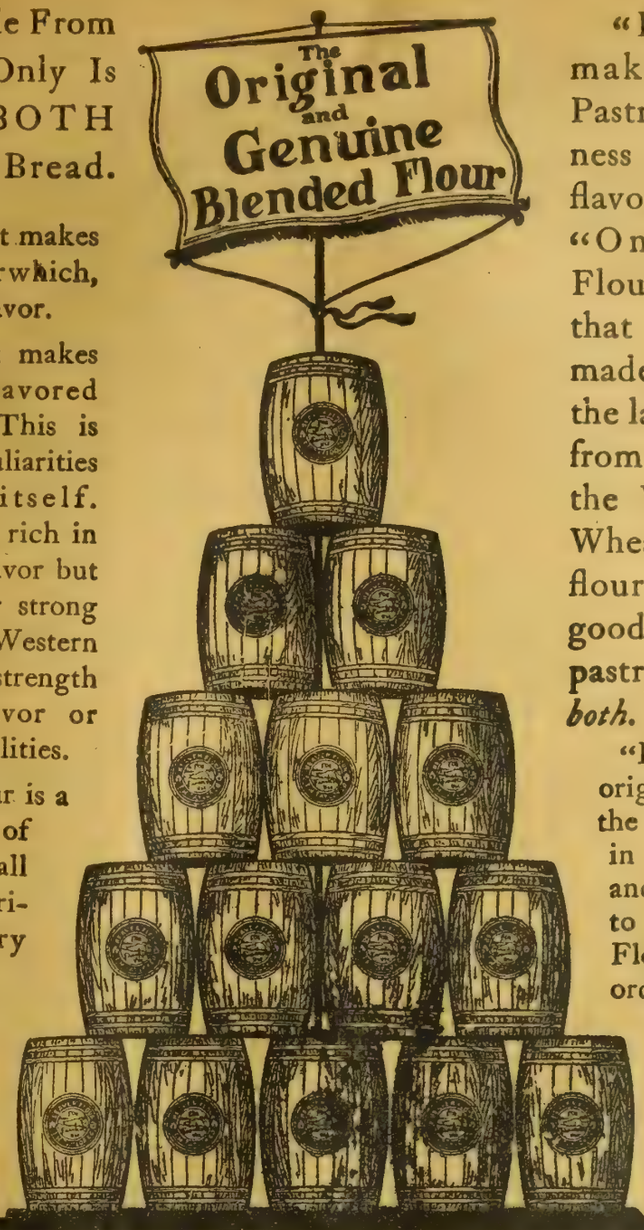
Poultry should have a dust bath the year round. Sifted coal ashes are good for this purpose, but so is anything that is fine and loose. In the summer time, nothing more is necessary than merely to spade up and make quite fine a few spots in shady corners of the yard, where the fowls may wallow and fluff themselves to their heart's content. This not only furnishes them witn exercise and keep them contented, but has a destructive effect upon the vermin, smothering them in the dust. Speaking of coal ashes, they are good for using on the droppings boards if you use this system. Do not use wood ashes however, as the alkali in them fades the shanks, injures the plumage and ruins the droppings for fertilizing purposes.

No Flour Made From One Wheat Only Is Good For BOTH Pastry And Bread.

Western Wheat makes a strong bread flour which, however, lacks flavor.

Ontario wheat makes the best full flavored pastry Flour. This is because of the peculiarities of the wheat itself. Ontario wheat is rich in nutriment and flavor but lacks strength or strong baking qualities. Western Wheat has the strength without the flavor or pastry making qualities.

"Beaver" Flour is a scientific blend of both, giving you all the flavor and nutriment and pastry making qualities of Ontario wheat with the added strength of the Western Spring Wheat.



"Beaver" Flour makes Cakes and Pastry with the lightness and delicacy of flavor of the choicest "Ontario Pastry Flour", and bread that is truly homemade in flavor with the large loaf derived from the strength of the Western Spring Wheat. It is the one flour that is equally good for bread and pastry—*and best for both.*

"Beaver" Flour is the original blended flour—the first and foremost in quality, strength and reliability. Be sure to specify "Beaver" Flour whenever you order.

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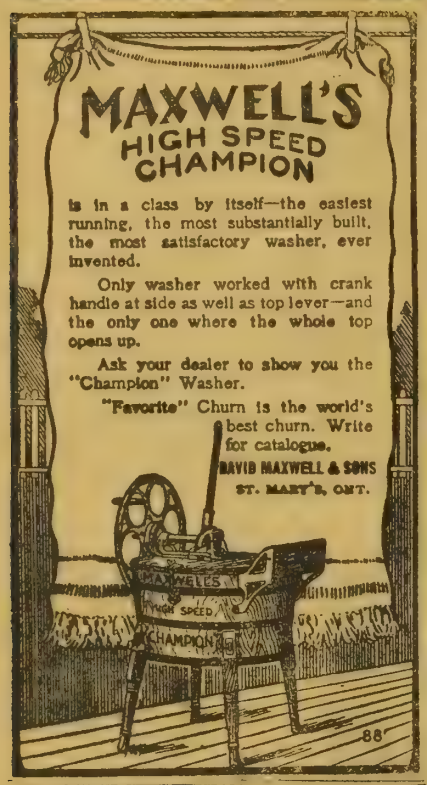
CHATHAM, Ont.

Beaver Flour 134



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Dairying Association.

The report of the fourteenth annual meeting of the Prince Edward Island Dairying Association has just been issued. It contains the usual statistical information relative to the dairy products of the province, the condition of the different factories, prices received for milk, butter, cheese, &c.

Without taking up the statistical part of the report, we may mention, for the sake of comparison, that the total value of butter, cheese and condensed milk produced in Canada in 1900 was $29,731,922 and in 1910 $39,047,840 an increasC in the decade of 31.33 per cent.

The value of butter, cheese and condensed milk made in factories on Prince Edward Island in 1900 was $567,802 and in 1910 $561,756. This, it will be observed is a considerable falling off in the midst of the general increase in Canada. The falling off is commented upon in the President's report as follows:

"There are several cases that more or less affect the situation. Among those are the desire for change and variety, also an occasional drouth that causes a check to the stream of prosperity; but nature's powers of recuperation are so prompt and vigorous in this highly favored land that this need not be considered a very disturbing factor. The greatest and probably the only reason is the scarcity of labor. We have 16,000 less of a population than we had twenty years ago. * * There were 93,795 weeks of hired labor at a value of $346.24 performed in 1900; in 1910 it was reduced to 42,668 weeks at a value of $256.00.

The report of the Secretary Treasurer of the history of an excellent review of the history of our twenty years co-operative dairying, asks the question "Has the outcome justified the claims of the promoters"? This question he answers in the affirmative, adducing as proof that the prices realized for P. E. Island butter and cheese is as good as that received at Ontario points. "These statements," says the report, "are conclusive that the best forecasts on the part of those favoring dairying twenty years ago have been fully realized. * * * Then we are met with the question if dairying is so good why is it not gaining instead of losing ground? To that we have but one main answer—the exodus."

That the exodus has hit the dairying business more heavily than any other is claimed in the report, while the fact that dairying, under such a strain, has not been a complete failure is given as proof of its inherent profitableness. "Were all the herds in this province as good as Mr. J. O'Conner's, and that would not be a very high average, our dairy sales would reach $1,000,000 annually, or more," is claimed by the report.

The cure suggested by the report for the unsatisfactory condition is this: "The loss of population can only be met by farmers employing more help and that can be made to pay by going stronger into dairying."

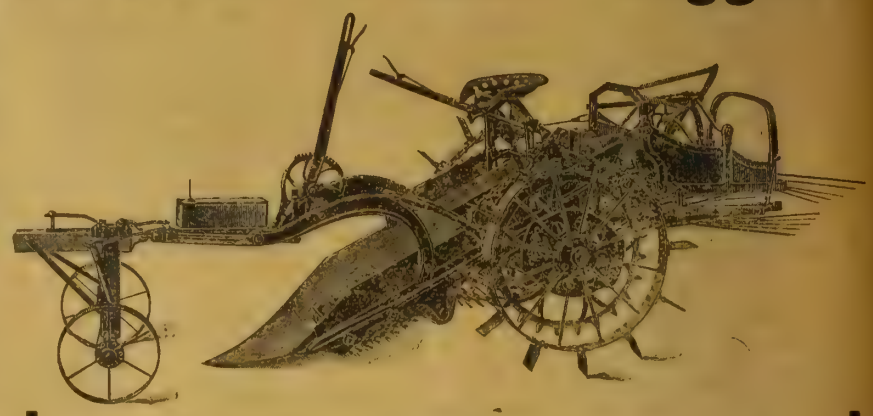
The working out of this "cure" is demonstrated as follows: "Five good cows returning the owner $90 per head annually will support a hired man and family having a free house. Ten thousand such families would mean 50,000 more people, and their wants would create employment for almost as many more, so that our population could thus be doubled in the course of time through the dairy business alone."

These reports, of which we have given but a mere hint, should be in the hands of all our farmers. That dairying, the most profitable line of farming today, should be on the decline in this province is not credit-

You will Save Time!

Save all your Crop and therefore save More Money by using the

Hoover Potato Digger



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28 degrees below zero

Will run on cheap fuels.

"I have run my Fairbanks-Morse Engine when it was 28 degrees below zero. It has given the best of satisfaction and is in as good repair as when I bought it." —E. C. Bissell, Northloch, Sask.

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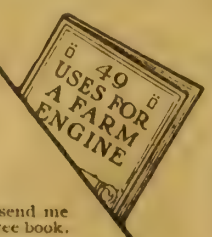
are reliable under all climatic conditions. Whatever work is required of them is *done*—done the way it is wanted, when wanted and without balking. The same thorough workmanship, carefully tested materials and *exact* construction that have made Fairbanks Scales the standard for so many years, are used in the building of Fairbanks-Morse Farm Engines, "the most dependable engine ever designed for farm use."

Every Fairbanks-Morse Farm Engine is guaranteed, and the responsibility of the largest organization of its kind in Canada or the United States stands back of every engine sold. Equipped with Bosch magnetos. Any size from 1 to 200 h.p. Will run on kerosene, gasolene or low grade distillate, the cost of the last being less than one-fourth that of gasoline.



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able. In an editorial reference to the subject a few days ago we mentioned the fact that whereas Canada, twenty years ago, was a large exporter of dairy products she has now become an importer, not being able to supply even her own market. This insures an almost limitless market for many years to come.

What is needed, as the reports above referred to state, in the employment of more labor. Laborers must be brought here; to bring them one inducement is necessary, namely, higher wages. That the payment of higher wages will profit the employer as well as the employe is abundantly proved by the report of the Secretary Treasurer above referred to.—C. G., P. E. I.

Alfalfa Growing Encouraged in New Brunswick.

As the result of the encouraging success achieved by Mr. C. W. McDougall, Dairy Superintendent for New Brunswick and others who co-operated with him in conducting experimental plots of alfalfa the Provincial Department of Agriculture has decided to apportion a money grant to extend over a period of years for the carrying on of an alfalfa growing campaign. We had the pleasure of meeting in conference with Secretary J. B. Daggett and others interested in alfalfa growing in St. John on the 26th ult., at which conference Mr. Daggett announced the decision of his department.

Mr. McDougall who has been taking such an active interest in the matter and who is conversant with alfalfa growing from personal experience will conduct the campaign.

A plot of alfalfa has been secured which will be allowed to ripen and produce seed.

The Maritime Farmer will keep its readess in touch with the movement which under the careful direction of Mr. McDougall is bound to succeed.

Soil Bacteria

Agrirultural scientists all over Europe continue to devote increased attention to the influence of bacteria in the soil, with the object of discovering the causes of greater or less artivity, and the most effective way of encouraging the little creatures to work for the benefit of crops.

Well cultivated soil with a fine tilth possesses greater bacterial activity than a soil full of clods.

A well-aerated soil containing organic substances encourages the development of beneficial bacterial activity.

The application of sulphate of ammonia, sulphate of magnesia, and superphosphate appear to be helpful to bacteria, especially is this the case with ammonia salts.

A fair amount of moisture in the soil, combined with aeration and organic substances, are the most favorable conditions.

Frost depresses bacterial life, although activity is rapidly regained with milder weather.

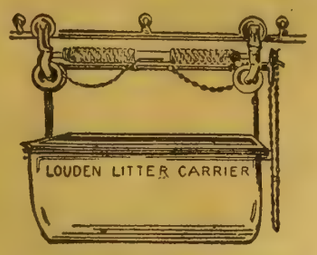
The lower layer of the soil does not favour the existence of bacteria; in this respect deep cdltivation admitting air to penetrate far down is most advantageous.

The presence of lime, rendering the soil alkaline, is beneficial, indeed essential.

From these remarks, it appears that the most favourable conditions for bacteria are those which all intelligent farmers try to obtain—viz, good tilth, deep cultivation admitting air, organic matter, sufficient lime—these conditions constitute a fruitful soil, assuming that it contains or is supplied with the requisite amount of plant foods.

You need these "LOUDEN" Stable Equipments

They have been specially invented to make farming easier and more profitable. They take half the bachache and drudgery out of farm work and show more of the labor-saving money-making side of it. Here are three stable equipments we want you to know about. They will solve some of those labour problems you have been worrying over lately



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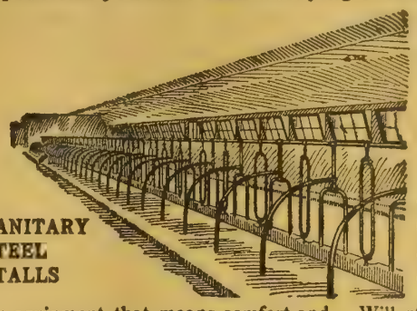
Simply eats up the drudgery! One pound pull on a chain lifts 40 lbs. in the box—a boy can hoist half a ton and run it with ease and speed from the barn to the yard or manure shed. Sanitary, too—all galvanized steel—no wood—and quite water tight. Saves time and labour and makes a clean, tidy barn.



SANITARY STEEL STALLS

An equipment that means comfort and cleanliness for your cows and profit to you. Made entirely of strong light tubular steel, easily and quickly installed and lasting. Allows freedom of movement and plenty of light and ventilation, thus ensuring contented cows—more and better milk—bigger profits.

COW-COMFORT STEEL STANCHIONS

Will make your cows happy—and profitable. These stanchions are strong and light in construction—simple to fasten and unfasten—giving perfect freedom and comfort, but perfectly secure. No crevices to harbor dirt or germs. Used by the most successful dairies in the country.

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Our Architectural Department will supply you with free barn plans if you are about to build or rebuild. No charge for this service.

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illustrates and describes ever so many devices for money-making and labour-saving on farms. It will interest you—and it's yours for the asking. 1

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(Colored RU-BER-OID, Canadian Patents Nos. 93,027 and 93,160)

KA-LOR-OID, in its beautiful, soft shades of Red and Green, is the **only** prepared roofing made in permanent colors. In KA-LOR-OID Roofing the colors are not painted on, but by our patented process are made an integral part of the exposed surface. They last as long as the roofing itself—and that means longer than any other prepared roofing has lasted, for KA-LOR-OID is made of the same materials, and has the same wonderful durability as RU-BER-OID Roofing in the regular Slate color.

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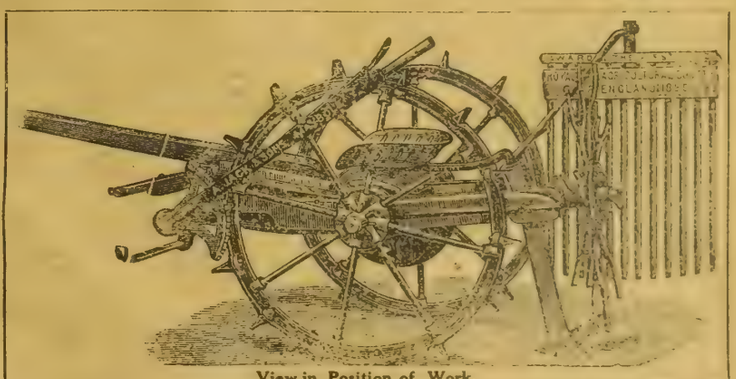
Jack's Royal First Prize New Patent

Caledonian Potato Digger

Fitted with Ball and Roller Bearings



View in Position of Work.

THE NEW PATENT CALEDONIAN POTATO RAISER holds the record as the Most Perfect Potato Raiser in the World. Awarded the First Prize of £20 at the latest great field trials of THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, at Leicester, EXCELLING IN ALL POINTS in competition with all the leading manufacturers, and AGAIN AWARDED THE FIRST PRIZE at the NORWEGIAN GOVERNMENT FIELD TRIALS, near Christiana, (leading Foreign and English Machines competing.) WRITE FOR CATALOG and PRICE.

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Cleaned in a minute with soap and water—outwear a dozen linen collars.

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Homeseekers Excursion to Western Canada.

Every Wednesday until the 9th of October the Intercolonial Railway will sell second class, round trip tickets to Winnipeg, Brandon, Regina, Edmonton,, Saskatoon, and Calgary. These are good to return two months from date of issue and are a special inducement to those wishing a cheap trip to the West. The nearest I. C. R. ticket agent will furnish all particulars. In that ticket read via Intercolonial Railway, the only all Canadian route from the Maritime Provinces.

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

Agricultural Developments in P. E. I.

(Continued from page 821.)

of this fruit under cultivation at the Station. The Moyer, and Delaware, and Golden Drop are the kind that on last year's experiments were found to ripen best in this climate. In fact, all the varieties of grapes being cultivated there will ripen, as they are all hardy varieties.

STRAWBERRIES, ETC.

Alter a cursory inspection of a plot of hemp, the party came to the strawberry beds, which naturally came in for close inspection. The Superintendent pointed out some rows of the fruit which had been in cultivation for three years, and as the result he said from one row they had got 60 boxes, and from another 63 boxes, which were sold at 18 cents a box. The Wharfield, Glen Mary and Beder Wood were the best of the main varieties, while the Netty and Parker Earl kinds were excellent late growers. They had also had splendid results with the Excelsior, the earliest grower. Gooseberries, then red currants, off one bush of which they took 14 boxes at the Station this year, and raspberries, of which the white, the purple, red and black varieties are all grown, were next inspected. With regard to raspberries, special mention was made of the Golden Queen variety, and the Superintendent advised in respect of the cultivation of this fruit that all the wood that had borne should be cut out, and if there were too many new limbs, they should also be cut out, as not more than five or six new ones were wanted on each tree for the spring.

PEAS.

Followed the garden peas. Any number of varieties of green peas are being grown and the cultivation is being experimented with in this fashion; half being picked to see how many green peas can be got, and the other half being allowed to ripen, to see how many ripe peas can be obtained. A lot of trouble is being experienced with the pea weevil in green peas; it is a pest which is common all through the Atlantic Provinces, and what is regrettable is that there is no known protection against it. The weevil is responsible for a certain amount of loss at the Station every year.

FLOWER BEDS.

From the green peas plots, the party turned to one of the most attractive spots in the Station, the flower beds. Sweet peas are grown in great and handsome varieties. Geraniums also flourish, as well as various kinds roses, tulips, peonies and Perennial phlox, the Superintendent told the party, was among some of the easier grown flowers which he would like to see them grow; there were the dark red, the pure white, and the white with red centre varieties. There was an interesting and important fact which he brought out, and that was to produce such a splendid garden as they had at the Station they had had no necessity to keep it watered beyond what moisture it got when the rain fell.

IMPLEMENT SHED AND BARN.

Mr. Clark concluded his itinerary by taking the visitors to the implement shed and barn. At the former building by an ingenious arrangement that he has contrived the large doors hang on a long rod, on which they run on wheel pulleys, so that it may be possible for three or more carts to be taken into the building at the same time. Here a rapid survey of the agricultural machines showed that in this respect the same up-to-date methods as were in evidence in the other parts of the farm were observed. The machines were

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Vitality Restored by New Method

The attached coupon entitles you to one illustrated copy of my pocket compendium and guide for the self-restoration of lost strength. (See description below) Upon hearing from you, this valuable little book of private information for men will be sent by return mail in plain sealed envelope. Please call or write today.

There is a new and marvelous method for restoring lost manly strength, for renewing the vigor of youth, which every man should know of, a self-restorer which operates without the use of drugs or medicines, a new way to treat yourself and by which it is my firm belief any man anywhere who is content to lead a decent life, free from excesses and dissipations may be almost certain to restore his full manly vigor snd strength, if he but makes the little effort that is called for in connection with the use of a little vitalizing appliance which I have patented and am now distributing all over the world.

Please remember that a man is not one day older than he actually feels, and therefore no matter what your age, if you are young or elderly, married or single, large or small, if I can show you reader, how you can yourself actually add to your system, nerves and blood the very nerve force or vital vigor which may have been drained away, and which is necessary to make you strong, vigorous, and capable again, then I have shown you the real secret of perpetual youth, and how you can again be filled with vitality and again be just as powerful in your influence and just as thoroughly manly in your capacity as the biggest, fullest blooded, most successul fellow of your acquaintance.

HEALTH IS HAPPINESS

I call my vitalizer a HEALTH BELT because it is worn around your body in the position of an ordinary belt. It sends a great, soft, strength-giving supply of a force I call vitality into your body nights while you sleep. I would like you to call or to write and get my free book, that you may know the whole wonderful account of what my HEALTH BELT is doing for others who were looking for a safe and sure means to restore vigorous health and to rid the body of pains, aches and weaknesses.

Note—My HEALTH BELT, with special attachment, is used by women as well as men for rheumatism, kidney, liver, stomach, bladder disorders, etc.

86-PAGE BOOK SENT FREE

My 86-page illustrated booklet (pocket size) was compiled by me to answer fully and correctly those questions which are asked privately by any man needing new strength and who seeks personal advice pertaining to the ailments and weaknesses he wishes to overcome. The book, fully illustrated, with photo reproductions contains much that a single or married man should know. It also fully describes my HEALTH BELT and tells how you may secure one to use in your own case, should you decide you want to use one. Remember the book is sent absolutely free, in plain, sealed envelope. Why not write for a copy today?

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exactly meet the need which so often arises in every family for a medicine to open up and regulate the bowels. Not only are they effective in all cases of Constipation, but they help greatly in breaking up a Cold or La Grippe by cleaning out the system and purifying the blood. In the same way they relieve or cure Biliousness, Indigestion, Sick Headaches, Rheumatism and other common ailments. In the fullest sense of the words Dr. Morse's Indian Root Pills are 47

A Household Remedy

Dates to be Remembered

Miramichi Exhibition, Chatham, N. B., September 23-26.

P. E. I. Provincial Exhibition, Charlottetown, P. E. I., September 23 to 26, 1913.

Canada Eastern Exhibition, Sherbrooke, Que., August 30 to September 6, 1913.

Maritime Winter Fair, Amherst, N. S., December 8 to 11, 1913.

Fredericton Poultry Show, Fredericton, N. B., February 17 to 19, 1914.

Dominion Exhibition, Brandon, Man., July 15 to 25, 1913.

Yarmouth County Exhibition, Yarmouth, N. S., October 1, 2, 3, 1913.

Cape Breton Exhibition, Sydney, N. S., September 30th to October 4th, 1913.

Westmorland Poultry and Pet Stock Exhibition at Moncton, N. B., January 13th to 16th, 1914.

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

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Will reduce **Inflamed, Strained, Swollen Tendons, Ligaments, Muscles or Bruises.** Stops the **lameness** and **pain** from a **Splint, Side Bone** or **Bone Spavin.** No blister, no hair gone. Horse can be used. $2 a bottle delivered. Describe your case for special instructions and Book 2 K Free.

ABSORBINE, JR., the antiseptic liniment for mankind. Reduces **Strained, Torn Ligaments, Enlarged Glands, Veins or Muscles, Heals Cuts, Sores, Ulcers. Allays pain.** Price $1.00 a bottle at dealers or delivered. Book "Evidence" free
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St. Isidore, P. Q., Aug, 18, 1904.
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Gentlemen.—I have frequently used MINARD'S LINIMENT and also prescribe it for my patients always with the most gratifying results, and I consider it the best all-round Liniment extant.

Yours truly,
DR. JOS. AUG. SIROIS.

An article that has real merit should in time become popular. That such is the case with Chamberlain's Cough Remedy has been attested by many dealers. Here is one of them. H. W. Hendrickson, Ohio Falls, Ind., writes, "Chamberlain's Cough Remedy is the best for coughs, colds and croup, and is my best seller. For sale by all dealers.

of the latest, and most successful type. There was a double disc harrow which the Superintendent was pleased to announce he had successfully recommended to several of the farmers who had visited him. It was explained here also that the method employed in bringing in the crops of grain from the fields to the barn for threshing was to tie them up in cotton sheets so as to prevent any loss. The loft in the implement shed is filled with many small bags of samples and seeds. The barn originally was intended as a grain barn, but it now contains both horse stables and cattle stalls. Concrete floored all over, its exceptionally clean condition is easily understood. The horse stalls are planked with wood over the concrete flooring, to save the animals' hoofs, and, by a clever arrangement, the feed troughs can be tilted so as to be filled or emptied from without, not necessitating the stableman's going inside the stall for this purpose at all. A concrete drinking trough stands conveniently at the entrance to the barn. Two large stalls are provided for the cattle, while a little beyond them is a roomy threshing room, where the concrete floor enables everything to be swept up and not much go to waste. The building is exceptionally well ventilated by means of four cleverly arranged air intakes and a similar number of outlets, by which the quantity of fresh air so necessary is always passing through the place. The fruit cellar is of concrete, and can be well secured against the effects of the weather. To conclude, the whole place is lighted with electricity.

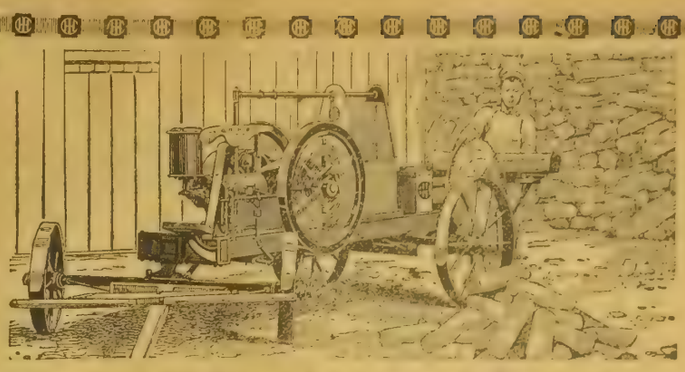
With reference to the new land which is being taken in as stated already on the other side of the railway line, just north of the Abegweits' grounds, it comprises forty acres, and, as it is required for the spring, at present the work of erecting a boundary fence on it is being pushed ahead.

Apple Famine in Ontario.

That there will be an apple famine in Ontario is predicted in the crop report issued recently by the Provincial Department of Agriculture. According to the statements of the province the apple crop will be remarkable light and under exceptional favorable conditions will not equal half the normal yield of the orchards. From the first of the season the apple trees have suffered greatly from early frosts and subsequent dry spell, while even in many of the sprayed orchards the scab ravages have been very bad. The tent caterpiller has also been bad in the eastern sections, and some orchards have been greatly defoliated. The early frosts have also injured the vineyards badly, and the grape crop will be but small. The pear yield will be good, while plums and peaches will be fully up to the yield of last year.

Steamship for Fruit Service.

An Ottawa despatch notes a contract with the United Fruit Company of Eova Scotia, for a direct steamship service between Annapolis Royal, N. S., and either London or Hull. The Company, which has its head office at Berwick, N. S., is composed of fruit growers, who wish to secure more satisfactory access to the English market. The company is to provide British steamers able to carry from 5,000 to 12,000 barrels, specially built for the fruit trade, with refrigerating apparatus. There are to be five voyages, the first to begin before October 30. The steamer are to call at Digby, N.S. The sum of $1,000 will be paid for each voyage.



Buy a Mechanical Drudge

MANY a winter day of back-breaking labor has the average farmer spent stooping over the old buck saw, zr-r-p, zr-r-ping its way through tough wood for the kitchen stove supply. But the wise ones don't do it now. They have a handy engine to run the saw, while they rest.

That engine is about the busiest and most convenient machine the wise man has on his farm. It pumps water for him, runs the separator, washing machine, feed grinder, and grindstone. Often it runs a hay press, small thresher, or a repair shop. The year round it drudges for him. And the wisest man has an

I H C Oil and Gas Engine

because it does most for him at least cost. Its simplicity renders it almost trouble-proof. Its construction makes it easy to start and to operate, and it is most economical in fuel consumption. The best material obtainable goes into its making.

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The IMPERIAL VARNISH & COLOR CO., Limited 10

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(Continued from page 836)

Gordon R. Carter, 2h; J. G. Wilson, Halifax, 2r, 1p.

Minorcas, Black R. C.—John D. Fraser, Pictou, 1 and 2c, 1 and 2h, 1 and 2r, 1 and 2p.

Minorcas, White—Gordon R. Carter, 1c, 1h.

Houdans—Thos. C. Latham, 1c, 1h, 1 and 2r, 1 and 2p; Wolfville Poultry Yards, 2c, 2h.

Polish, W. C.—Thos. C. Latham, 1c, 1h, Maritime Poultry & Supply Co., 2c, 2h.

Polish, Non Bearded—Thos. C. Latham, 1c, 1 and 2r, 1 and 2p; Maritime Poultry & Supply Co., 2c, 1 and 2h.

Game, Black and Brown Breasted Red—John A. Malloy, Halifax, 1 and 2c, 1h; Wm. Gilfoy, Halifax, 1r, 1p.

Game Pile—John A.Malloy, 1c, 1h; Stephen Hubley, Halifax, 2h.

Duckwing, G. and S.—Lewis Shortell, Halifax, 1h; Wm. Gilfoy, 1r, 1p.

Games, Indian—E. S. Tracey, Halifax, 1r, 2p; Wm. Tucker, 2r, 1p.

Game, Pet (Old English)—Lewis Shortell, 1 and 2r, 1 and 2p; Stephen Hubley, 1c, 1h; Peter Shortell, Halifax, 2c, 2h.

Bantams, B. and B. B. R.—Thos. C. Latham, 1c, 2h; Chas. Ryder, Halifax, 2c; Arthur Gilfoy, 1h.

Bantams, R. C. W.—Maritime Poultry & Supply Co., 1c, 1 and 2h.

Bantams, R. C. B.—Maritime Poultry & Supply Co., 1c, 1h.

Bantams, Cochin, Buff—Thos. C. Latham, 1c, 1r, 1p; Edward Pickram, Halifax, 2c; Gordon R. Carter; 3c, 1 h; P. W. Thomas, 2h; Chas. Ryder, 3 h.

Bantams, Black—Freeman Innis, New Glasgow, 1c, 2h; Maritime Poultry & Supply Co., 2c; E. S. Tracey, 1h.

Bantams, White—Maritime Poultry &Supply Co., 1c, 1h.

Bantams, Japanese—Cyril Kirby, Halifax, 1 and 2c, 2h; Maritime Poultry & Supply Co., 1h.

Rhode Island Reds, S. C.—Thos. S. Kyle, 1c, 3h, 1r, 1p: E. C. Griffin, 2c, 2p; F. W. Pickles, 1h; W. H. Henry, Shubenacadie, N. S., 2h; Chas. A. Dill, 2r.

Rhode Island Reds, R. C.—W. H. Henry, 1c, 1 and 2h; E. S. Tracey; Maritime Poultry & Supply Co., 3c; E. C. Griffin, 3h, 1r, 1p.

Orpingtons, Buff—W. H. Henry, 1c, 2h; Geo. Retson, Truro, N. S., 1h; C. P. Thorne, Charlottetown, P. E. I., 1r, 2p; R. R. Black, 2r, 1p.

Orpingtons, Black—Clifton Hassett, Hassett, N. S., 1c; Geo. A. Thompson, Halifax, 2c, 1h; Thos. C. Latham, 2h.

Orpingtons, White—F. W. Pickles, 1c, 1h; R. Hamm, Halifax, 2c, 2h.

Silkies—Maritime Poultry & Supply Co., 1c, 1h; Gordon R. Carter, 2c, 2h.

A. O. V.—Mrs. E. D. McAvity, Bridgetown, 1h; J. R. McConnell, Antigonish, 2h; Gordon R. Carter, 1r, 1p; Thos. C. Latham, 2r, 2p.

Heaviest and best dozen brown eggs—1, E. C. Griffin; 2, Wm. Mitchell.

Heaviest and best dozen white eggs —1 and 2, Miss A. Piers.

BREEDING PENS ADULT BIRDS.

Brahmas—1, Thos. C. Latham.

Barred Rocks—1, W. Bevis; 2, F. Thompson.

Buff Rocks—1, Alan Simmons; 2, Arthur Simmons.

White Rocks—1, Geo. A. Calbeck; 2, Albert Boswal,.

Langshans—1, Albert Jeans; 2 and 3, Wm. Mitchell.

Wyandottes, White—1, R. R. Black.

Wyandottes, Silver and Gold—1, Thos. C. Latham; 2, Sanborn & Griffin.

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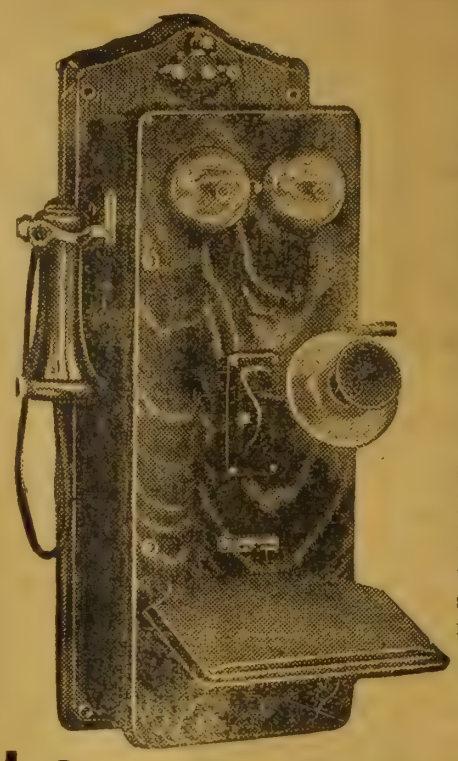

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Orpingtons, A. O. V.—1, Geo. A. Thompson.
Leghorns, White—1, Wm. Beazley; 2, Thos. C. Latham.
Leghorns, Brown—1, Wolfville Poultry Yards.
Minorcas—1, Donald Foster, Halifax, 3, Wm. Mitchell.
Polish—1, Thos. C. Latham.
Houdans—1, Thos. C. Latham.
Games—1, Wm. Tucker; 2, E. S. Tracey.
Rhode Island Red—1, W. H. Henry; 2, Thos. S. Kyle.
A. O. V.—1, T. Latham.
Bantams, A. V.—1, Thos. C. Latham.

TURKEYS, GEESE AND DUCKS.

Turkeys, Bronze—1, Albert Boswall; 2, J. McDonald & Son, Shubenacadie; 3, Thos. Aylward, Falmouth, N. S.
Geese, Toulouse—1, Thos. Aylward; 2, Almon Boswall.
Geese, Bremen and Embder—1, Albert Boswall.
Geese, A. O. V.—1, Albert Boswall; 2, E. C. Griffin.
Ducks, Rouen—1, Thos. C. Latham; 2, C. A. Dill; 3, A. S. Boswall, Pownal, P. E. I.
Ducks, Pekin—1, Clifton Hassett; 2, Maritime Poultry & Supply Co.; 3, Albert Boswall.
Ducks, A. O. V.—1, F. W. Pickles; 2, Maritime Poultry & Supply Co.
Turkeys, Bronze, of 1913—1, Thos. Aylward; 2, Victor W. Aylward, Falmouth.
Turkeys, White of 1913—1, V. W. Aylward; 2, Thos. Aylward.
Geese, Toulouse of 1913—1, Thos. Aylward; 2, V. W. Aylward.
Geese, Bremen or Embder of 1913—1 and 2, Albert Boswall.
Geese, A. O. V. of 1913—1, Thos. Aylward; 2, V. W. Aylward.
Ducks, Rouen, of 1913—C. A. Dill.
Ducks, Pekin of 1913—1 and 3, Maritime Poultry & Supply Co.; 2, Albert Boswall.
Ducks, A. O. V. of 1913—1, Maritime Poultry & Supply Co.; 2, C. A. Dill.

The Charlotte County Exhibition.

(Continued from page 827)

mental Farm, Ottawa. This calf is out of one of the highest record Canadian cows in Canada.

GRADE DAIRY CATTLE.

Cow, 4 years—1, Harry Tourtillotte 2, Edwell Emerson; 3, Archie Maxwell
Cow, 3 years—1, John Trafton; 2, Edwell Emerson.
Cow, 2 years—1, Edwell Emerson; 2, Chas. Maxwell; 3, L. B. Mitchell, St. Stephen.
Heifer Holstein—1, W. S. Poole, St. Stephen; 2, Hugh Hill; 3. A. T. Reid.
Heifer, French Canadian—1, W. S. Poole, St. Stephen; 2, Lewis Acker, St. Stephen; 3, John Trafton.
Heifer Calf, under 6 mos.—1, W. C. Arnold, Ledge; 2, Harry Tourtillotte; 3, John Logan.
J. W. Richardson's prize for the best Spring Calf—1, J. W. McBride.

GRADE BEEF CATTLE.

Cow, 3 yrs. old—1, Manzer Moffitt; 2, Albion Moffitt.
Heifer, 2 years old—1, Hugh Hill.
Heifer Calf, under 1 year—1, Manzer Moffitt; 2, Hugh Hill.
Steer—1, Hugh Hill.

SHEEP

The entry in sheep was rather limited, but in advance of the showing of previous years. No attempt had been made by the exhibitors to fit or trim the sheep but as competition will increase we may look for more care in preparing the stock for the show ring.

Mr. Andrew Elliott placed the awards. Following are the prize winners:

Oxford Downs Ram, 2 shears— 1, Jos. Trundel, Oak Bay.
Shropshire Ram, 2 shears and over —1, Edward Annis, Milltown.
South Down Ram,—1, Sir Wm. Van Horne; 2, R. W. Whitlock.
South Down Ram Lamb—1 and 2, Sir Wm. Van Horne.
South Down Ewe—1, Sir Wm. Van Horne.
South Down Ewe Lamb—1 and 2, Sir Wm. Van Horne.
South Down Ram, 3 ewes in pen—1, Sir Wm. Van Horne.
Ram, 2 shears and over—1, Seth Bartlette, Old Ridge; 2, R. W. Whitlock.
Dorset Ram—1, Freeman Lever; 2, John Logan.
Ram Lamb, Dorset pure bred—1, Martin Reid, Leverville; 2, John Logan.
Ewe, Leicester—1, John Logan; 2, Will McGibbon.
Shearling Ewe, Dorset pure breed—1, Martin Reid.
Ewe Lamb, Dorest, pure breed — 1, Martin Reid.
Pair Grade Ewes, 2 shears and over —1, R. W. Whitlock.
Pair Grade Ewe Lambs—1, R. W. Whitlock.
Pair Ewes, 2 shears—1, Freeman Lever; 2, Levi Ferson, Ledge.
Pair Ewe Shearlings—1, Freeman Lever.
Pair Lamb Ewes—1, Freeman Lever; 2, Seth Bartlette.
Pair Ewes Shearlings, ewe lambs—1, Freeman Lever; 2, Levi Ferson.

FAT SHEEP.

Ewe Lamb—1, Martin Reid; 2, R. W. Whitlock.
One Wether Lamb—1, R. W. Whitlock.
Royal Bank of Canada prize for the best Pair Lambs—1, A. T. Reid.

SWINE

The swine were judged by S. M. Fiske. There was a very good showing of sows with litter, as well as some choice individuals in Berkshires, Yorkshires, Tamworths and White Chesters and their grades.

In the Berkshire class all the prizes with the exception of second prize on sow, under one year, which went to W. C. Arnold, went to Albion Moffitt, who also captured all the monies awarded in the Yorkshire, White Chester and grade classes, with the exception of first prize on brood sow. Sir Wm. Van Horne had all the Tamworths shown at the fair. Harry Mann, St. Stephen had the fattest hog and Messrs. Tom McDonald and Albert Forbes, the fattest spring pigs Asher Getchell showed a pair of Hampshire Pigs.

POULTRY

There was a good showing in the poultry classes. The water fowl classes were particularly interesting, and Mr. Seth Jones, Provincial Poultry Superintendent, placed the awards.

Good weather, good exhibits of stock and agricultural products, a record attendance nearing the ten thousand mark on several days, good racing, a good programme before the grand stand and a busy midway, kept every visitor to the fair busy and in the best of humor.

Quality, Style Finish and Efficiency

is what you get when you buy

A RECORD PLAIN RANGE

(*Record Plain Range with Reservoir and Cast High Shelf*)

Why Plain Ranges are Kitchen Favorites

Plain Ranges are made from cast iron, the quality of which cannot be surpassed for smoothness. The large flues, the corrugated top oven and a fire bridge for clearing smoke provides a large and efficient heating surface for the oven. The oven damper is placed in the smoke box and operated direct from the top of the stove. The reservoir damper is so arranged as to send the heat direct to water tank.

A range with a large fire box is economical of fuel and requires a minimum amount of attention from the busy housewife. A collar and damper is provided on the back of the oven so that a hot air pipe can be attached to the oven; and heat conducted to bathroom or chamber above.

Dyplex or flat shifting and dumping coal grates or wood grates as desired. In appearance the "Record Plain" is not excelled by any other range on the market. Tops are polished smooth which combine with the nickle trimmings to make an ornamental as well as useful addition to every kitchen in which they are installed.

Before buying elsewhere see the RECORD PLAIN

Record Foundry & Machine Co., Moncton, N.B.

Eddy's "Safeguard" Safety Matches

—in special convertible box.
—good matches always ready at the bottom.
—burnt sticks are dropped in the top.
—noiseless; heads do not glow.
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For Safety's sake---Eddy's "Safeguard" Matches--- ONLY --- should be in every home.

EDDY'S Matches are the only NON-POISONOUS matches manufactured in Canada.

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WANTED—A pure bred Scotch Collie dog. State age, breeding and price. D. R. Nicholson, Coxheath, N. S.

FOR SALE—One pure bred Ayershire Bull 20 menths old, 5 ft. 10 in., very fine. Apply to C. R. DeLONG, New Germany, Lun. Co., N. S.

FOR SALE—Shropshire lambs, 1 ram 5 ewes, choice stock, sired by a Dryden ram. CHAS. WALKER & SON, Lower Millstream, N. B.

FOR SALE—Pure bred Holstein Bull Calf, 8 mos. old. One imp. Registered Clyde Mare 6 years old. Apply J. D. FRIER, Sussex, N. B.

FOR SALE—Pure Bred Holstein Bull Calf, 8 months old. One imported registered clyde mare 6 years old. J. D. FRIER, Sussex, N.B.

FOR SALE—Pure bred, registered Holstein bull, 4 years, of good milking strain. Fifty dollars if sold at once. KENNETH HYATT, River Philip, N. S.

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

GIRL WANTED for General Housework. Wages $15 per month. Apply to MRS. D. B. PIGEON, 153 Douglas Ave., St. John, N. B.

FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R. J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

WANTED — Permanent local representatives, either sex, salary or commission ; can make five to ten dollars day; spare time accepted. NICHOLS CO., LIMITED, Publishers, Toronto, Canada.

WANTED—The name and addrees of the party who mailed Postal Note No. H. 998512 at Moncton, N. B., on March 15th, so we may give proper credit for same.—THE MARITIME FARMER, Sussex, N. B.

MAPLE GROVE FARM—We are offering for sale 1 pure bred Hereford Bull 13 months old and of Rupert Ingleside 4th strain. For futher particulars write L. A. WHITMAN, Maple Grove Farm, New Albany Annapolis Co., N. S.

BROOKLAND'S FARM SHROPSHIRES FOR Sale, 6 head, all reg. or eligible in the A. S. R. Asso., 4 were sired by a Dryden ram, they are dandy ones. $75 takes the lot. Address the Manager, H. McDONALD, French River, N. S.

GUERNSEYS FOR SALE.—One bull 2 years 9 months old, very fine animal from high testing stock. suitable for society. Also one 16 months. For further particulars apply to WM. COX & SON, Canard, Kings Co., Nova Scotia.

LADIES WANTED—To do plain and light sewing at home; whole or spare time; good pay; work sent any distaace; charges paid. Send stamp for full particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

WE WILL PAY YOU $120.00 to distribute religious literature in your community. Sixty days' work. Experience not required. Man or woman. Opportunity for promotion. Spare time may be used. INTERNATIONAL BIBLE PRESS. 182 Spadina Ave., Toronto.

MEADOW BROOK FARM offers for sale at reasonable prices Ayrshires of all ages including young cows, heifers in calf, yearling heifers, bulls fit for service, bull and heifer calves. Also the best lot of Shropshire lambs ever offered for sale and one 3 year old ram that has been used in the flock for two years with good success. Correspondence cordially invited. ANDREW MacPHERSON, Ricklin, Pictou Co. N. S.

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I have a bunch of nice yearling Single Comb Rhode Island hens I am selling now for $1.00 each, will make splendid stock to start a flock, nice turkeys and some exceptionally fine grey African Geese for fall delivery.

Sarah E. Moses Smith,
Woodward's Cove, N. B.

Seven Guernsey Bulls For Sale

I have seven Guernsey bulls from cows of exceptional milking qualities. Parties wishing high class stock for dairy purposes, should write for description and prices.

John N. Ohute, Berwick, N. S.

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All included with 150-acre lake farm; fine fishing; just out of select village; good schools, cream sold at door; for quick settlement of aged owner's estate, horse, two cows, heifer' poultry, complete line farm tools, machinery, wagons and crops included; pasture for 10 head, cuts hay for same; black loam machine-worked fields; estimated to be 800 cds. Wood, 75,000 ft. timber; 100 apple trees, variety small fruits' good house; 40 x 40 ft. barn, horse fork; poultry, pig and wood houses; price only $1600, easy terms; for all details and traveling instructions for this and a good crop and timber farm of 85 acres for only $700, see page 13, our "Mammoth 75-Page Farm Catalogue No. 36"; beautifully illustrated and filled with a wonderful assortment of money-making farms throughout N. S. and N. E. States; send today for your free copy, it will save you lots of time and money. Box No. 373, Sussex, N. B.

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for feeding purposes. Price 60 cents per barrel, F. O. B. Cash.

Maritime Seed Potato Co., St. Stephen N. B.

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

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Just what you are looking for to dig that field of potatoes with this fall. Write for booklet giving full information.

C. FRED FAWCETT,
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Stock, Tools and Crops

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We have very little to sell, but what we have got is the best, it is a bull calf six weeks old, out "Beauty Sue of Willow" (a cow purchased from Roper Bros.) and sired by the famous "Golden Opinion," Write for price.

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NOTICE

We have in stock at present to dispose of several purebred Guernsey and Ayrshire Cows and Heifers—fresh milkers and to come in shortly—2 Guernsey bulls from 12 to 16 months. A number of Shropshire Ewes and Lambs, prices and quality right, particulars on application.

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Bloomfield Farm. Shubenacadie, N.B

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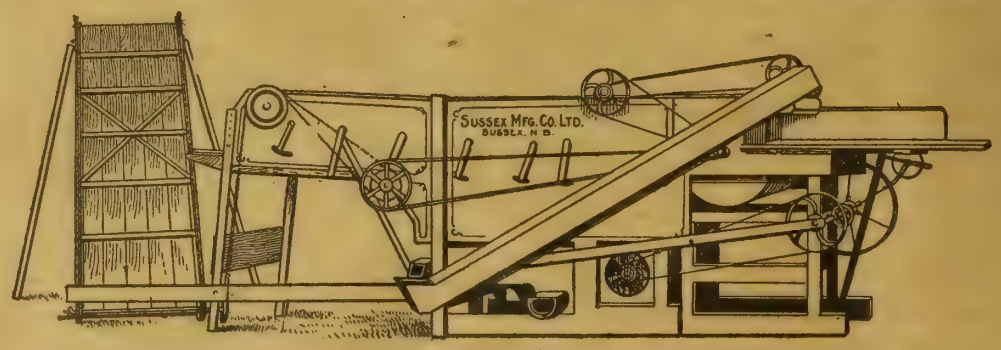

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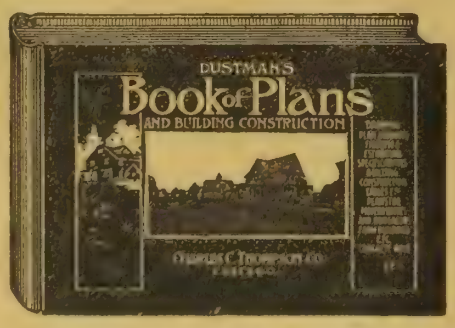

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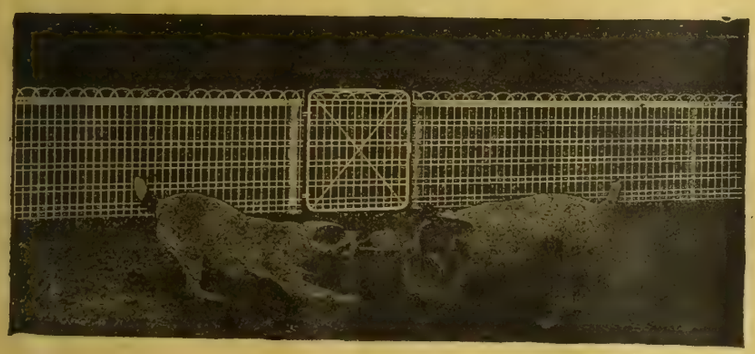

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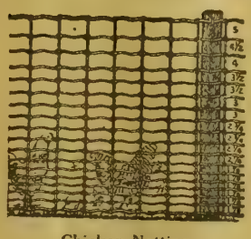

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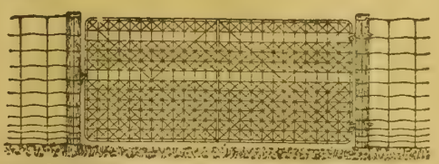

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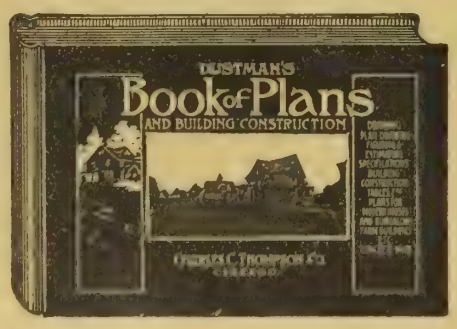

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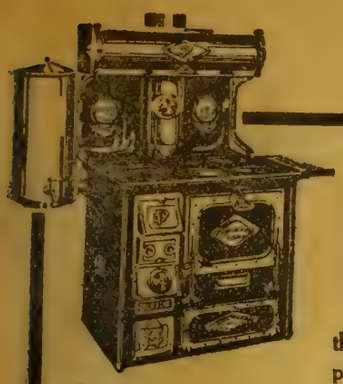

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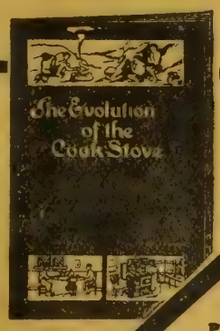

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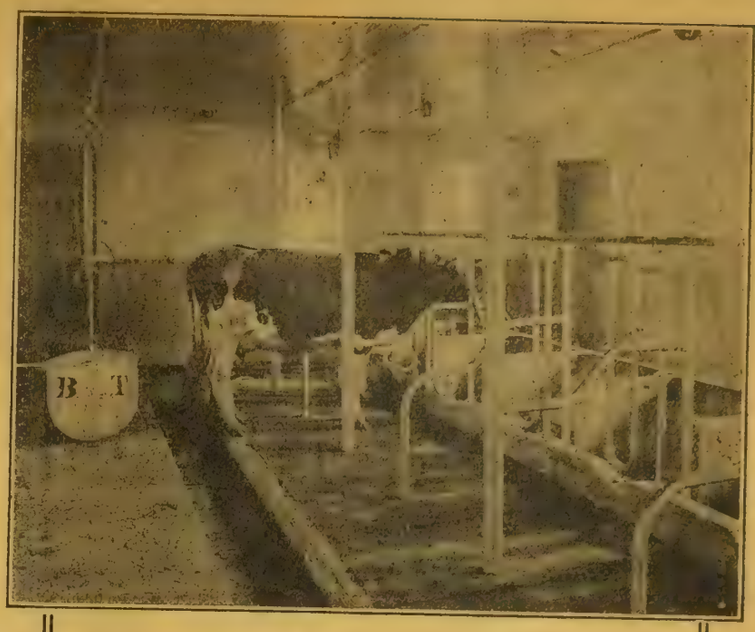

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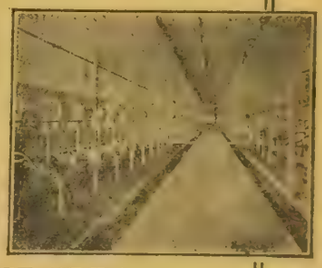

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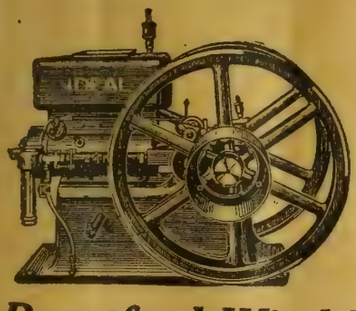

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Volume 18. SUSSEX, NEW BRUNSWICK, SEPTEMBER 30, 1913. Number 24.

The Frederitcon Biennial Exhibition

It's Golden Jubilee

THE 1913 Exhibition which was held in Fredericton, on the week of the 15th to the 20th inst. rounded out a half century of biennial fairs in the capital city of New Brunswick.

W. S. Hooper, the genial, enterprising Mayor of the city and Secretary-Manager of the fair was at the helm and associated with him on the managing board and as superintendents of the various departments of the fair were some of the most prominent, public spirited citizens of Fredericton.

With the exception of Thursday forenoon, during which rain drizzled the weather was all that could be desired and as a consequence the attendance was a record breaker.

The main building was well filled with tastily arranged booths containing the wares of many of Fredericton's busiest business houses and also the wares of not a few firms who have general salesman in the Maritime field.

There was a good display of carriages, automobiles, cream separators, gasoline engines, pianos, etc.

The agricultural section of the fair was well filled with the products of the field and garden, potatoes in abundance, large pumpkins and squashes, excellent samples of the various grains threshed and in the straw and innumerable vegetables of various kinds. S. J. Moore, Truro, N. S., assisted by W. W. Baird, Nappan, N. S., placed the awards. Among the exhibitors and first and foremost with the best collections of grain in the straw were Messrs. Donald Innes, Tobique River, N. B. and Bertram Goodspeed, Penniac, N. B. Other exhibitors in the grain classes were A. R. Gorham, Robt. Shaw, J. W. Smith & Son, T. Aylward, W. G. Clark, Geo. Tennant, W. H. Moore, W. Palmer, Frank Shortell, Wm. O'Brien & Sons, J. E. Baker & Sons and Orchard Hill Farm.

B. Goodspeed had the best collection of field roots and J. W. Smith & Son, Nashwaak, came in with the second best collection.

J. Bebbington and J. W. Smith & Son, Nashville, had the best collection of garden vegetables. The largest and best assortment of vegetables was shown by J. W. Smith & Sons, B. Goodspeed and Mrs. J. S. Darcus, Fredericton.

THE HORTICULTURAL EXHIBIT

was a creditable one. It consisted of an abundance of good fruit well staged. The Fruit Division of the New Brunswick Department of Agriculture had an artistic display of fruit and orchard scenes that gave the visitors to the fair an insight into the fruit growing possibilities of the province of New Brunswick. A. G. Turney, Provincial Horticulturist placed the awards.

The prize for the best collection of ten varieties of apples went to:—1, W. P. & F. L. Fox, Lr. Gagetown, N. B.; 2, Mrs. J. S. Darcus; 3, W. B. Gilman, Fredericton; 4, A. S. Dumphey, Douglas, N. B.

The best barrels of apples were shown by A. R. Gorham, S. L. Peters & Sons and S. B. Hatheway.

W. B. Gilman and A. R. Gorham showed the best baskets of plums packed for market while Miss Maud Allen, and Mrs. M. J. Bowers, Fredericton, had the best collection of preserved fruits. Miss Allen also had the best collection of pickles.

THE DAIRY PRODUCTS

were judged by Mr. Harvey Mitchell, and the awards were as follows:—

Best Tub Butter, 50 lbs.—1, Dunk River Creamery Co., Central Bedeque, P. E. I.;2, J. P. Simmons, Dunnstafnage; 3, Artic Cook, N. Tryon, P. E. I.;4, W. C. Lewis, Little Bass River.

Butter, 20 lbs.—1, Benj. Lester, Apohaqui; 2, F. W. Smith, Nashwaakville; 3, Miss Amelia Kirk, Barony; 4, B. Goodspeed.

Butter Prints, 20 lbs.—1, Dunk River Creamery Co.; 2, J. P. Simmons; 3, W. L. Lewis; 4, Sussex Cheese & Butter Co.

Prints Butter, 10 pounds—1, F. W. Smith; 2, B. Goodspeed; 3, Chas. Parent, Douglas; 4, A. Illingworth, Fredericton Junction.

Cheese, Best 2, 50 lbs.—1, J. A. McManus, Cornwall, P. E. I.; 2, Wesley Keefe, Bridgetown, P. E. I.; 3, Wm. Clark, Emerald, P. E. I.; 4, Leo Hughes, Kengsington, P. E. I.

Farm Dairy Cheese.—1, I. Stephenson, Maugerville; 2, Clementine Drake, North River, P. E. I.

PLANTS AND FLOWERS.

There was a profusion of foliage and blooms in the Floricultural Department and Mr. H. E. Goold, Sussex, placed the awards. J. Bebbington, Florist, Fredericton, had the best general display in all sections. A. Alward had the second prize winning collections of foliage plants and exotic ferns. F. W. Gregory showed the best collection of ornamental Begonias.

HONEY AND APIARY.

David Hiscoe, Fredericton, was the only exhibitor in the apiary section. H. P. Durost, of the Provincial Department, placed the awards and gave demonstration lectures on the handling and care of bees which were listened to with much attention by an appreciative audience. Surrounded in the wire cage by thousands of bees he worked without gloves or veil as he demonstrated the handling of the various kinds of hives and other apiarian supplies.

During the course of the fair a number of interested bee keepers formed themselves into a New Brunswick Beekeepers Association, of which Mr. Peabody, of Woodstock, is president and Mr. Durost the Secretary.

THE FINE ARTS AND LADIES WORK

occupied the galleries of the main building. The display of needle work was particularly attractive and showed a wealth of mechanical ingenuity on the part of the exhibitors. The domestic department was also filled with representative exhibits of the various handicrafts practised in the home.

HORSES.

The entry in the horse classes was quite large but the competition excepting in the Clydesdales sections and in the aged Percheron stallion section was not as keen as we would expect.

The heavy horses were judged by John Guardhouse, of Ontario. Dr. Sinclair, of Ontario, placed the awards on the light horses.

THOROUGHBREDS.

There were only three Thoroughbreds at the fair—the aged stallions, Waterlight and Donell and the four-year-old filly, Romona F. Waterlight carried off the championship diploma.

HACKNEYS.

R. A. Snowball was the only exhibitor of Hackeneys. Model Performer the aged stallion was awarded the male championship while the female honors went to Chatham Lily out of Langton Lily by Model Performer. The latter's foal by Cock o' the North was the only 1913 foal in the ring.

STANDARD BREDS.

There was only one entry in each section of the Standard Bred Class. H. C. Jewett, showed Canadian Prince by Isle o' Dew and Malone by Mobel in the four-year-old and three-year-old classes respectively. J. T. Jenkins' Upton Prince by Todd Mac out of an Orien dam had no competition in the two-year-old stallion class. Alf. Quartermain's Ralph Kitchen by Columbo was the only one-year-old stallion in the class. H. G. Kitchen showed the fillies Stella Jewett by Dispute and Ohulta by Ozona in the three-year-old and two-year-old sections. Frank Good's brood mare Zeta M. by Lorraine and her foal by Columbo were the only other entries in the Standard Bred Class.

CLYDESDALES.

Five aged stallions faced the judge in the Clydesdale class. Baron Balgreddan, owned by R. A. Snowball, Chatham, Flash Favorite, owned by H. R. McMonagle, Sussex and H. C. Jewett's Hercules by Sir Arthur carried off the red, blue and green ribbons in their respective order. The three-year-old section brought out a three cornered contest between Cossar Farms' Dumure Craig, O'briens' Bob McGregor and Wm. Seymour's Bobbie Boy by Sorbie Boy and the decision given was as mentioned. The male championship went to Demure Craig, but the Clydesdale Association special prize for best stallion, any age, went to Baron Balgreddan, Demure Craig was not entered for the special.

Snowball's May Lothian was the first prize aged mare and first brood mare. O'Briens' Belle of Hants by Norseman and Fraser Bros.' Lady Ross by Royal Ross came in for second and third prizes respectively. May Lothian carried off the female championship.

Fraser & Sons' Nancy F. by Up-to-time, H. S. Pipes & Son's Princess Nora by Norseman and Snowball's Miss May by Baron Balgreddan won honors in their respective order in the two-year-old class.

H. S. Pipes & Son captured first prize on yearling filly with Fleur de Lis by Handy Andy, O'Briens' Ruby Primrose by the Norseman and Snowball's Chatham Kate by Baron Balgreddan took the two remaining prizes. Two Sorbie Boy foals led their class followed in third place by a Baron Balgreddan foal.

PERCHERONS.

No fewer than five aged Percheron stallions appeared in the ring and they put on their very best behavior—quite a contrast to the same class at Halifax, H. C. Jewett's Gresham, the champion at Halifax, carried off the same honors at Fredericton. W. R. Christie's Caissier came in for second money and D. P. Clayton's Indican stood in third place.

H. R. Christie's Masterpiece came in for first money ahead of Chas. Symes' Lord Roberts in the three-year-old stallion class.

W. R. Christie's mare with foal at foot by Caissier and Chas. Symes' mare with foal by Erbago were placed in the order named; but their foals were placed in the reverse order.

SHIRE HORSES.

T. A. McDonald, Welsford, had the only shire on the grounds, a stallion shown in the aged class.

SADDLE HORSES.

One of the classiest horses on the grounds was a mare ridden, to first place in the gentleman's saddle horse class, by H. W. Armstrong, Fredericton. Charles G. Carter, Petitcodiac, N. B., had the second prize winner. Mrs. Carter showed the only horse ridden by a lady.

CARRIAGE HORSES TO HALTER.

In the brood mare with foal at foot sertion of this class, Wm. Craig, Nassis led the way with N. Kierstead's mare by Krath with foal by Columbo in second place.

H. G. Kitchen's Standard Bred mare, Stella Jewett was first in the three-year-old filly class.

A. Bourbon T colt and another by Dan Gilbert stood in for the second and third monies.

J. R. Jewett's filly by Onyx, a German coach sire, came in for first money while H. G. Kitchen's standard bred Ohutta was the second prize winner.

In the foal of 1913 class Columbo foals sandwiched an Axbelle foal.

Kitchen's Stella Jewett was also first in the three-year-old carriage horse to harness class.

Mrs. A. B. Kitchen's Brazilian mare was first in the ladies' carriage class and captured the diploma for best carriage horse, any age.

ROADSTERS.

H. S. Pipes & Son's filly by Bonnie C. wa s first in the three-year-old roadster class and carried off the diploma for best horse, any age. H. G. Kitchen's Stella Jewett captured second money and Joseph Burnett's Dan Gilbert colt stood in for the third award.

GENERAL PURPOSE HORSES.

Clyde, German Coach and Percheron breeding was seen in the first, second and third prize winners in the section for singles in the general purpose class. The breeding of the matched teams was practically along the same lines. There was a three-cornered contest in each section.

THE AGRICULTURAL HORSES.

were a good useful lot, Clyde, Percheron and German Coach blood predominated.

HEAVY DRAUGHTERS.

The heavy draught classes were very creditable. Clydes led in point of number. Percherons and Percheron grades were also out in fairly large numbers.

The prize winnings will be found on another page of this issue.

PONIES.

Wm. Jamieson, Sussex Corner, had the only pony on the grounds, a trappy, Sable Islander.

BEEF CATTLE.

were judged by Mr. Andrew Elliott.

SHORTHORNS.

In the Shorthorn class there were three nice, thrifty, herds shown by R. A. Snowball, Chatham, N. B., D. Fraser & Sons, Plaster Rock, N. B., and I. M. Lovitt, Yarmouth, N. S. The Lovitt herd produced the best bull, Pontiac, and three of his get get while their Merry Maid 4th was first with two of her offspring.

Snowball led in aged and young herds with the Lovitt herds close seconds. John R. Jewett had the third prize young herd. Snowball also had the best bull and best femaie, any age.

HEREFORDS.

The white faces were out in fine fettle and the competition and awards were practically the same as at Halifax, Bradshaw leading in nearly all sections. The O'Briens led with two-year-old bull and senior heifer calf and came in for their share of the second prize awards. W. R. White, Fort Lawrence, N. S., also had a share of the second and third ribbons.

ABERDEEN ANGUS.

There were two herds of the Doddies and they were nicely fitted. One herd, that owned by F. G. Spafford came down from Compton, Que to vie with E. Allen's herd from Bangor, Me. See their winnings on another page.

DEVONS.

W. A. Pinkney was awarded all prizes in the Devon class without competition on a well-fitted herd.

FAT CATTLE AND GRADE CATTLE.

Bradshaw had everything his own way in the fat cattle class. He also captured the majority of first prizes on grade cattle. In the latter class, Wm. O'Brien & Sons, and F. G. Spafford were the principal competitors.

THE DAIRY CATTLE

were jddged by R. S. Stevenson, Ancaster, Ontario. The competition was not so strong in any one class as we have seen it in former years; but the quality of the herds that did show were up to the mark that can only be attained by careful breeding and good care and feeding.

AYRSHIRES.

The battle royal in the Ayrshire class was waged between McIntyre Bros. and A. McRae & Sons. Both herds were out in fine form. McIntyre Bros. captured the male championship with their aged bull, Grange Kelly, who was also first with three of his get. They also captured the female championship, and succeeded in capturing the diploma for cow and two of her offspring.

The McRae herd had the best four animals the get of one sire in the get of Howie's Crusader, While their Nellie Bawn was the dam of best two animals progeny of one cow.

McRae's herds were sandwiched in in second place between two McIntyre Bros' herds in both aged and breeders' young herds sections. See winnings in the other sections elsewhere in this issue.

HOLSTEINS.

Four Holstein herds were in the show of which Lea & Clark, Victoria, P. E. I.; Harding Bros. and W. S. Harding, Welsford, N. B. and C. H. Giles, Fredericton, were the exhibitors. There was something going on all the time and there were no walk overs.

Harding Bros.' aged bull, Schuling Sir Posch was first in his class and carried off the male championship. Lea & Clark's aged bull Ida Rooker II's Vale was the reserve champion. Harding Bros. had the champion female in their Faforit 7th Beauty shown in the dry four-year-old class and the reserve champion in their Madelyn Duchess DeKol the first prize four-year-old cow in milk. Lea & Clark led in Breeders' young herd, bull and three of his get, three animals, get of sire, the get of Ida Rooker II's Vale and two animals of the progeny of Mercedes Johanna Posch.

Harding Bros.' Faforit cow was first with two of her offspring.

C. H. Giles had the third prize four-year-old cow in milk, second prize senior bull calf and third prize aged bull.

W. S. Harding had the first prize junior yearling heifer. He also captured a number of second and third prizes in the other sections.

Chas. C. Murray, Central Keswick, showed the second prize two-year-old bull.

GUERNSEYS.

With the exception of third prize on aged bull which went to Wallace Cook, Salem, N. S., first prize on senior yearling bull, which went to Fred Corbitt, Fredericton and first prize on juoior bull calf, which went to R. R. Black, Amherst, N. S., all the prizes in the Guernsey class went to H. W. Corning, Chegoggin, N. S., on a well-fitted herd.

JERSEYS.

H. S. Pipes & Son, Amherst, N. S., met with no competition, except in the two-year-old and senior yearling bull classes where first prizes were awarded to Wm. Craig, Nas-sis and F. W. Robinson, Fredericton. The Pipes herd was out in good form and deserved more competition.

DAIRY GRADES.

were shown by W. B. Gilman, R. R. Black, Mrs. M. Atkinson, J. W. Harrison, gnd S. J. Darcus. Holstein grades predominated and they were a profit producing lot.

SHEEP.

The sheep classes were judged by Mr. Andrew Elliott.

Two nice flocks of Cheviots were shown by A. C. Servant, Overton, N. S., and Wm. Craig, Nas-sis, N. B. Most of the first prize honors went to the Servant flock.

LEICESTERS.

Two good flocks of Leicesters were shown by the Boswalls of Prince Edward Island.

LINCOLNS.

The Boswalls and C. Pugsley, Barronsfield, N. S., were exhibitors of Lincolns. The Boswalls led in number of first prize awards. Pugsley showed the best two-year-old ewe-

OXFORDS.

J. E. Baker & Sons, Barronsfield, N. S., and Burder Goodwin, Baie Verte, N. B., waged war in the Oxford classes. The Bakers won six firsts, five seconds and two third prizes and Goodwin captured the remainder.

SHROPSHIRES.

There was a three-cornered contest in the Shropshire class. F. G. Spafford, Compton, Que., had a well-fitted flock to vie with the Prince Edward Island flocks exhibited by Geo. L. Boswall and Cephas Nunn of Prince Edward Island. The Spafford flock produced the best two-year-old and shearling rams. The Boswall flock rang in for the remainder of the first and quite a few of the second prizes. The Nunn flock captured the remaining prizes in seconds and thirds.

SOUTH DOWNS.

Two flocks of South Downs graced the turf. Cephas Nunn had the best two-year-old ram and the second prize winners in the remaining sections. J. E. Baker & Sons captured all first prices, with the single exception of that on aged rams.

HAMPSHIRES.

Cephas Nunn made a strong showing in the Hampshire class and captured all but one of the first prizes and the majority of the second prizes. His only competitor was Almon Boswall.

CHEVIOTS.

In Cheviots also Cephas Nunn led the way, with a well fitted flock. Geo. Symes and Chas. Symes, of Minudie, N. S., were his competitors and prizes were awarded as in the list found on another page.

DORSETS.

Two flocks of Dorsets shown by Geo. L. Boswall and A. C. Servant strove for the honors of their class. Servant led the way with aged rams and ewe lambs. Boswall led in the remaining sections.

SUFFOLKS.

The Boswalls were the only exhibitors of Sufffolks.

GRADES AND FAT SHEEP.

There was a good showing in the grades and fat sheep classes.

SWINE

were judged by Mr. R. S. Stevenson. The competition was not very keen in any section of the swine classes. Berkshires, Yorkshires, Tamworths, White Chesters, Poland Chinas and Duroc Jerseys were out in small but well-fitted numbers. Although three prizes were offered in each section only one of the third prizes was called for. The list of winnings found elsewhere in this issue tells the tale as to Who is Who? in the respective classes.

POULTRY.

The poultry exhibit was the largest ever cooped at Fredericton. Messrs. J. P. Landry and Seth Jones placed the awards. There were some very choice birds and also a great many undersized, poor ones. The latter is particularly applicable to the 1913 chicken classes.

Powerful Gas Engines.

Ford City, Ont., Sept.— The big plant of the Ford Motor Company of Canada, Limited is to have a gas engine the same size as the mammoth power producer recently installed at the parent plant at Detroit.

The engine will develop 5000 horse power and will be an exact duplicate of the first engine of the same capacity designed by the engineering department of the Ford Company. It is planned to install half of this engine at first, and the other half later when the power requirements demand it.

A second engine of the same size will be installed at the Detroit plant, in addition to one 5000 horse power, and one 1500 horse power engine now in operation, but in the Canadian plant the one big engine will augment the two 750 horse power gas engine, which now supply the power. The foundations are now being placed.

The 5000 H. P. engine is the most powerful gas engine in the world and has attracted a great deal of attention from engineers both on this and the other side of the Atlantic.

The Prince Edward Island Exhibition

Despite the fact that the thirteenth annual interprovincial exhibition was held at Charlottetown in 1913 every section of the fair went along with a swing that caused a happy smile to rest on the features of genial Secretary Smallwood and the entire managing staff.

Fine weather prevailed during the fair dates, September 23rd to 26th inclusive. The attendance totalled a number far in excess of the most sanguine expectations of the management. Although the seating capacity of the grand stand has been increased by 75 per cent. it was filled to overflowing on the various race days and standing room in the paddocks was at a premium.

THE MAIN BUILDING

contained the exhibits of some of Charlottetown's most progressive firms and also those of some outside firms. The Prince Edward Island Experiment Station had a very comprehensive exhibit of the various products grown on the station farm, which was neatly arranged and which reflected much credit on Supt. Clark and his staff. ...

The Agricultural showing in roots and grains did not approach in point of quantity the showing of other years and this is probably accounted for by the fact that a great deal of grain remained unhoused when the exhibition opened and many of the old exhibitors did not feel inclined to leave their work in the grain fields long enough to get exhibits in readiness.

S. J. Moore, Truro, N. S. placed the awards.

THE DAIRY PRODUCTS

were judged by Mr. Harvey Mitchell. There was a good showing in all sections of the butter and cheese class both factory made and domestic..

Following is a complete list of the prize winners;—

BUTTER AND CHEESE.

Butter, box, 28 lbs., for export—1, Dunk River Creamery Co.; 2, Artie Clark, North Tryon; 3, Peter Burke, St. Louis.

Butter, best 2 firkins, 20 lbs. each, home made—1, Mrs. John McMillan, Hazelwood; 2, Benj. Rodd, Brackley Point, 3, Mrs. J. R. McLellan, Alexandria.

Butter, best 2 firkins, 20 lbs. creamery—1, J. P. Simmons, Dunstaffnage; 2, Dunk River Creamery Co.; 3, Peter Burke.

Butter, 5 lbs. prints, creamery made—1, J. P. Simmons; 2, Dunk River Creamery Co.; 3, J. A. McRae Pinette.

Butter, best crock, 20 lbs., home made—1, Mrs. A. H. Boswall; 2, Mrs. John McMillan; 3, Mrs. Ernest Prowse.

Butter, 5 lbs. prints, home made—1, Mrs. L. H. D. Foster; 2, Mrs. A. H. Boswall; 3, Mrs. John McMillan.

Butter, 5lbs. rolls, home made—1, Mrs. L. H. D. Foster; 2, Mrs. A. H. Boswall; 3, Mrs. John Gill, Union Road.

Cheese, best 2 dairy-farm made—1, R. B. McKinley, N. River; 2, Clementine Drake, Cornwall; 3, Mrs. Fred Hyde, Cornwall.

Cheese, best 2 factory made—1, Leo J. Murphy; 2, Archie Cousins, Park Corner; 3, Mrs. J. A. Manus, Cornwall.

Messrs. Dillon & Spillett Gold Medal for best home made cheese—Leo J. Murphy, Tignish.

Messrs. Bruce & Stewart Silver Medal for second best home made cheese—Archie Cousins.

Although Prince Edward is an island flowing with milk and honey there was only one exhibit of honey, an entry made by Harold Newson, East Royalty, P. E. I.

FRUITS.

...H. A. D'Almaine, Wolfville, N. S., placed the awards in the fruit class. Considering the off season the showing of fruit was very good but not up to the other years in quantity or quality. The showing was, however, sufficient to show the stranger that Prince Edward Island farmers can grow fruit, grow it well and that in some varieties they can excel.

EXHIBITS IN THE ARTS, FANCY WORK, DOMESTIC AND INDUSTRIAL

departments proved to the visitor that the artisans in the Prince Edward Island homes are not a whit behind those of the sister provinces.

MACHINERY HALL

had good exhibits of gasoline engines, cream separators, threshing machines grain grinders and other machinery in which farmers are usually interested.

THE HORSES.

The Live stock departments, particularly the horse department suffered from the effects of the late harvesting season. The entry in the light horse classes, which were judged by Duncan Brown, Ottawa, was a disappointment in point of numbers and in some sections in point of quality. The latter was particularly true of the carriage class where not a few horses were shown out of their class. Only two animals were anywhere near conforming to the requirements of a carriage class. Most of the horses shown as carriage horses should have been entered as roadsters where they would better fill the bill and make a better showing. A. A. McBeath had the champion mare, any age, in a Fashioner filly.

THE STANDARD BREDS were also very light in point of entries and Hammond Kelly had the only entry in the aged stallion class—Mayor Todd by Todd.

In the three-year-old stallion class there were four entries. The Acadian by Sabledom out of a Nelson dam led the way followed in second place by Prince Marjor by Moko out of a Sidney Dillon dam.

The third prize winner was Beau Cheval by Princeton.

The contest in the three-year-old filly section waged between the mares Capitola and Oak Cap. Oak Cap captured the red ribbon. There were no other entries in the Standard Bred sections.

SADDLE HORSES.—The Saddle horse sertions were very ordinary and as a whole were minus outstanding saddle qualities.

IN HACKENEYS there was only one entry, a nice, two-year-old filly by Fashioner.

ROADSTERS.—Nutwood was the only roadster stallion exhibited at the fair. He was shown in the aged stallion class by Byrne Bros.

Four three-year-old- fillies—a Joe Dillon, a Commodore Lydiard, a Darkwood and a Brazilian were placed in the order named.

Two Parkside mares, one with foal by Commodore Lydiard and the other with foal by Dingola were placed in the order mentioned in the brood mare with foal by her side section of the roadster class.

THE CLYDESDALES, SHIRES AND REGISTERED CANADIAN DRAFT HORSE section comprised the classiest horseflesh at the show. There was quality, lots of it in nearly every section of the class and while Mr. Fred Richardson, Columbus, Ontario was placing the awards the ring side was crowded with spectators, who were captivated by the excellence of the individuals shown.

Four aged stallions—Baron Kelvin, Woodend Chief by Up-to-time, Kippoch Prince by Scotland Yet and tne shire stallion, Eskham Waggoner, were placed in their respective order.

Three three-year-old stallions, Lord Dalmaney Jr. by Lord Dalmaney out of a fortuneteller dam, Royal Darnley by Bergie Royal out of a Baron's Pride dam and Royal Winsloe by Crown Rights out of a Cataclysm dam faced the judge and were awarded the red, blue and white ribbons in their respective order.

Lord Chatham by Lord Dalmaney led the two-year-old stallion class with Prince of the Crown by Crown Rights out of a Craigmore dam followed in second place and Baronet by Bergie Royal out of a Baron's Pride dam took up the rear.

The one-year-old stallion class was led by Crown Rights Junior by Crown Rights out of a Baron's Pride dam and in second and third places came Wighton Boy out of a Reformer dam and Kenlock Prince by Lord Dalmaney out of a Fortuneteller dam, while Victor Selkirk by Victor of Goodwood was just outside the money.

Two three-year-old fillies, Queen by Bergie Royal and Juno by Crown Rights out of a Pride of Blacon dam were placed in their respective order without any other competition.

In two-year-old fillies the prize winners in a three-cornered contest were: 1, Scott Royal by Bergie Royal out of a Lothian's Challenge dam. 2, Lady Charming by Charming Lad and 3, Jean of Shoreacres by Atlas out of a Lord Stewart dam.

The one-year-old filly section was a credit to Prince Edward Island horsemen. There were nine entries, Honest Bess by Honesty out of a Crown Rights dam led her class and captured all the female championships and first prize specials for which she was entered. The second was an imported filly and the third was by Prince Shapley out of a Hiawatha Goldfinder dam.

Nine mares with foals at foot graced the turf. Sylvia by Prince Prim, foal by Atlas led the class. Jean Roberts by Bobs with foal by Baron Kelvin captured the second award. Her foal was also second in his class. The third award on mare and also on foal went to Winnifred Ward by Bulwark and her foal by Bandit. A Bandit foal out of Lady Weaver brought home the bacon in his class.

Baron Kelvin captured the male championship and specials.

Wallace Stead's stallion Bandit was first with three of his get.

Lord Chatham and Woodend Chief captured second and third monies offered by the Canadian Clyde Horse Association for best Clyde stallion.

Honest Bess by Honesty, the first prize yearling filly captured the first money for best mare, any age. The second and third monies were captured by the two-year-old Scott Royal by Bergie Royal and the yearling, Maximilla, by Prince Shapeley.

Crown Rights fillies out of Barrister dams led the single mare or gelding in harness section and these were followed in third place by a Reformer gelding out of a Crown Rights dam in a class of seven. A Bandit foal led the way followed in second and third places by two Baron Kelvin foals in the class for foals by pure bred Clydesdale stallions out of grade dams.

DRAFT HORSES.—There were only two entries in the three-year-old filly section of the draft class and the first prize went to an Atlas filly out of a Crown Rights dam while the second prize went to a Crown Rights filly out of a McQueen dam.

The two-year-old filly section of this class was led by a very nice filly by the Shire stallion, Eskham Waggoner out of a Crown Rights dam, while second and third awards went to an Orphan Jack out of a Goldfinder dam and a McLean's Barrister out of a McQueen dam.

Four yearling draft fillies put in an appearance. Crown Rights, was the sire of the first and third prize winners and sandwiched in between them was an Atlas filly.

The brood mares with foals numbered five. All monies in the mare section went to the get of Crown Rights. Kippock Prince was the sire of the first prize draft foal while Baron Kelvin claimed the patership of the other two money winners.

BEEF CATTLE

were rather more numerous than we have seen them at Charlottetown for some years. A. J. Howden, Ontario, placed the awards. The various herds were out in pretty fair fittle.

SHORTHORNS.—The male championship and also the female championship were won by individuals shown in the calf classes. Yonkers & Sanderson claimed the former and T. P. Cass the latter. Both animals were sired by the T. P. Cass aged bull Somerset.

HEREFORDS—Louis Hayden, Cherry Valley, had the only entries in the Hereford class, an aged bull, a three-year-old cow and a senior heifer calf.

POLLED ANGUS—Robert Furness showed a two-year-old Angus bull, the only animal of the breed on the grounds.

THE DAIRY CATTLE

were judged by W. W. Ballentyne, of Ontario. The various breeds were well represented.

AYRSHIRES—In the Ayrshire class Easton Bros. were the principal winners. A. McRae & Sons herd being at the Chatham fair weakened their hands at home but their Milkmaid 7th was good enough to capture the female championship.

Eastons' Howies Crusader was the champion male.

The best two animals, either sex, any age, progeny of one cow were shown by Easton Bros. who also captured the second money in the same class on the progenies of Blue Belle of Spruce Row and Lady Kirsty Gleniron.

JERSEYS.—W. Clark & Son, North Wiltshire made the big showing in Jerseys. W. Stead, H. Holm, S. Holrood, Robt. Weeks and Spurgeon Warren were their principal competitors. Clark's Pogis of Hazeldean and Sylvia of Maple Grove were the male and female champions.

GUERNSEYS—Roper Bros. and F. H. Roper had everything their own way in the Guernsey class.

HOLSTEINS—There was a good healthy competition in the Holstein class. Lea & Clark, J. M. Leard & Son, W. J. Gibson, John Tweedy and others. The Island Holstein herds are fast gaining in point of numbers and in quality. Lea & Clark's Ida Rooker II's Vale, their aged bull captured the male championship. Leard & Son's Mabel Rooker, their first prize yearling heifer was the champion female. Laird & Son had best three animals,

(Conttinued on page 858.)

THE MARITIME FARMER.

And Co-operative Dairyman

Semi-Monthly Journal devoted to the interests of the farmers of the Maritime Provinces.

Official Organ of The Farmers and Dairymen's Association of New Brunswick; The Nova Scotia Farmer's Association; The Nova Scotia and P. E. I. Fruit Growers' Associations; The New Brunswick Fruit Growers' Association; The Maritime Stock Breeders' Association; The Maritime Bee-Keepers' Association; The New Brunswick Poultry Association, and the Newfoundland Agricultural Board.

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The date after your name on the little green label on front page, is in every case the time to which your subscription is paid.

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R. D. Robinson Publishing Co., Limited

Sussex, N. B.

NOTICE TO ADVERTISERS.—Changes of ads. should reach this office one week before date of issue, in order to insure insertion.

SEPTEMBER 30, 1913.

DATES OF ISSUE.

October 14-28

November 11-25

OPPORTUNITY IN BEEF PRODUCTION

Dr. G. M. Twitchell in Maine Farmer says:—

"There's a familiar poem that starts out with the proposition that "New occasions teach new duties," etc., but too often this is not thought of as applying to the life of the larm. We realize that change is written in big letters on everything, and then go on in the same old rut as though everything on the farm was rigid. To take in the fact that we must be up and doing, with our brains as well as hands, means much to a man today, yet here is a lesson facing every man, no matter where he works.

"The trouble too often is that men are standing waiting for an opportunity and do not see, right at hand, the best chances possible. In this year, 1913, there is neither doubt of possibility, nor question of the fact, that the very best chance for the man, who has a liking for stock, to realize as never before, is by getting into one of the two beef breeds and growing beef for the market. Beef is higher than ever in the history of the country, and, more than that, there is no possibility that it will ever be any cheaper. Instead, there is the certainty that for the coming years it must go higher, simply for the fact of supply and demand.

"It was a sorry day when the farmer sacrificed his steers for trotting stock, for, when the speed bubble burst, it left the barns loaded with a class of stock having no value and with little possibility for service.

"Years ago, as one of our well-known and successful breeders of white faces was showing his string of steers before the grandstand at one ol our fairs, he was approached by a big breeder of trotting stock, who said: "That's right, my friend, you keep right on growing good-looking steers if you want to, but there's a little mare over there in the stall which will sell for more than this whole string of steers."

"The crowd applauded, and when the man with the whip moved away, the boys all followed. Long since, the man who held the goad stick made good in a financial sense, while his friend with the whip has been struggling, with little chance to get his head above water.

"We have come upon a time when a,l the conditions confirm the wisdom of the man who has clung to the steers. Failing pasturage throughout the great west, and a rapidly increasing population, radically change sthe situation with the eastern farmer.

"Have you ever stopped to think what this might mean to the eastern farmer if he should step in and stock his barns with the Herefords or Shorthorns?

"The government has just sent a commission to South America to investigate the situation there, with a view of a possible supply of meat products from those countries, indicating that our authorities realize the situation now confronting us as a people. Why shouldn't we supply in larger measure our own markets with home-grown beef and mutton, as well as pork?

"Isn't it ashame that in every little country store one will find western beef and lambs, and especially pork products of all kinds, with prices soaring all the time?

"We do not produce beef, mutton, or pork enough to supply our home markets one month in the year. It's an ugly situation because while the facts are as stated, one will find everywhere men who are anxiously asking what they can do to make a living on the farm.

"What we want to have worked into the marrow of our bones is that here is an opportunity not to be neglected, and that as the years pass there is sure to be an increasing demand for all hoof products, and at good paying prices. Study the subject from any standpoint and the self same conclusion will be forced, that we have been letting go of a good chance for an ever increasing business.

"Brother farmers, there's too much to this problem to be put silently by without discussion. The facts are as stated, and the man who wants to build up his farm and realize permanently from it can engage in no better line of work than growing beef, mutton and pork.

"Multiply the white faces or the Shorthorns, and the question of bank credit will take care of itself. No prosperous farmer ever had trouble in getting credit anywhere. The external evidence of good business will settle the whole problem, and good business points today straight towards the tieup, the sheepfold and hogpen.

"There are some things we cannot get away from, and one certainly is that from this time on there is going to be, in all our markets, a steadily increasing demand for all meat products, and that the home supply is not only best for all, but there are dollars for the men who get into the game to supply the cry for meat. Some day this fact will be realized, but why wait? Go to the fairs to study the situation with sole reference to business, and then begin in a small way to get into the game for a bigger agriculture, built on some phase of stock husbandry. It has got to come. It will surely pay. Now is the time to strike for a seat on the band wagon."

REASONS FOR DAIRY ADVERTISING

At a recent meeting of the dairy cattle breeders mention was made of one man who has been rather successful in dairying, having secured an exclusive market for his milk and cream in metropolitan hotels. Others who were acquainted with this party expressed surprise for they knew nothing of his undertaking; in fact, they were not aware that he was a breeder of this particular kind of cattle. The statement was made that he has never advertised therefore how could one know of his work.

There are scattered all over the country men who have been successful in their various lines of breeding but who are unknown because they do not advertise. When a state organization was formed recently, the thorough canvass that was made for eligible members showed many men of just this kind. They were well established in a limited way but they had been virtually hiding the light under a bushel for they had not given the others who were similarly interested any information of the success which they had achieved.

One of the principal benefits to be derived from breeders' organizations is that which comes through friendly co-operation through the occasional visits with others who are similarly interested. This can never be fully appreciated by the men who are not willing to make themselves known. For this reason, if for no other, it pays to advertise.

The time has come when the advertising columns of any reputable paper are of recognized value from the news standpoint. The facts that they represent mean much to the reader and many items of interest are gleaned from them. Primarily an advertisement is intended to sell stock but it has a secondary importance that is not to be overlooked and that is the fact that it acquaints others of your interest in the breed.

PROVIDE SHELTER FOR ALL FARM TOOLS

Tool protection necessarily requires considerable room, more than some farmers can easily provide. The farmer who is able to own a large tool shed can run his implements in it at the end of the season and leave them there until he wants them again next season. But the farmer who feels that he is not able to own a shed for his implements must do a little planning in order to get all of them out of the weather. He can and should utilize all the space he has by planning to store his implements in as little space as possible.

Some of the machines may be taken apart and thus stored in a very small space. Those that cannot be taken apart easily must be run together as closely as possible. The hay rake may be condensed by removing the wheels and tongue; the mower can be placed in close quarters by taking off the tongue and sickle-bar. The spike tooth harrow can be taken apart and hung upon a wall with railroad spikes. The corn-planter and the cultivators will not require much room if dismantled. It is often quite a job to find room for the binder, but by taking off the reel and bundle carrier the space needed for this machine may be much lessened. An effort should be made to get the binder under shelter by all means as the elements will quickly play havoc with this complicated implement.

Often there is considerable room in the barn loft that may be utilized for the storing of plows and those tools which have been taken apart. When implements are oiled or greased, taken apart and packed away, try to place the parts so that you can get at those you will need early in the spring without having to move the ones you will not need until late in the season.

In the wagon-shed or driveway, or in any shed for storing tools, a system of ropes and self-locking pulleys can be used to good advantage to hoist some of the tools out of the way. The wagon boxes, hay rack or hog rack may thus be removed entirely out of the way and they can be raised or lowered easily directly on the wagon.

Sometimes a farmer will permit good shelter for his tools to go unused because he does not realize that he has the shelter. We know several farms on which there are one or more old sheds filled with nothing but worthless rubbish, while the farming implements stand in the fields. By clearing the rubbish out, and then repairing the leaky roofs and replacing loose boards so as to make the sheds dry, these old buildings would be come valuable, considering the use to which they could be put. A tool house does not need to be so well constructed as stock buildings, as the question of warmth need not be considered. A tool shed needs to be very dry, of course. A good dry floor can be made by hauling a few loads of cinders.

STABLE FLOORS

Lhe stable floor is a prolific source of trouble unless it is properly made. One may go into many a barn and find the floors reeking with filth although they look clean to the casual observer. The old-fashioned plank floor that was laid on top of the ground allowed the moisture and the filth to work through the cracks, making mudholes that were just about as pure as a cesspool from which the odors and gases arise in the stable, especially during hot weather. This same floor may be swept and spotless as stable floors are considered, but it can never be cleaned until conditions beneath are remedied.

All plank floors are not like this, but many of them are and that in itself is sufficient to condemn the general use of this material for such purposes. Furthermore, with the prices that now prevail one can hardly afford to put such a valuable commodity as a good plank under the cows.

The cement floor is as nearly ideal as anything known to dairymen at this time. It is practically germ proof, it can be washed, it does not allow for any seepage of moisture, there are no unsightly cracks, all of the manure can be saved and the barn can be kept cleaner and more free from stable odors.

Naturally the cement floor is not most ideal for the cow's feet; it is not the best place for her to stand unless it is well covered with plank or cork brick or blocks, but the cement offers the right foundation lor this covering and lit is necessary if one would have the best stable floor.

The Prize Winners at the Fredericton Biennial Exhibition

HORSES.

THOROUGHBRED HORSES.

Aged Stallions—1, H. A. Jameson, Canterbury Sta., N. B.;2, Wm. Jenkins, Hamstead, N. B.

Filly, 3 yrs. old and upwards—3, E. J. Mooney, St. John.

HACKNEYS.

All prizes awarded in the Hackney class went to R. A. Snowball, Chatham, N. B., without competition.

STANDARD BRED HORSES.

Aged stallions—1, H. C. Jewett, Fredericton.

Stallion, 3 years old—1, H. C. Jewett.

Stallion, 2 years old—1, J. T. Jenkins, Charlottetown.

Stallion, 1 year old—1, Alf. Quartermain, Fredericton.

Filly, 3 years old—1, H. G. Kitchen, Fredericton.

Filly, 2 years old—1, H. G. Kitchen.

Foal of 1913—Frank Good, Island View.

Brood mare with foal by her side—Frank Good.

CLYDESDALE HORSES.

Stallion, 4 years old and upwards—1, R. A. Snowball, Chatham, N. B. 2, H. R. McMonagle, Sussex Corner, N. B.; 3, H. C. Jewett.

Stallion, 3 years old—1, G. C. Cossar, Gagetown, N. B.; 2, Wm. O'Brien & Sons, Windsor Forks; 3, Wm. Seymour, Royal Road.

Stallion, 2 years old—1, Wm. Seymour.

Best Stallion, any age—Diploma, G. C. Cossar.

Filly, 3 years old—1, R. A. Snowball; 2, Wm. O'Brien & Sons; 3, D. Fraser & Sons, Plaster Rock.

Filly, 2 years old—1, D. Fraser & Sons; 2, H. S. Pipes & Son, Amherst; 3, R. A. Snowball, Chatham.

Yearling Filly—1, H. S. Pipes & Son; 2, Wm. O'Brien & Son; 3, R. A. Snowball.

Foal of 1913—1 and 2, Alphonso Kelly; 3, R. A. Snowball.

Brood mare with foal by her side—1, R. A. Snowball; 2, Alphonse Kelly.

CLYDESDALE ASSOCIATION SPECIALS.

Best Clydesdale Stallion, any age—R. A. Snowball.

Best Clydesdale Stallion, any age—1, May Lothian.

Best Filly or Gelding, sired by a registered Clydesdale Stallion—1 and 3, R. A. Snowball; 2, D. Fraser & Sons.

PERCHERONS.

Stallion, 4 years old—1, H. C. Jewett; 2, W. R. Christie, Caribou; 3, D. P. Clayton, Christie P. O.

Stallion, 3 years old—1, W. R. Christie; 2, Chas. Symes.

Stallion, any age—Diploma— H. C. Jewett.

Filly, 2 years old—1, Chas. Symes.

Foal of 1913—1, Chas Symes; 2, W. R. Christie.

Brood Mare with foal—1, W. R. Christie; 2, Chas Symes.

ENGLISH SHIRES.

Stallion, 4 years old—1, T. A. McDonald, Welsford.

SADDLE HORSES.

Saddle Horse, ridden by gentleman—1, H. W. Armstrong, Fredericton; 2, Chas. G. Carter, Petitcodiac.

Saddle Horse, ridden by lady—1, Mrs. Chas. G. Carter.

CARRIAGE HORSES TO HALTER.

Brood Mare with foal by her side—1, Wm. Craig, Nas-sis; 2, N. Keirstead, Fredericton

Filly or Gelding, 3 year old— 1, H. G. Kitchen; 2, Judson Burden; 3, Jasper Burnett.

Filly or Gelding, 2 years old—1, J. R. Jewett; 2, H. G. Kitchen.

Foal of 1913—1, G. Pugh, Nas-sis; 2, Chas. Ross, Covered Bridge; 3, Wm. Craig.

CARRIAGE HORSES TO HARNESS.

Filly or Gelding, 3 years old—1, H. G. Kitchen; 2, Robert Long.

Filly or Gelding, 2 years old—1, Frank Kilburn; 2, John R. Jewett.

Single Horse in Harness—1, Frank Burnett; 3, Judson Burden.

Best Horse, any age—1, Mrs. A. Kitchen.

Mare or Gelding, driven by lady—1, Mrs. A. B. Kitchen; 2, Guy Lawson; 3, Mrs. Geo. Colwell, Fredericton.

GENERAL PURPOSE

Filly or Gelding, any age—1, Frank Burnett; 2, B. Goodspeed; 3, H. Melton, Hammondville.

Matched Team in harness—1, Frank Burnett; 2, H. Melton; 3, A. Davidson

ROADSTERS TO HARNESS.

Filly or Gelding, 3 years old—1, H. S. Pipes & Son; 2, H. G. Kitchen; 3, Jasper Burnett.

Filly or Gelding, 2 years old—1, H. G. Kitchen; 2, N. Keirstead; 3, J. R. Jewett.

Single Horse in harness—1, H. G. Kitchen; 2, Judson Burden; 3 Jasper Burnett.

Best horse, any age—Diploma— H. S. Pipes & Son.

AGRICULTURAL HORSES.

Brood Mare, any age with foal by her side—1, W. H. Bailey, Nas-sis; 2, Fred McFarlane, Fredericton; 3, A. Davidson.

Filly or Gelding, 3 years old—1, Frank Burnett, Lr. French Village; 2, Moses Flemming, Scotch Lake.

Filly or Gelding, 2 years old— 1, Geo. Pugh; 2, W. H. Moore; 3, John R. Jewett.

Filly or Gelding, yearling—1, E. H. Allen; 2, Geo. Pugh.

Foal of 1913—1, W. H. Bailey; 2, B. Goodspeed; 3, Fred McFarlane.

Span, in harness—1, Jasper Burnett; 2, D. Fraser & Sons; 3, Moses Flemming.

HEAVY DRAUGHTS.

Brood Mare, with foal—1, Alphonse Kelly; 2, W. R. Christie.

Filly or Gelding, 3 years old— 1, Arthur Kitchen; 2, John Barton; 3, Alphonse Kelly.

Filly or Gelding, 2 years old—1, D. Fraser & Sons; 2, Robert Gay; 3, W. R. Christie.

Yearling Filly or Gelding—1, Geo. L. Pugh.

Foal of 1913—1 and 3, Alphonse Kelly; 2, W. R. Christie.

Span—1, D. Fraser & Sons; 2, Arthur Kitchen; 3. Alphonse Kelly.

PONIES.

Pony in single harness—1, Wm. Jamieson, Sussex Corner.

BEEF CATTLE.

SHORTHORNS.

Bull, 3 years old and upwards—1, D. Fraser & Sons, Plaster Rock.

Bull, 2 years old—1, R. A. Snowball; 2, I. M. Lovitt; 3, D. Fraser & Sons.

Bull, senior yearling—1, John R. Jewett, Macinquac.

Bull, junior yearling — 1, R. A. Snowball.

Bull, senior calf—1 and 3, R. A. Snowball; 2, S. McCullough, Mouth Keswick.

Bull, junior—1, I. M. Lovitt; 2, R. A. Snowball.

Best Bull, any age—Diploma—R. A. Snowball.

Cow, 4 years old—1, 3 and 4, I. M. Lovitt; 2, R. A. Snowball.

Cow, 3 years old—1, R. A. Snowball.

Cow or Heifer, 2 years old—1 and 4, R. A. Snowball; 2 and 3, D. Fraser & Sons.

Heifer, senior yearling—1, R. A. Snowball; 2, I. M. Lovitt.

Heifer, junior yearling—1 and 2, R. A. Snowball; 3, I. M. Lovitt.

Heifer, senior calf—1, S. McCullough; 2 and 3, R. A. Snowball.

Heifer, junior calf—1 and 3, I. M. Lovitt; 2, John R. Jewett.

Female, any age—Diploma— R. A. Snowball.

Aged Herd—1, R. A. Snowball; 2, I. M. Lovitt.

Breeders' Young Herd—1, R. A. Snowball; 2, I. M. Lovitt; 3, John R. Jewett.

Bull, and 3 of his get—Diploma—I. M. Lovitt.

Cow and 2 of her offspring—Diploma—I. M. Lovitt.

HEREFORDS.

Bull, 3 years and upwards—1, A. Bradshaw, Amherst, N. S.; 2, W. O'Brien & Son.

Bull, 2 years old—1, Wm. O'Brien & Sons.

Bull, senior yearling—1, Wm. O'Brien & Sons.

Bull, junior yearling—1, A. Bradshaw.

Bull, senior calf—1, A. Bradshaw.

Bull, junior calf—1, A. Bradshaw; 2, W. R. White.

Bull, any age—Diploma— A. Bradshaw.

Cow, 4 years old—1 and 4, A. Bradshaw; 2, Wm. O'Brien & Sons; 3, W. R. White.

Cow, 3 years old—1, A. Bradshaw; 2, Wm. O'Brien & Sons.

Cow or Heifer, 2 years old—1, A. Bradshaw; 2, Wm. O'Brien & Sons.

Heifer, senior yearling—1, A. Bradshaw; 2, Wm. O'Brien & Sons; 3. W. R. White.

Heifer, junior yearling—1, A. Bradshaw; 2, W. R. White; 3, Wm. O'Brien & Sons.

Heifer calf senior—1, Wm. O'Brien & Sons; 2, A. Bradshaw; 3. W. R. White.

Heifer calf junior—1, A. Bradshaw; 2, Wm. O'Brien & Sons; 3, W. R. White.

Female, any age—Diploma—A. Bradshaw.

Aged Herd—1, A. Bradshaw; 2, Wm. O'Brien & Sons.

Breeders' Young Herd—1, A. Bradshaw; 2, Wm. O'Brien & Sons.

Bull and 3 of his get—Diploma—A. Bradshaw.

POLLED ANGUS.

Bull, 3 years old—1, E. L. Allen; Bangor; 2, F. G. Spafford, Compton, Quebec.

Bull, senior yearling—1, E. L. Allen

Bull, junior yearling—1, F. G. Spafford.

Bull, senirr calf—1, F. G. Spafford.

Bull, junior calf—1, F. G. Spafford.

Bull, any age—Diploma—E. L. Allen

Cow, 4 years old—1 and 4, E. L. Allen; 2 and 3, F. G. Spafford.

Cow, 3 years old—1 and 2, F. G. Spafford.

Cow, or Heifer, 2 years old—1 and 3, E. L. Allen; 2, F. G. Spafford.

Heifer, senior yearling—1, F. G. Spafford.

Heifer, junior yearling—1, F. G. Spafford; 2, E. L. Allen.

Heifer, senior calf—1. F. G. Spafford.

Heifer, junior calf—1, F. G. Spafford; 2, E. L. Allen.

Female any age—Diploma— F. G. Spafford.

Aged Herd—1, F. G. Spafford; 2, E. L. Allen.

Breeders' Young Herd—1, F. G. Spafford.

Bull and 3 of his get—Diploma—F. G. Spafford.

Cow and 2 of her offspring—Diploma F. G. Spafford.

DEVONS.

All prizes to W. A. Pinkney, Melborne, N. S. without competition.

GRADE BEEF CATTLE.

Cow, 3 years old—1, A. Bradshaw; 2, W. O'Brien & Sons.

Cow or Heifer 2 years old—1, F. G. Spafford.

Heifer, 1 year old—1, A. Bradshaw.

Heifer Calf—1, A. Bradshaw.

FAT CATTLE.

Fat Ox or Steer, 2 years or over—1, A. Bradshaw.

Fat Cow or Heifer—1, A. Bradshaw.

Pair of Fat Cattle—1, A. Bradshaw.

DAIRY CATTLE

AYRSHIRES.

Bull, 3 years old—1, McIntyre Bros. Sussex.

Bull, 2 years old—1, A. McRae & Sons, Charlottetown; 2, McIntyre Bros.; 3, Howard McKendy, Chatham.

Bull, senior yearling—1, A. McRae & Sons; 2, McIntyre Bros.

Bull, junior yearling—1, McIntyre Bros.; 2, Chas. Symes.

Bull, senior calf—1 and 2, McIntyre Bros.; 3, A. McRae & Sons.

Bull, junior calf—1, McIntyre Bros.

Bull, any age—Diploma, McIntyre Bros.

Cow, 4 years old—1, 3 and 4, McIntyre Bros.; 2, A. McRae & Sons.

Dry Cow, 4 years old—1, McIntyre Bros.; 2 and 3, A. McRae & Sons.

Cow, 3 years old—1, McIntyre Bros; 2, A. McRae & Sons.

Dry Cow, 3 years old—1, McIntyre Bros.; 2, A. McRae & Sons.

Cow, 2 years old—1 and 2, A. McRae & Sons; 3, McIntyre Bros.

Heifer, 2 years old—1, McIntyre Bros.

Heifer, Senior yearling—1, A. McRae & Sons; 2 and 3, McIntyre Bros.

Heifer, junior yearling—1 and 2, McIntyre Bros.

Heifer calf, senior—1, McIntyre Bros.; 2 and 3, A. McRae & Sons.

Heifer calf, junior—1, McIntyre Bros.

Best Female, any age—Diploma, McIntyre Bros.

Aged herd—1 and 3, McIntyre Bros; 2, A. McRae & Sons.

Breeders' young herd—1 and 3, McIntyre Bros.; 2, A. McRae & Sons.

Bull and 3 of his get—Diploma, McIntyre Bros.

Cow and 2 of her offspring—Diploma, McIntyre Bros.

Four animals, get of sire—1, A. McRae & Sons; 2, McIntyre Bros.

Two progeny of one cow—1, A. McRae & Sons; 2, McIntyre Bros.

HOLSTEINS.

Bull, 3 years old—1, Harding Bros., Welsford, N. B.; 2, Lea & Clark, Victoria, P. E. I.; 3, C. H. Giles, Fredericton.

Bull, 2 years old—1, Lea & Clark; 2, Chas. C. Murray, Central Keswick, N. B.; 3, W. S. Harding, Welsford, N. B.

Bull, senior yearling—1, Lea & Clark.

Bull, junior yearling—1, Lea & Clark; 2 and 3, Harding Bros.

Bull, senior calf—1, Harding Bros.; 2, C. H. Giles; 3, W. S. Harding.

Bull, junior calf—1 and 2, Lea & Clark; 3, W. S. Harding.

Champion Bull—Harding Bros.

Reserve Champion—Lea & Clark.

Cow, 4 years old—1, Harding Bros; 2, Lea & Clark; 3, C. H. Giles.

Dry Cow, 4 years old—1, Harding Bros.; 2 and 3, Lea & Clark.

Cow, 3 years old—1, Lea & Clark; 2, Harding Bros.

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The Prince Edward Island Exhibition.

(Continued from page 855.)

get of one sire, the get of Count Mercena Posch. Lea & Clark's Johanna Mercedes Posch was the dam of the best two animals, progeny of one cow.

DAIRY GRADES were a good, useful lot and the winnings of the respective owners will be found elsewhere in this issue.

SHEEP.

The sheep classes were judged by J. M. Guardhouse, Weston, Ont. Despite the fact that many of the large Island flocks were away at Chatham there were enough good ones at home to fill the pens very creditably. The grand championship pen was composed of South Downs.

SWINE

were there in abundance, Berkshires, Yorks, Chesters, and Tamworths of quality. W. W. Ballentyne placed the awards.

The various sections of the respective classes were closely contested and there were no easy walkovers.

See full list of awards on another page.

POULTRY.

J. P. Landry, Truro, N. S. placed the awards in the poultry classes. The showing of birds was good but many of the individuals, as might be expected, at this time, were not in show condition. A few months hence when the winter poultry show season arrives, the birds now in ragged dresses will have donned new attires and will make a much more pleasing showing.

Prize Winners at the Prince Edward Island Exhibition.

HORSES

THOROUGHBREDS.

Stallion, 3 years old and under 15 years—No entry.

Mare, 3 years old and upwards.—No entry.

Filly, 2 years old—No entry.

CARRIAGE HORSES.

Stallion, 4 years old and upwards, in harness.—No entry.

Stallion, 3 years old.—No entry.

Stallion, 2 yrs. old—1, Wallace Stead.

Filly, 3 years old—1, Fred Bulman & Son; 2, A. A. McDonald, Souris; 3, Geo. L. Boswall.

Filly, 2 years old—1, C. Robertson; 2, A. Matheson; 3, Wm. L. Essery.

Filly, 1 year old—1, A. H. Boswall; 2, Geo. Kerr; 3, R. E. Longworth.

Foal of 1913.—1, Brehant & Conners; 2, Spurgeon Warren; 3, Byrne Bros.

Mare, with foal at foot—1, Spurgeon Warren.

Carriage Mare or Gelding, 15½ hands or over—1, Prowse Bros.; 2, Thos. Campbell; 3, Angus McPhee.

Carriage Mare or Gelding, under 15½ hands.—1, W. S. McKie; 2, H. F. Vanidestine; 3; Reuben Vessey.

Champion Mare, any age—Diploma—A. A. McBeath.

Dealers pair of horses, geldings or mares, shown to a carriage. Horses to count 60 per cent and appointment 40 per cent.—1, W. S. McKie.

STANDARD BREDS.

Stallion, 4 years old and upward—1, Hammond Kelly, Charlottetown.

Stallion, 2 yaars old and under 4 years—1, W. T. Church; 2, J. H. G. Murphy; 3, Geo. Reddin.

Filly, 3 years old and upwards—1, Dr. A. A. Leckie; 2, D. W. White.

Filly, 2 years old—No entry.

Filly, 1 year old—No entry.

SADDLE HORSES.

Gentleman's Saddle Horse, not less than 15½ hands—1, John Horne, Winsloe; 2, J. A. Stewart, Union Road; 3, Guy Stewart, Southport.

Lady's Saddle Horse, not less than 15 hands—1, Fred Turner, Winsloe Road; 2, L. M. Boswall, Marshfield; 3, Ray Horne, Winsloe.

Filly, 2 years old—Almon Boswall.

Best Stallion, any age, Canadian Horse Society Silver Medal—

Best Mare, any age, Canadian Horse Society Silver Medal—Almon Boswall.

... ROADSTERS.

Stallion, 4 years old and upwards 15½ hands and over.—1, Byrne Bros.

Stallion, 3 years old—No entry.

Filly, 3 years old—1, Ira Carr; 2, H. Horne; 3, R. E. Longsworth.

Brood Mare, with foal at her side—1, Byrne Bros; 2, D. W. White.

CLYDESDALES, SHIRES AND REGISTERED CANADIAN DRAFT HORSES.

Stallion, 4 years old and upwards—1, J. Richards, Bediford; 2, David Reid; 3, W. W. Crosby.

Stallion, 3 years old—1, P. S. Brown & Son; 2, R. B. McKinley; 3, Dr. A. D. Leikie.

Stallion, 2 years old—1, Wm. Godfrey; 2, Dr. Goodwill; 3, Geo. E. McNeill.

Stallion, 1 year old—1, J. H. Crosby; 2, E. Heartz; 3, D. Stewart.

Filly, 3 years old—1, J. Richards; 2, W. W. Crosby.

Filly, 2 years old—1, Wm. L. Essery; 2, J. Richards; 3, L. H. Drake.

Filly, 1 year old—1, D. Lee; 2, J. Richards; 3, J. H. Crosby.

Foal of 1913—1, Vernon McMillan; 2, C. E. McKenzie; 3, W. M. McRae.

Mare with foal at foot—1, Edgar Heartz; 2, C. E. McKenzie; 3, W. M. McRae.

Champion Stallion, any age—Diploma—J. Richards.

Champion Mare, any age—Diploma—D. Lee.

Stallion and 3 of his get—Diploma—Wallace Stead.

SPECIAL PRIZES.

Given by The Clydesdale Horse Association of Canada.

For best Clydesdale Stallion, any age—1, John Richards; 2, David Reid; 3, W. W. Crosby.

For best Clydesdale Mare, any age—1, Jabez Lea; 2, W. Lee; 3, J. H. Crosby.

For best single mare or gelding in harness, sired by registered Clydesdale Stallion—1, D. C. McKinley; 2, Chas. Bryenton; 3, Leslie McEwen.

For best Foal of 1913, sired by a pure bred Clydesdale Stallion from a grade mare of any breed—1, Chas. Bryenton; 2, Herbert Mason; 3, Neil Robinson.

Special prize given by Hon. John Richards for foal of 1913, sired by the Clydesdale stallion, Baron Kelvin—1, Herbert Mason; 2, Neil Robinson; 3, C. E. McKenzie.

DRAFT HORSES.

Filly, 3 years old—1, Geo. Dockendorff; 2, D. Todwell.

Filly, 2 years old—1, A. A. McBeth; 2, Donald McMillan; 3, Vernon McMillan.

Filly, 1 year old—1, J. Heber Crosby; 2, R. B. McKinley; 3, Waldo E. Bain.

Foal of 1913—1. Chas. Bryenton; 2, Herbert Mason; 3, Neil Robinson.

Mare, with foal at foot—1, Chas. Bryenton; 2, Donald Murchison; 3, Herbert Mason.

WALKING HORSES.

Mare or Gelding shown in carriage—1, Ira Carr; 2, Byrne Bros.; 3, Reuben J. Vessey.

FOUR-IN-HAND.

Best Four-in-Hand shown before a Coach or Heavy Carriage—1, G. D. Wright.

CATTLE

SHORTHORNS.

Bull, 3 years onld and upwards—1, Thos. P. Cass, North River.

Bull, 2 years old—1, Hugh McPhee New Dominion; 2, Samuel C. Lane, Mt. Mellick.

Bull, 1 year old—1, Donald Murchison, North River; 2, Duncan Darrach, Canoe Cove.

Bull, senior calf—1, Yonkers & Sanderson, North River; 2, T. P. Cass.

Bull, junior calf—1, Yonkers & Sanderson; 2, T. P. Cass.

Cow, in milk or calf, 3 years old or upwards—1 and 3, T. P. Cass; 2, Yonkers & Sanderson.

Cow, in milk or calf, 2 years old—1, T. P. Cass; 2, Yonkers & Sanderson; 3, Wallace Stead, Highfield.

Heifer, 1 year old—1, T. P. Cass; 2 and 3, Yonkers and Sanderson.

Heifer, senior calf—1, T. P. Cass; 2, Yonkers & Sanderson.

Heifer, junior calf—1, T. P. Cass; 2, Albert Boswall, Pownal.

Champion Bull—Diploma—Yonkers & Sanderson.

Champion Female—Diploma— T. P. Cass.

Herd, 1 bull and 4 females, over 2 years old—1, T. P. Cass.

Breeders' Young Herd, 1 bull and 4 females, under 2 years old—Diploma T. P. Cass.

HEREFORDS.

Bull, 3 years old and upwards—1, Louis Hayden, Cherry Valley.

Cow, in milk or calf, 3 years old, and upwards—1, Louis Hayden.

Heifer, senior calf—1, Louis Hayden

Champion Bull—Diploma—Louis Hayden.

Champion Female—Diploma— Louis Hayden.

Aberdeen or Poled Angus Bull, 2 years old—Robert Furness, Vernon.

AYRSHIRES.

Bull, 3 years old and upwards—1, Easton Bros.

Bull, 1 year old—1, Easton Bros; 2, Robert Stewart; 3, Byrne Bros.

Bull, senior calf—1, Easton Bros.

Bull, junior calf—1 and 2, Easton Bros.

Cow, in milk or calf, 3 years old and upwards—1, A. McRae & Sons; 2 and 3, Easton Bros.

Cow, in milk or calf, 2 years old—1, A. McRae & Sons; 2, Easton Bros.; 3, J. A. Gordon.

Heifer, 1 year old—1, 2 and 3, Easton Bros.

Herd, 1 bull and 4 females over 2 years—1, Easton Bros.

Breeders' Young Herd—Diploma—Easton Bros.

Champion Bull—Diploma— Easton Bros.

Champion Female—Diploma—A. McRae & Sons.

SPECIAL PRIZES

By the Canadian Ayrshires Breeders Association.

For best 4 animals, either sex, any age, get of one sire—1 and 2 Easton Bros.

For best 2 animals, either sex, any age, progeny of one cow—1 and 2, Easton Bros.

JERSEYS.

Bull, 3 years old and upwards—1, W. Clark & Sons, North Wiltshire; 2, Robert Weeks, Highfield.

Bull, 2 years old—1, Spurgeon Warren; 2, S. Holroyd.

Bull, 1 year old—1, Holmes Hamilton; 2, W. Clark & Sons.

Bull, senior calf—1, W. Clark & Sons.

Bull, junior calf—1, Spurgeon Warren; 2, Wallace Stead.

Cow, in milk or calf, 3 years old and upwards—1 and 3, W. Clark & Son; 2, H. Holm.

Cow, in milk or calf, 2 years old—1 and 3, W. Clark & Son; 2, Wallace Stead.

Heifer, 1 year old—1 and 3, W. Clark & Son; 2, Wallace Stead.

Heifer, senior calf—1, W. Stead; 2, W. Clark & Son.

Heifer, junior calf—1, W. Clark & Son; 2, W. Stead.

Herd, 1 bull and 4 females over 2 years old—1, W. Clark & Son.

Breeders' Young Herd—Diploma—W. Clark & Son.

Champion Bull, any age—Diploma—W. Clark & Son.

Champion Female, any age—Diploma—W. Clark & Son.

GUERNSEYS.

Bull, 2 years old—1, Roper Bros.

Bull, 1 year old—1, Roper Bros.

Bull, senior yearling—1, Roper Bros.

Bull, junior yearling—1, Roper Bros.

Cow, in milk or calf, 3 years old or upwards—1, F. H. Roper; 2 and 3, Roper Bros.

Cow, in milk or calf, 2 years old—1, F. H. Roper; 2 and 3 Roper Bros.

Heifer, 1 year old—1 and 2, Roper Bros.; 3, F. H. Roper.

Heifer, senior calf—1, Roper Bros.; 2, F. H. Roper.

Heifer, junior calf—1, Roper Bros.; 2, C. Stewart, Covendish.

Herd, 1 bull and 4 females over 2 years old—1, Roper Bros.

Breeders' Young Herd—Diploma—Roper Bros.

Champion Bull, any age—Diploma—Roper Bros.

Champion Female, any age—Diploma—F. H. Roper.

HOLSTRIN—FRIESIANS.

Bull, 3 years old and upwards—1, Lea & Clark, Victoria; 2, J. M. Leard & Son, Kelvin Grove; 3, John Tweedy Enerscliffe.

Bull, 1 year old—1, J. M. Leard & Sons; 5, W. J. Gibson, Marshfield; 3, F. W. Prowse.

Bull, senior calf—1 and 2, J. M. Leard & Son; 3, Lea & Clark.

Bull, junior calf—1 and 2, J. M. Laird & Son.

Cow, in milk or calf, 3 years old and upwards—1, Lea & Clark; 2 and 3, J. M. Laird & Son.

Cow, in milk or calf, 2 years old—1 and 2, Lea & Clark; 3, Byrne Bros.

Heifer, 1 year old—1, J. M. Laird & Son; 2, Lea & Clark; 3, W. J. Gibson.

Heifer, senior calf—1, Lea & Clark; 2, W. J. Gibson.

Heifer, junior calf—1, J. M. Laird; 2, Edgar Heartz, Marshfield.

Herd, 1 bull and 4 females, over 2 years old—1, Lea & Clark.

Breeders' Young Herd—Diploma—Lea & Clark.

SPECIAL PRIZES.

Holstein—Friesian Association.

Champion Bull, $10.00— Lea & Clark.

Champion Female, $10.00— J. M. Laird & Son.

Three Animals, get of one sire $12.—J. M. Laird & Son.

Two Animals, progeny of one cow, $10.00—Lea & Clark.

Breeders' Young Herd, $8.00—Lea & Clark.

BEEF CATTLE GRADES.

Cow, 4 years old and upwards, in milk or calf—1 and 2, Drake & Co., Charlottetown; 3, Mrs. J. L. Lane, Mt. Mellick.

Cow, in milk or calf, 3 years old—1, Drake & Co.; 2, T. P. Cass; 3, A. H. Boswall, Marshfield.

Heifer, 2 years old and undec 3 yrs.—1, Drake & Co.; 2, T. P. Cass; 3, A. A. McBeth, Marshfield.

Heifer, 1 year old—1 and 3— T. P. Cass; 2, Jos. Praught, Pownal.

Heifer, senior calf—1 and 2, Joseph Praught.

Heifer, junior calf—1, Albert Boswall; 2, A. A. McBeth.

AYRSHIRE GRADES.

Cow, 4 years old in milk or calf—

1, Robt. Stewart, Winslow; 2, G. W. Wood & Son, Hazelbrook.

Cow, in milk or calf, 3 years old—1, Easton Bros.; 2, Robt. Stewart; 3, A. McRae & Son.

Heifer, 2 years old and under 3 yrs.—1 and 2, A. McRae & Sons; 3, Easton Bros.

Heifer, 1 year old—1 Easton Bros.; 2, A. McRae & Sons; 3, Wm. Gregory.

Heifer, senior calf—1, G. W. Wood & Son; 2, Robt. Stewart.

Heifer, junior calf—1, Easton Bros.

JERSEY OR GUERNSEY GRADES.

Cow, 4 years old, in milk or calf—1, Wm. Gregory; 2, Roper Bros.; 3, Robt. Stewart.

Cow, in milk or calf, 3 years old—1, Roper Bros.; 2, Easton Bros.; 3, Robt Stewart.

Heifer, 2 years old and under 3 yrs.—1, A. McRae & Sons; 5, Roper Bros; 3, Robt. Stewart.

Heifer, senior calf—1, Roper Bros.; 2, T. P. Cass.

Heifer, 1 year old—1, Roper Bros.; 2, Robt. Stewart; 3, Wallace Stead.

Heifer, junior calf—1, W. Clark & Son; 2, W. L. Essery, Union Road.

HOLSTEIN GRADES.

Cow, 4 years old, in milk or calf—1 and 3, W. J. Gibson; 2, J. M. Laird & Son; 4, Hector McPhee; 5, Edgar Heartz.

Heifer, 2 years old and under 3 yrs.—1, W. J. Gibson.

Heifer, 1 year old—1, Edgar Heartz

Heifer, junior calf—1, W. J. Gibson.

JUDGING CLASSES.

Prizes given by the P. E. Island Department of Agriculture, to farmers and farmers' sons living on a P. E. I. farm, who are under 25 years of age.

Greatest Skill in Judging Beef Cattle—1, Earl McRae, North Wiltshire; 2, W. W. Gibson, Marshfield; 3, A. O. L. Hill, Little York; 4, Walter R. Shaw, St Catherines; 5, Earl Ings, Hazelbrook.

Greatest Skill in judging Dairy Cattle—1, W. J. Gibson; 2, A. O. F. Gill, Little York; 3, W. E. Jones, Hazelbrook; 4, Geo. A. Godfrey, N. Wiltshire, 5, Earl McRae N. Wiltshire.

STEERS.

Best pair Steers, 2 years old—1, A. P. Ings, Pownal.

Best single steer, 2 years old—1, A. P. Ings.

Best pair steers, 1 year old—1, Jos. Praught.

Best single steer, 1 year old—1 and 2, Jos. Praught.

Best pair of steers. Calves of 1913—S. C. Lane; 2, A. H. Boswall.

MILK TEST.

Canadian Bank of Commerce Medal for best Milch Cow, any Breed— A. McRae & Son.

SHEEP.

LEICESTERS.

Ram, 2 shears and over—1, Albert Boswall, Pownal; 2, S. C. Lane; 3, S. L. Boswall, Pownal.

Ram, shearling—1, S. L. Boswall; 2, Albert Boswall.

Ram Lamb—1, Albert Boswall; 2 and 3, S. L. Boswall.

Ewe, 2 shears and over, having reared lamb in 1913—1, Albert Boswall; 2, S. C. Lane; 3, S. L. Boswall.

Ewe, shearling—1, Albert Boswall; 2, A. H. Boswall, Marshfield; 3, S. C. Lane, Mt. Mellick.

Ewe, Lamb—1, A. Boswall; 2, A. H. Boswall; 3, S. C. Lane.

Flock, 1 ram, 2 aged ewes, 1 shearling ewe and one ewe lamb—1, A. Boswall; 2, S. C. Lane; 3, S. L. Boswall.

COTSWOLDS.

Ram, 2 shears and over—1 and 2, John Tweedy, Ernscliffe; 3, G. W. Wood & Sons, Hazelbrook.

Ram, shearling—1, John Tweedy; 2, Harry Tweedy, Ernscliffe.

Ram Lamb—1 and 3, John Tweedy; 2, Harry Tweedy.

Ewe, 2 shears and over—1 and 3, John Tweedy; 2, Harry Tweedy.

Ewe, shearling—1, John Tweedy; 2, Harry Tweedy; 3, G. W. Wood & Son.

Ewe Lamb—1, John Tweedy; 2, Harry Tweedy; 3, G. W. Wood & Son.

Flock, ram, 2 aged ewes, 1 shearling ewe and 1 ewe lamb—1, John Tweedy; 2, Harry Tweedy; 3, G. W. Wood & Son.

LINCOLNS.

Ram, 2 shears and over—1, Albert Boswall, French Fort; 2, A. H. Boswall; 3, Ernest Lund, Mt. Herbert.

Ram, shearling—1, Albert Boswall; 2, Ernest Lund; 3, A. H. Boswall.

Ram, Lamb—1, Albert Boswall; 2, A. H. Boswall.

Ewe, 2 shears and over—1 and 3, Ernest Lund; 2, Albert Boswall.

Ewe, shearling—1, Albert Boswall; 2 and 3, Ernest Lund.

Ewe, Lamb—1, Albert Boswall; 2, A. Boswall; 3, Ernest Lund.

Flock, ram, 2 aged ewes, 1 shearling ewe, 1 ewe lamb—1, Albert Boswall; 2, Ernest Lund; 3, A. Boswall.

SOUTHDOWNS.

Ram, 2 shears and over—1, Oliver Saunders, Winsloe.

Ram, Shearling—1, Oliver Saunders.

Ram, Lamb—1, Elijah Saunders, Winslow Road; 2, Oliver Nunn, Winsloe Road; 3, Oliver Saunders.

Ewe, 2 shears and over—1 and 3, Oliver Saunders; 2, Oliver Nunn.

Ewe, Shearling—1 and 3, Oliver Saunders; 2, Elijah Saunders.

Ewe Lamb—1, Elijah Saunders; 2 and 3, Oliver Saunders.

Flock—1, Elijah Saunders; 2, Oliver Saunders; 3, Oliver Nunn.

SHROPSHIRES.

Ram, 2 shears and over—1, L. H. D. Foster, Marshfield.

Ram, Shearling—1, Oliver Nunn; 2, Geo. L. Boswall, French Fort; 3, L. H. D. Foster.

Ram, Lamb—1 and 3, Geo. L. Boswall; 2, Oliver Nunn.

Ewe, 2 shears and over—1, Oliver Nunn; 2 and 3, Geo. L. Boswall.

Ewe, Shearling—1 and 2, Geo. L. Boswall; 3, Oliver Nunn.

Ewe Lamb—1 and 2, Geo. L. Boswall; 3, Oliver Nunn.

Flock—1, Geo. L. Boswall; 2, Oliver Nunn.

OXFORD DOWNS.

Ram, 2 shears and over—1, A. H. Boswall; 2, Henry W. Weatherby, Mt. Herbert

Ram, Shearling—1, A. H. Boswall; 2, H. W. Weatherby.

Ram, Lamb—1 and 2, A. H. Boswall; 3, H. W. Weatherby.

Ewe, 2 shears and over—1 and 3, A. H. Boswall; 2, J. M. Laird & Son.

Ewe, shearling—1, J. M. Laird & Son; 2, A. H. Boswall; 3, H. W. Weeatherby.

Ewe, Lamb—1 and 2, J. M. Laird & Son; 3. A. H. Boswall.

Flock—1, A. H. Boswall; 2, H. W. Weatherby.

SUFFOLKS.

Ram, 2 shears and over—1, Albert Boswall.

Ram, shearling—1, Albert Boswall; Almon Boswall.

Ram, Lamb—1, Albert Boswall; 2, 2, Almon Boswall.

Ewe, 2 shears and over—1, Almon Boswall; 2 and 3, Albert Boswall.

Ewe, Shearling—1, Almon Boswall; 2 Albert Boswall.

Ewe, Lamb—1 and 2, Albert Boswall; 3, Almon Boswall.

Flock—1, Albert Boswall; 2, Almon Boswall.

HAMPSHIRE DOWNS.

Ram, Lamb—1, 2 and 3, Almon Boswall.

Ewe, 2 shears and over—1, 2 and 3, Almon Boswall.

Ewe, Shearling—1, Almon Boswall; 2, Geo. L. Boswall; 3, Oliver Nunn.

Ewe Lamb—1, Oliver Nunn.

Flock—1, Oliver Nunn; 2, Almon Boswall.

DORSET HORNS.

Ram, 2 shears and over—1, Geo. L. Boswall.

Ram, Shearling—1, John Tweedy, 2, Geo. L. Boswall.

Ram, Lamb—1, Geo. L. Boswall; 2, John Tweedy.

Ewe, 2 shears and over—1 and 2, Geo. L. Boswall; 3, John Tweedy.

Ewe, Shearling—1, Geo. L. Boswall; 2, John Tweedy.

Ewe, Lamb—1, Geo. L. Boswall; 2, John Tweedy.

Flock—1, Geo. L. Boswall; 2, John Tweedy.

CHEVIOTS.

Ram, 2 shears and over—1, Wm. Godfrey.

Ewe, 2 shears and over—1 and 2, Robert Furness, Vernon.

LONG WOOL GRADES.

Ewe, 2 shears and over—1, S. C. Lane; 2, Ernest Lund; 3, Albert Baswall.

Ewe, Shearling—1, Ernest Lund; 2, Albert Boswall; 3, S. L. Boswall.

Ewe, Lamb—1, S. C. Boswall; 2, S. C. Lane; 3, Albert Boswall.

Wether, Shearling—1, S. L. Boswall 2, S. C. Lane; 3, Albert Boswall.

Wether, Lamb—1, S. C. Lane; 2, Geo. W. Wood & Son.

Best Fat Ewe or Wether—1, S. C. Lane; 2, Albert Boswall; 3, S. L. Boswall.

SHORT or MEDIUM WOOL GRADES

Ewe, 2 shears and over—1, Albert Boswall; 2 and 3, Oliver Saunders.

Ewe, shearling—1 and 2, Oliver Saunders; 3, Albert Boswall.

Ewe, Lamb—1, Geo. L. Boswall; 2, Elijah Saunders; 3, L. H. D. Foster.

Wether, Shearing—1 and 3, Oliver Saunders; 2, Oliver Nunn.

Wether, Lamb—1 and 2, Oliver Saunders; 3, Elijah Saunders.

Best Fat Ewe or Wether—1, Albert Boswall; 2, Elijah Saunders; 3, Robt. Furness.

J. A. Humphrey & Sons, special prize for best collection of sheep, any pure breed, carrying best fleeces for manufacture of tweeds— Suit length Humphrey's Moncton Tweeds—Oliver Saunders.

SWINE

BERKSHIRES.

Boar, 2 years old and upwards—1, John Simons, E. Royalty; 2, Jas. F. Roper, Charlottetown; 3, George W. Wood & Son.

Boar, 1 year old—1 Peter Brodie, Little York; 2, Geo. W. Wood & Son.

Boar, over 6 mos.—1, A. P. Ings; 2, Geo. W. Wood & Son.

Boar, under 6 mos.—1, Geo. W. Wood; 2, Stewart Bros; 3, Peter Brodie.

Sow, 2 years old—1, Thos. P. Cass; 2, Stewart Bros.

Sow, 1 year old—1, S. L. Lane; 2, Peter Brodie; 3, Geo. W. Wood.

Sow, over 6 mos.—1, T. P. Cass; 2, Geo. W. Wood & Son; 3, Peter Brodie

Sow, under 6 mos.—1, S. L. Lane; 2, Geo. W. Wood & Son; 3, Stewart Bros.

Pair of Pigs under 6 mos and over 3 mos.—1, Geo. W. Wood & Son; 2, S. C. Lane; 3, Stewart Bros.

Breeding Sow with litter—1, Stewart Bros; 2, Peter Brodie; 3, Benj. Mallett, Little York.

Sweepstakes Boar—John Simmons.

Sweepstakes Sow—T, P. Cass.

Pen, 1 boar and 3 females, any age—1, Peter Brodie.

YORKSHIRES.

Boar, 2 years old—1, J. W. Callbeck, Summerside; 2, Jas. A. Gordon, New Perth.

Boar, 1 year old—1, A. A. MacBeth; 2, J. W. Callbeck; 3, Wallace Stead.

Boat, over 6 mos.—1, J. W. Callbeck; 2, A. A. MacBeth.

Boar, under 6 mos.—1, J. W. Callbeck; 2, W. H. Pope Cook, York; 3, J. W. Callbeck.

Sow, 2 years old—1, J. W. Callbeck 2, Stewart Bros.; 3, Wallace Stead.

Sow, 1 year old—1 and 2, J. W. Callbeck; 3, Stewart Bros.

Sow, over 6 mos.—1, 2 and 3, J. W. Callbeck.

Sow, under 6 mos.—1 and 2, J. W. Callbeck; 2, Geo. Crockett.

Pair of Pigs, 3 mos. and under 6 mos.—1, J. W. Calbeck; 2, Stewart Bros.; 3, Geo. Crockett.

Breeding Sow, with litter—1 and 2, J. W. Calbeck; 3, Stewart Bros.

Sweepstakes Boar—A. A. MacBeth.

Sweepstakes Sow—J. W. Calbeck.

Pen—1, J. W. Calbeck.

TAMWORTHS.

Boar, 1 year old—1, W. J. Gibson.

Boar, over 6 mos.—1, W. J. Gibson.

Boar, under 6 mos.—1, W. J. Gibson.

Sow, 2 years old—1, W. J. Gibson.

Sow, under 6 mos. old—1 and 2, W. J. Gibson.

Breeding Sow with litter—1, W. J. Gibson.

Sweepstakes Boar—W. J. Gibson.

Sweepstakes Sow—W. J. Gibson.

Pen—1, W. J. Gibson.

CHESTER WHITES

Boar, over 2 years—1, F. W. Prowse Union Road; 2, Pope Cook.

Boar, 1 year old—1, Wm. Court, Marshfield.

Boar, over 6 mos.—1, A. H. Boswall; 2 and 3, Pope Cook.

Boar, under 6 mos.—1, Wallace Stead; 2, F. W. Prowse; 3, William Court.

Sow, over 2 years—1, F. W. Prowse, 2, Pope Cook.

Sow, 1 year old—1, A. H. Boswall.

Sow, over 6 mos.—1, F. W. Prowse; 2, Pope Cook; 3, F. W. Prowse.

Sow, under 6 mos.—1 and 3, F. W. Prowse; 2, Wm. Court.

Pair of Pigs, over 3 mos. and under 6 mos.—1 and 2, F. W. Prowse; 3, Wm Court.

Breeding Sow, with litter—1, Pope Cook.

Sweepstakes Boar—A. H. Boswall.

Sweepstakes Sow—A. H. Boswall.

Pen—F. W. Prowse.

EXPORT BACON HOGS.

Best pen pure bred hogs for Export Bacon—1, W. J. Calbeck; 2, Stewart Bros.; 3, W. J. Gibson; 4, W. J. Calbeck; 5, Geo. Crockett.

Best pen of Grade or Cross Hogs for Expert Bacon—1, Geo. Crockett; 2, Jos. Praught.

Best 2 finished Hogs, any breed—Messrs. Davis & Fraser prizes—1, W. J. Calbeck; 2, Easton Bros.; 3, Pope Cook; 4, S. C. Lane.

Best pair Bacon Hogs, dressing between 125 and 180 lbs. Messrs. R. E. Mutch & Co's prizes—1, W. J. Calbeck; 2, Stewart Bros.

POULTRY.

Anconas Cock—1, John Whitlock; 2, E. J. Vessey; 3, Thos. C. Latham.

Anconas Hen—1 and 2, E. J. Essey; 3, J. Whitlock.

Andalusian Cock—1, Wilfred McNeil; 2, R. Hudson.

Andalusian Hen—1, Wilfred McNeil.

Bramha Cock—1, J. Whitlock; 2, T. C. Latham.

Brahma Hen—1, T. C. Latham; 2, J. Whitlock.

Buff Cochin Cock—1 and 2, T. C. Latham.

Buff Cochin Hen—1 and 2, T. C. Latham.

A. O. V. Cochin Cock—1, T. C. Latham.

A. O. V. Cochin Hen—1, Thos. C. Latham.

Dorking Cock—1, Neil A. McKinnon

Dorking Hen—1, Spring Park Poultry Yards; 2, N. A. McKinnon.

(Continued on page 874)

DAIRYING.

Buying a Cow.

In writing this article I am somewhat in the predicament of a small boy whose maiden aunt asked him to go to a ball game and explain the game to her. He said he would go but he wished his batting average were higher. Thus with me, I wish my buying average were better.

In going out to buy a cow do not let any middle of the road fellow mix you up if you intend to dairy. Get a dairy machine.

Not only must dairy cattle be marked perfectly but in conformation they must show their breeding. We are buying Holsteins. They must be black and white with white legs, from the knees down at least on all four feet, switch muss be white, the skin soft and pliable, while the hair is fine and silky. The udder must be large and of tremendous capacity supported by an extra strong vertebrae. We don't want the legs to be too long either, for by the operations of the law of correlation, we expect to find long heads, long backs and loose connections associated with excessively long legs. Long legs are generally placed close together and you find that animal more subject to tuberculosis, a mincy eater and usually an unprofitable cow.

We demand that our dairy cows carry an udder. We want a good big, sack too, not a piece of fat meat, but an udder that is soft and pliable and elastic—the kind that feels like India rubber and after you have milked out 25 or 35 pounds of milk is limp and empty feeling. This udder should have on the lower side, four good rather slender teats with good-sized openings in the ends so you can milk fast. We prefer to have these teats placed well apart and of equal size. Running forward from the udder and as far forward as possible are the milk veins. They should be large and crooked. Of course the older the cow, the larger and more pronounced they become, especially if she is fed to her capacity. These milk veins end in a well, and the larger the well the better we feel about it.

Now we go to the other end of the cow. We had a beef training and after milking four years we are more than ever insisting that these cows stand wide apart in front. The head should be rather wide between the eyes and dished a trifle with the nose fine and just a trifle longer than what is liked best in a beef cow. The eye is what we watch most. It should be quiet but not sleepy; tranquil but not sluggish. A dairy cow to be a producer must have a tremendous amount of nervous energy but that does not mean that she is a rattle-headed fool, but exactly the opposite. It means that her nerves are under control. Now we want size, lots of size. We do not mean more bigness either, but compact working room. However, there is always a point where size is at the expense of quality and to pass it means a lot of steery nondescripts.

BOUGHT WORTH THE MONEY.

The where and the when to buy these cows is all important. If the intending purchaser lives in a good well-developed dairy district he is fortunate. If not, I would advise him to go to one and not spend his life trying to grade up, when by spending a little extra time and money could start as far along as he would be in 15 or 20 years by only using good bulls or poor or ordinarily bad females. Certain sections are noted for different breeds of dairy cattle. There are places where community breeding has been practiced for some time. Go to one of these breeding districts and buy your cows direct from a farmer. You stand a far better chance than by dealing with a professional cow dealer. We prefer to have a local man, usually a dealer drive us. He knows the country and usually knows where the best cows are and something about the people. The time to buy cows, is when the other fellow wants to sell.

Buying a cow is considerable of a gamble sometimes. At to-day's prices I feel that it is a case of heads the seller wins and tails the buyer loses, where the seller is not a good square breeder with a future he wishes to care for. The final word we wish to leave with you is that although the foundation animals will come high, buy the best—far better top grades than scrub pure-breds. Then use a top registered bull not only registered but directly descended from animals, which were tremendous producers. These heifer calves cared for properly will soon develop into a herd of cows that will be a credit to any farm. But always remember that the three greatest judges of a dairy cow are the tuberculin test, the scales and the Babcock test.

When is a Milch Cow at her Best?

The age limit or greatest usefulness has never been very definitely fixed for a cow. In men, one of the leading physicians of the country thought he had laid down a law which could not be broken safely that a man who reached sixty was done, so far as any work of a successful nature is concerned. But his arguments have all tumbled down in the face of facts presented by men who at seventy or even eighty have been doing the greatest things of the world.

I suppose most men would argue that the cow which has come to the age of eight years is at her prime and should not be kept much longer. But on our farm we have at the present time a Jersey cow which has reached the age of thirteen and is still doing good work. For a number of years we have thought this would be the last season we could keep her, but she raises such fine calves and gives such good milk and in such plentiful supply that we have kept her on and on to her present good old age.

I milked this cow this morning and could not help wishing we had several more as good.

Now, the age of the other extreme of life when a cow begins to be really useful is quite poorly defined. I have seen heifers at three or four that seemed to be as good as they ever were. The fourth year is called by many the poorest year of all. These men say you cannot tell what a heifer will be till she has passed that year. And yet, I have heifers in my herd now that at two are surely proving that they will be some day very valuable members of the herd. It is true that other heifers do not develop quite as early. Some never get to be worth keeping.

Because of this element of uncertainty in young cows, there are a good many farmers who would rather buy their cows all matured and with established reputations. I have a brother-in-law who never thinks of raising a cow. He says it costs too much, and then you do not know after you have raised your cow what she will turn out to be. So when he wants a cow he steps out and buys her.

There is some grain of satisfaction to me, however, in watching the development of the cows of my herd from the little calf up through. When I get a cow of that sort I know her in all her ways; and, what is quite desirable, she knows me. This mutual understanding is, as I look upon it, a very desirable matter.

But the range of usefulness does in the most of cases lie between three and ten years of age. The cows younger than three or older than ten which are really worth keeping in the dairy are the exception and not the rule.

Constitution of the Herd Important.

One of the essential things for the breeder to look well after, is the constitution of the herd. The survival of the fittest is what has kept up the vitality and ruggedness of the wild animals in the forest, a weakling has no place in the economy of animal improvement and when mated with some of the rugged cows, even of scrub and mongrel breeding, there has been no improvement because of the lack of vitality which is necessary in the transmission of quality to the offspring. The breeder that overlooks this quality and neglects the individuality of the sire at the head of his herd has weakened a link in the great chain of dairy improvement.

A weakened constitution may be caused by heredity or may be caused by improper care while young. The breeder then should look well after the welfare of the calves. The care for calves in such a way as to stunt them in their growth is not of the greatest injury to them but to stunt or dwarf their digestive organs, incapacitates them from handling feed and every one knows what a dainty feeder means. An animal that is not a good feeder is rarely profitable.

Heifers should not be bred too young as it has a tendency to diminish size and retard greatest development. I do not mean to be understood that an undersized cow is always unprofitable, but I do mean to say that if this diminishing in size continues it will work disaster to the herd, and I would consider this a warning and begin to look to the source or cause whether in my sire or in my own mismanagement.

Colantha's 4th's Johanna was a strong cow. Bonostine Belle, Dairymaid of Pinehurst, Jacoba Irene, all were strong cows and let us not lose sight of the fact that it takes a tremendous sight of vitality for a cow to make and produce maximum a-

The Average Man, strikes with his heel, a Ninety Pound Blow at every step.

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Now is the time to put your floors in good shape for the winter. Summer is always wearing on floors. Dirt and sand are constantly brought into the house during summer's open door. Naturally the floors get marred and shabby.

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Another important factor for the breeder to consider is the weeding out process. All animals will not be first class even with the best breeding and care possible for us to give, and to indiscriminately sent out every bull calf that comes along, has much to do with retarding the best development of dairying. There has been such a demand for dairy sires that you can hardly blame breeders for saving everything, but if a large number of the bulls that have been sent out to head herds had died early in the game the business would have been better off.

The responsibility then, for the breeder of dairy cattle, toward dairy improvement is great, and insofar as the breeder breeds and develops his herd to greatest efficiency in breed characteristics and production, will come the best development of the dairy interests of the country. The breeder must recognize the four essential points—breeding, feeding care and selection. They go hand in hand and can not be separated. To neglect one of these points is to make a weak link in the chain of improvement.

Is There Danger of Milk Fever?

I have a young cow that will soon have her second calf. She should come in in ten days and she is giving a good mess of milk now. I tried to dry her up but the pasture has been extra good and she kept gaining instead of drying up. She is a Holstein. Now what I want to know is, if there is more danger of her having milk fever by milking right up to calving, or not? I can't dry her up. What is the best treatment for her now? She is the only cow I ever had that I could not dry up, in fact most of my cows dry up too easy. When she came in before her udder caked badly and one of her quarters did not give more than half as much milk as the other, but now this quarter is giving as much as the rest.

J. T. B.

Ans.—There is very little danger in a heifer having milk fever with her first calf, and a slight danger under ordinary conditions of her having milk fever with the second calf, but with this cow that is being milked right up to her second period of lactation I do not consider there is any danger at all of milk fever. Milk fever only comes when a cow has been dry for a considerable length of time and she is allowed to develop a splendid udder. Then when she freshens and the milk is all removed from the udder at once, there be a collapse of the nervous system and milk fever, so-called, is the result. But where a cow doesn't go dry at all there is practically no danger what ever of milk fever.

Milk fever nowadays is not very much of a scourge to the dairyman anyway. We know how to handle it. We can let the cows go dry now and have a good vacation and rest up, store up energy for a big year's work, and when they come in if we are careful about milking we will have no trouble. At the first milking we milk out only a small portion; then the second milking a little more is taken out, and so on for two or three days, when there is little or no danger of milk fever and we milk the animal clean.

Should, from any cause, too much of the milk be removed at once, and we get a case of milk fever, then it is not a very serious situation. All you have to have is an air pump and force air into the udder and distend it again as it was before the milk was removed and the cow, in 99 cases out of 100, is relieved at once, but the best way is to prevent it, as I have said, by relieving the udder of the pressure gradually and not take the milk all out at once.

With such a promising cow as this it probably would have been better if you could have dried her up and given her four to six weeks, or perhaps eight weeks vacation. She would have accumulated enough energy so that she would have been likely to have made a bigger record the coming year, but nothing serious has happened with the cow herself. Your calf probably won't be quite so strong as it would had the dam been dried off, but it may be that she has vigor enough so that she has continued to give a good flow of milk and develop a healthy, vigorous fetus at the same time. At any rate, the only thing to do now is to keep milking the cow and feed her well. Don't scrimp on her feed. Give her a full ration and thank your stars that you have the start for such a good animal.—O. V. T.

Forcing the Dairy Cow.

Does Record-Making Injure Dairy Cows? is a question dealt with by Mr. Geo. Laidlaw, of Elgin County, Ont., in a letter to the agricultural press. "I have often been asked if the forcing of a cow for a big record is not apt to injure her," he says.

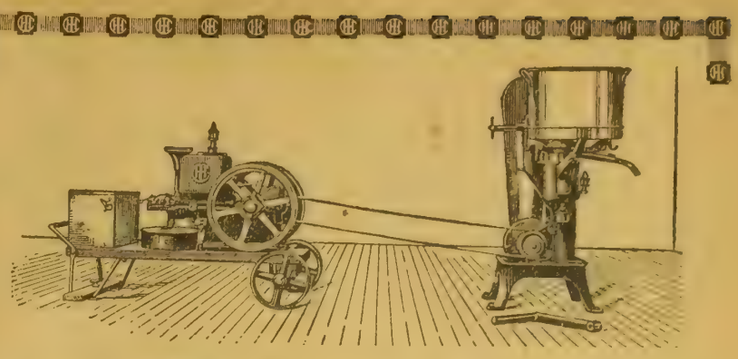
"I feel certain that there is a danger of injuring the health of a cow by getting a little too anxious while making large records and feeding beyond the danger point. On the other hand, there is nothing that will tend to the building up of a dairy cow like feeding for records. Of course the cow must be in the hands of a good, but not over anxious, feeder; by over anxious I mean one who desires to get a little more milk from his cow and knows there is a chance of doing so by feeding more, but may not know just where to draw the line in order to preserve the health of his cow. The old saying that "It is the last straw that breaks the camel's back," holds good here.

We consider that the greatest danger of cow injury comes in the long time records, especially with heifers. We do not believe the short time records to be as injurious as the yearly records. With the short time records one may make a large record from a cow year after year and still give her a good rest from heavy feeding between records, while with the long time records the cow does not have the rest from heavy feeding.

I do not mean to discount the value of yearly records. I consider them to be the most valuable records we have. But in making the large records it is very necessary for the feeder to thoroughly understand what his cow will stand without overdoing her.

I will illustrate by a grade cow that we raised. She was an extra good heifer, and naturally we were especially interested in her welfare. She never made a poor season and was always well fed. I can remember that some of our neighbors remarked, while she was in her prime, that she would not last long because she would wear herself out. When this cow was in her fourtheenth year we put her in a dairy test at London Fair, where she won first place competing with all breeds and ages. When in her fifteenth year she made the best year record she ever made. There is nothing that will develop a heifer and make her a large producer as will testing her.

In feeding for records the offspring of the cow may be affected if the cow is dry for some time before freshening and loaded with fat. It had a tendency to weaken the offspring. We have never had a weak calf ourselves. If we want a good horse, we will feed him well from the time he is foaled, then when he is old enough give him plenty of work to harden him without overdoing him. If we want a good cow we start when she is a calf feed her well, and when old enough, feed and milk to her capacity, but never overdo it.



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See the local agents who handle these machines, and have them demonstrate the working to you, show you the close skimming qualities, and efficiency, and go over the mechanical features with you. They will give you catalogues and full information.

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Early Maturity.

Editor Maritime Farmer:

I think I have the youngest cow on recard. I bought a calf last fall that was dropped in March, 1912, and on the 5th of July, 1913, she had acalf, thus breaking all records for young cows, so far as I can find out. I wrote Prof. Cumming of the Agricultural College, Truro, N. S., and he said he could not trace up any records of younger maturity incattle. The cow is a half Jersey. Her dam is a pure bred Jersey cow. The sire was only a scrub.—Alfred McPherson, Upper River Denis, N. S.

Do any of our readers know of any records that will beat this one for early maturity.

Dairy Thoughts.

He is in no wise a public benefactor who keeps two cows to do the work of one.

A good cow of inferior breeding is not qualified to drop a good calf.

We need not only develop a good working stomach on a calf but a good acting heart. This cannot be done without pure air, sunlight and plenty of exercise.

The best thing for any dairying locality is the organization of local cow test associations.

If you knew the real value of Chamberlain's Liniment for lame back, soreness of the muscles, sprains and rheumatic pains, you would never wish to be without it. For sale by all dealers.

LIVE STOCK.

Rickets in Lambs and Other Animals.

This disease in lambs differs in its manifestations from what is known as rickets in children. It is not the legs but the axial portion of the skeleton that is mainly involved in the lambs. The spine and hindquarters are particularly affected, and many cases of so-called paralysis in lambs are really due to rickets.

CAUSES.

There are naturally differences of opinion as to causes, and these vary more materially with reference to its occurrence in different animals than in those of the same class. Among sheep the avoidance of the use of rams which have produced rickety offspring, and the drafting of ewes which have thrown rickety lambs, is insisted upon, and doubtless rightly in the present state of our knowledge of the disease, but in the lamb its presence seems more a matter of soil or situation than parentage. Sutherland says it is "caused by cold east winds on certain soils, by in-and-in breeding, and by debility of the ewe during pregnancy." He strongly insists that ewes which have dropped such lambs should not again be bred from, that fewer ewes should be put to each ram, that care should be taken that the condition of both is fairly good when mated, and that the feeding of the ewes should be liberal throughout gestation. So many different diseases of the lambs are due to "flushing," followed by semi-starvation, and later again by better feeding or a long course of dieting almost exclusively on watery roots or other equally unsuitable or innutritious food, that rickets may well be one of them, especially when we remember that in this animal there are more subjects born rickety that are never, from the moment of birth, able to rise than in any other class. We find very much the same thing in the human subject. It is most common among the poor; the later-born children in a family are generally the chief sufferers, owing to the struggle for existence being rendered more severe by the increase in the number of mouths to be filled out of the same scanty wage. There seems no getting away from the fact that maladies known variously as rickets, bone-softening, and paralysis, about which there is, year after year, a recurrence of reports among lambs and young sheep during the first year of their lives, occur principally among flocks depastured on certain soils, or fed on products grown thereon. I do not think it is sufficiently explained why a disease notoriously associated with deficiency of the inorganic elements of bobe—viz., the phosphate and carbonate of lime—giving rise to a soft, cartilaginous, and open structure, should prevail in direct ratio as lime is used for dressing the light moorish soils of gravel or sand on which it occurs, and only have this effect when used for such light soils; but that is the theory which has been propounded. I have no personal experience of rickets in lambs as an enzootic, but those who have tell us that roots, grasses, or other food from such land will alone suffice to produce the disease, acting with special force in this direction when fed to ewes in the middle or later stages of pregnancy. It seems, further, that as flocks become used to the soil, fatality and losses from disturbed bone nutrition lessen, and that it is most frequent and severe in sheep freshly imported into those light soil districts where it is enzootic. As already stated, some lambs appear to be affected at birth, and are never able to rise; but it usually appears in a fortnight or three weeks after birth When older sheep those of the first year, become affected with this weakness of the loins, it is said to be chiefly those which at intervals, or entirely, have been kept on such situations as cause it, or else their dams have. The determining influences are supposed not powerful enough to kill them, when lambs, but some of them, when hoggets, fall victims.

SYMPTOMS.

Analysis of some rickety booes give animal matter 81.2 earthly matter, 18.88 per cent. as against animal matter 31.10 , earthly matter 68.90 in healthy bones. Whether dependent on imperfect or insufficient nutritive suoply, or malassimilation, the effect of this unnatural softeness of the osseous system is that the bones of the extremities give way in those animals where the limb bones are mainly affected, and the nervous system is deranged in those that, like the sheep, have the axial portion of the skeleton primarily involved. In addition to curvature of the limb bones from superincumbent weight, human pathologists tell us that bones are bent laterally by the action of the muscles, and they are always bent to the side on which the muscles act most powerfully. This is especially the case with dogs, but in addition to bending of the bones there is enlargement of the joints and extremities of the bones, which become hot and painful. In the sheep it is only in older animals that the bones of the limbs become markedly affected and show evidence of givong way, but in almost all cases there is enlargement of the joints. Calves and foals most commonly exhibit the symptoms of indigestion and diarrhoea. In dogs and calves the head and belly are ?enerally found disproportionately big. The paralysis in the lamb arises from constriction or pressure on the spinal cord, the result of the imperfect bone development. It must be understood that this description of curvature of the long bones, with general constitutional disturbance, must be taken as applying onlv to the fully- developed form of the disease, and it should be remembered that rickets occurs with many variations, in which there are different kinds of deformity.

TREATMENT.

In all cases and in all animals, treatment consists principally in careful nursing, avoidance of exposure, and in providing a nutritious and digestible diet, and one that is, of course, rich in phosphates. The debility, constitutional weakness, and imperfect performance of the function of digestion, must be kept in mind. A marked characteristic of the disease is an intense susceptibilitu to cold, and a dry and warm, but airy, abode must be provided. Plenty of fresh air and sunlight is insisted upon by the human surgeon, and it is essential that the best hygienic conditions possible should also be secired for the lower animal. Obviously it would tend to increase the deformity if much walking be permitted when the bones are soft. When the limbs have begun to curve, the pressure of light, well-padded, and well-bandaged splints, applied on the convex surfaces gives useful support, and helps largely to prevent and perhaps in some degree to reduce deformity. If the animal be allowed to live, the bones in time become harder from the deposition of earthy matter, but the curvatures remain. If the patient be a foal, it is worth while considering whether it pay to rear and treat it, seeing that its bent bones will always remain deformed. As to diet, the very young animal should have a plentiful supply of milk from another source, if it appears that that produced by the mother is poor, sour, fevered, or in

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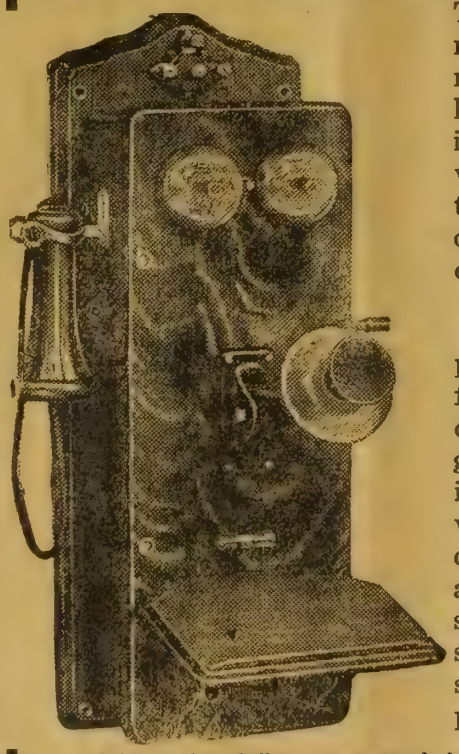

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any way altered or deficient in essential constituents. Those able to eat should have bran, as being especially rich in mineral constituents, as well as cereals and ckae. Where there is is digestive derangements and scouring, a gentle aperient, in the shape of castor oil made into an emulsion — with bicarbonate of soda or potash— should be administered, and then lime water mixed with equal quantities of milk should be given two or three times a day. Puppies should have bone-dust, lime-water, and crushed eggs and shells, with a view of supplying calcareous matter to the system; in fact, I do not know that these things are not quite as useful for other animals, the eggs especially. Cod-liver oil is the sheet-anchor in all these cases, and if the animal be worth treating at all the expense will be amply repaid. It is best given in conjunction with Parrish's syrup, called also chemical food, or compound syrup of phosphates. For calves phosphate of lime in doses of 1½ to 3 drachms daily is recommended. Pepsin wine, steel wine, and citrate of iron are sometimes employed. If the bowels remain affected and the faeces sour, Gtegory's powder—a mixture of rhubarb, magnesia and ginger— or rhubarb abd carbonate of soda should be given. For lambs change of pasture and shelter from biting east winds are necessary and the best treatment in such cases is to put both ewe and lamb in a warm, dry shed. When at all capable of rising, lambs will fat fairly well, if the ewe is sheltered and generously fed; but when unable to rise they waste rapidly. Lambs should be killed as soon as in sufficiently good condition, and the ewe drafted. Bran and oats form a good food for ewes with rickety lambs. In undertaking the treatment of rickety subjects, it must always be remembered that, owing to the nature of the complaint, a rapid recovery cannot be looked for, and that it is better to at once knock the patient on the head, unless one is prepared for long continued care and patience in the use of remedial measures.

Founding the Breeding Herd.

The accompanying remarks on the question of "Founding the Breeding Herd" were given before the recent summer congress of the Minnesota Shorthorn Breeders' Association by Mr. Leslie Smith, of Minnesota. Mr. Smith, breeder of the grand champion Ringmaster and many other noted Shorthorns, is perhaps the most expert breeder and handler of show cattle in this country and suggestions on this subject could not come from a more reliable source.

Laying the foundation or founding the breeding herd is a subject upon which I venture with considerable hesitation to give an opinion. We are met at the very outset by the advocates of blood and those of selection. Much may be said and volumes have been written in favor of both. My experience leads me to take a middle course between the two and to keep in view both the one and the other. With respect to the qualifications of a successful breeder, Darwin writes: "Not one man in a thousand has accuracy of eye and judgment sufficient to become an eminent breeder. If gifted with these qualities, and he studies the subject for years and devotes his lifetime to it with indomitable perseverance, he will succeed and make great improvements; and if he lacks any of these qualities, he will assuredly fail." Darwin's views will be found pretty nearly correct. Many breeders have a certain amount of success and even rush to the top for a time, but it is only those described by Darwin who will eventually succeed in laying the foundation of a breeding herd.

There are generally one or two objects in view; first, to raise a herd, the best of its breed, with a view to showyard competition and improvement to the limit; and, second, to breed commercial cattle for commercial purposes with the greatest possible profit. The first requires independent means, and, to attain success, skill, perseverance and patience under heavy disappointments. The second can be obtained by ordinary prudence. If the first object be the one aimed at, the selection should be made from the more established herds and animals of the breed possessing the characteristics of the ideal you intend to propagate. A man who goes into the breeding business has his ideal of what he would like his animals to represent, but my attention will be more particularly directed to the second point.

There are few that have surplus money to expend upon the purchase of high priced animals, nor is this necessary in order to secure a profitable return from a breeding herd. The wealthy breeder may look to the honors of the showyard but the breeder with limited means must have regard only to his ultimate profit. We have seen some of these wealthy breeders flourish for a time, but they soon get tired of the business; and there may have been a few breeders and dealers that got some of their money, but as a rule they did not do much good to the breeding business.

The beginner should be very careful in the selection of his foundation females. Find out all you can about the different families and, if you have to consider the faulty or defecmrnt, get someone in whom you have faith to act for you in your first selection. As I have already observed the breeder must have in mind the model which he desires to propagate and the animals selected should approach that type as nearly as can be obtained; and by careful and repeated selections, the ideal may be reached.

In the selection of the bull you will have to consider the faulty or defective points in your cows with a view to correcting them as much as possible. Pedigree being right, you ought to purchase the bull that is strong upon the points where your females are faulty; but although the bull selected may possess the excellence required in the cows, he ought of course not be very deficient in other points; otherwise, the cure may be worse than the disease. To be good behind the shoulders, good in the girth, well down in the fore rib are the qualities most difficult to attain. Lightness of the fore rib shows a tendency to delicacy of constitution, and strength combined with soundness are most important essentials to the success of the breeder. Study to combine quality with weight. Quality ought to be the first consideration, but we must never forget that all must finally come to pounds. A good coat of hair is indispensable in our cold climate.

Inbreeding has some advantages and some advocate it; but it is knotty problem to touch upon. At the commencement I stated that my experience led me to adopt a middle course and that experience has not been in favor of this system. By adhering to it, I found that quality was maintained and even improved, but size was reduced and symptoms of delicacy of constitution were manifested. It may be pursued for a time until the type is developed, but to continue for any length of time to breed in and in is not only against my experience, but I believe against Nature, although in the breeding and developing of the race horse, where stamina and endurance are required in a high degree, inbreeding has been practised with success.

Shorthorns are an immensely popular and abundant breed and comprise many strains, as they probably always will. Some breeders will emphasize : beefing tendencies more strongly than others; some will place relatively more importance upon milking functions just as they did in the days of Booth and Bates, and this is possible without any great difference in blood lines; but the great common aim should be to retain in a large measure the adaptability as nearly as possible for both beef and milk.

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THE HORSE.

Leg Boots and Their Use.

Defective action, which may be due to such different reawons as faults of conformation, weakness, and want of condition is frequently the cause of horses injuring their legs through hitting them with their shod feet, this trouble being in particular often caused through what is variously known as brushing, cutting, or interfering, resulting from the horse going too close with its feet. With young horses which are being broken in or have recently been broken, similar injuries are also often liable to be inflicted as the result of awkwardness of gait or so-called greenness. In all cases of this sort it becomes necessary to protect the leg or legs exposed to injury by letting the horse wear some kind of boot, either permanently or temporarily. There are various patterns of such leg boots, designed to protect different parts of the limb. The most common kind of protection needed is a fetlock boot, to cover the inside of that joint when a horse bruises or interferes. This consists of a rounded and hollowed-out or cup-shaped piece of leather mounted upon kersey cloth or thin felt, being somewhat similar in style to a knee-cap. It has a padded strap by means of which it is buckled on just above the fetlock joint. The strap requires to be adjusted pretty tightly, otherwise the boot will gradually work round, leaving the part needing protection uncovered. Instead of a proper fetlock boot, a simple cloth boot is very commonly improvised by folding a piece of thick cloth, having some tapes sewn on in the middle, right round the leg at the fetlock joint, it being doubled over after the tapes have been tied. This will in average cases afford perfectly adequate protection, and there is the special advantage associated with it that even if it does work round on the leg, the inside of the fetlock remains fully protected, as the boot encircles the entire joint. A difficulty sometimes experienced, however, is that the skin gets rubbed sore in time where the tapes are tied round the leg. In that case a well-padded leather strap, and of ample width, should be substituted for the tapes. Sometimes a so-called ankle ring made of india rubber is used in cases of brushing in lieu of a boot, and this contrivance often proves effective in preventing damage, but it has one disadvantage in that the india rubber is very apt to chafe the skin, especially in the case of delicate-skinned horses, a contingency which may make it impossible to use it. It is certainly much worse as regards liability to chafe than a boot. Generally the ankle ring is placed round the leg above the fetlock, but it answers equally well, if not, indeed, better if it is worn round the coronet, and when placed in this position there is less liklihood of its chafing. A good plan, if there is any tendency for it to chafe, is to let the animal wear the ring alternately in these two different places. An ankle ring is more suitable for temporary than for permanent use, a boot being, as a rule, preferable in the latter case.

OVER-REACHING.

For cases of speedy-cutting—that is, when a horse hits one of its forelegs just below the knee—which usually occurs only in free-actioned horses and at fast paces, there is a special kind of boot, while occasionally splint boots are resorted to should a horse have a largely developed splint on the inside of the cannon and be liable to hit it with the opposite foot when trotting or cantering. That trouble is, however, comparatively rare. As a not infrequent cause of injuries and wounds on the back part of the forelegs we have over-reaching, which consists in a horse striking a foreleg with a hind foot, a deep cut oftentimes being inflicted by the shoe in this way. Such an over-reach may occur either on the coronet or heel, which is the more frequent, or else higher up on the back tendons. The latter are, in particular, apt to be so hit when a horse is jumped, and also when galloping. To guard against this there are leather so-called over-reaching boots, which completely encase the cannon, being buckled on by means of three straps and buckle. Some people also term them leggings. They protect the back tendons from the knee downwards as well as the back of the fetlock. The tendons and fetlock joint may, however, also be suitably protected from over-reaches by bandaging the legs with ordinary flannel bandages, but it is necessary to adjust these with the greatest care, otherwise the bandage may come undone, and then there is danger of the horse being tripped up through treading upon the loose end. In schooling young horses over jumps it is always a useful precaution to bandage the legs in this manner in case they should overreach, which owing to their awkwardness in jumping at first they are liable to do. A different sort of boot is used when there is a tendency for the horse to over-reach and cat its heels or coronet. The boot designed to meet this contingency is often known as an ankle boot. It is made of leather, and lined with thick cloth or thin felt. There is also a special type of india rubber boot or guard made for the same purpose, which goes right round the pastern joint and covers the whole of the heels and coronet. The Americans call boots of this kind scalpers, a most appropriate name, considering the sort of injury that is inflicted by an over-reach on the heel and coronet.

A useful pattern of leg boot is represented by the polo boot, as used on ponies for polo playing, which consists of a combined legging encasing the cannon tendons and fetlock boot, protecting the inside of the fetlock. This kind may, in frequent cases, be resorted to with advantage also for ordinary purposes, but for big horses it must be made of larger size. In addition to their use as a protection against injuries from brushing, sueedy-cutting, over-reaching, etc., leg boots are also sometimes used for the purpose of giving support to the back sinews when a horse has weak legs or has only recently recovered from a sprain or breakdown....The effect of wearing a boot or legging of this description is similar to that of a bandage. These boots are worn round the cannon, and reach from the knees to the top of the fetlock. To be effective they must be put on tightly, but they should not adtuanlly compress the leg. They are ordinarily made either of felt or cloth, and may or may not be mounted with leather on that portion which comes opposite the other leg, so as also to afford protection against possible cutting. There is one pattern which is secured by means of straps, and another which laces, the latter being, as a rule, preferable, only it calls for greater care when adjusting the boot, as it can easily be done up too tightly. There are also elastic leggings of this kind or so-called stockings to be had.—Argus.

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any moment to totter and fall. In that case only prompt and intelligent attention can prevent death.

If there is a veterinarian within reach he should be summoned. In the meantime cold wet clothes or ice should be applied to the top of the head and cold water should be sprayed or sponged over the neck, shoulders and body. Half an ounce of carbonate of ammonia or half a pint of whisky given in a pint of water will serve as a suitable stimulant. If neither of these is available, 4 ounces of aromatic spirits of ammonia may be given in a pint of water, or a pint of warm coffee may be given. The application of cold water should be continued until the fever is preceptibly reduced. A horse that has been brought through a crisis of this kind must be worked very carefully the rest of the season.

Prevention is far better than cure, and real preventive measures start with building up the vitality of the horse. A horse that is in perfect health and spirits is not likely to become overheated. It is the horse that has been irregularly or unsuitably fed, overworked or kept in a hot stable that first succumbs on a hot day. Horses may be made much more comfortable at night in summer in running loose in the barnlot with a rack of hay and a tank of water accessible, rather than standing in stuffy stalls. The horse that sweats all night is not in condition to resist the heat of the day.

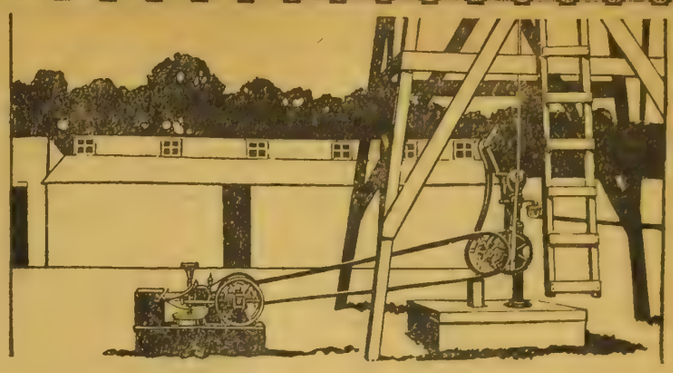
Owners and drivers should remember that ordinarily there is no excuse for overheating a horse, even to a slight degree. To go on working a horse that has become too hot, until finally he drops, is the height of folly. Except in most extraordinary emergency the work to be done cannot be nearly as important as the life of a horse.

Signs of Pregnancy in Mares.

There are no visible signs that infallibly indicate pregnancy in the very early stage—indeed, cases are common in which the condition of the animal may remain doubtful up to within a short time of parturition or the date when this is considered due. Putting on flesh is one of the signs of pregnancy, but by itself is utterly valueless as an indication. It is a bad sign when a mare appears at oestrum—that is, comes in season—and accepts service again, after having been covered several times. It is, however, not a certain sign that the mare is not in foal, because exceptions have been recorded in all animals, but it is so nearly certain that the chance of the foal in a case where a mare has been covered three or four times and has appeared at oestrum subsequent to the last service is practically nil. It is generally regarded as a sign of successful fecundation where there is no further appearance of oestrum after service and the mare refuses the horse when "tried," and equally so as a sign of failure when oestrum reappears at the usual period and service is accepted. There are exceptions to both, and only time or foetal development can determine the matter with certainty.

Chronic Founder or Navicular.

R. S. G. has a work horse that is lame in both front feet and has been for some time; there is evidence of fever in the hoof and in the stable he stands in such a way as to remove all possibfe weight from the feet. This must be either chronic founder or navicular disease, and in all probability all that can be done is to relieve the condition by keeping the feet soft by standing on wet clay during the day and shoeing with a wedge shoe, thin at the toe and thick at the heel.



Once Upon a Time

ONCE there was really no way out of it for the farmer. Plodding home from the field with his team at close of day, he saw before him the waiting small jobs about the house, barn, and yard, jobs that took time and labor, and never seemed to end. There was water to be pumped, wood to be sawed, various machines to be run by hand. But that was once upon a time. Today he lets the engine do the work.

Every I H C engine is economical, simple, sturdy and reliable. Whether you want it for sawing, pumping, spraying, electric light plant, for running separator, or repair shop, or for all sorts of tiresome energy-wasting small farm jobs, you have need of an

I H C Oil and Gas Engine

I H C engines are built vertical, horizontal, stationary, portable, skidded, air-cooled and water-cooled. Sawing, spraying and pumping outfits. Sizes from 1 to 50-horse power. They operate on gas, gasoline, kerosene, naphtha, distillate and alcohol. I H C oil tractors range in size from 6-12 to 30-60-horse power, for plowing, threshing, etc.

Have the I H C local agent demonstrate the engine to you and explain its various points. Get catalogues from him, or, write the

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J. W. KAYE
New Brunswick's Representative
Box 301 - MONCTON, N. B.

POULTRY.

The Egg Circle Movement.

Following a series of lectures given in various parts of Prince Edward Island, Mr. T. A. Benson, Dominion Poultry Representative, working in co-operation with the Provincial Department of Agriculture, has for some weeks been engaged in practical field work, with a view to demonstrating along the lines of his lecturing, and the question of marketing eggs has been given first place. Those who have given the matter even a passing thought have long recognized the evils arising from the present methods of marketing as ordinarily practised, and the urgent need of some remedial easures being taken; in fact, public feeling in many sections has been so strong as to constitute a demand for a betterment of conditions. Under present methods, speaking generally, an egg is an egg providing the shell is intact, and what is known as the "flat rate" system prevails; all eggs, good, bad or indifferent, commanding the same price, which means that those practising careless methods of breeding, feeding and caring for poultry and market eggs, are on an equality with those who adopt correct methods with the one exception of course that the former class of poultry keepers obtain a smaller production of eggs. It may, in fact, be said that a premium is placed on slovenly methods. All this results in a loss of not less than 17 per cent of the total egg production of the Dominion or the value of five dozen eggs in every thirty marketed, nearly all of which loss is preventable. This heavy loss must of necessity fall principally upon the producer and in part on the consumer. Another bad feature of present conditions is the great difference between the price realized for eggs by the producer and the prices paid by consumers by reason of their being too many handlers of the product, which considering its extremely perishable nature should reach the consumer in the shortest possible time. The object in view in organizing co-operative egg selling associations, known as egg circles, is to eliminate these evils and place a premium on good methods and good eggs thus giving encouragement to those wishing to be honest and do the right thing. There is room for much greater profit to the producer without increasing the cost to the consumer if the present waste and some of the unnecessary handling are eliminated. There is a great and ever increasing demand for the good article and it is for the producer to co-operate more closely with the consumer and see to it that this demand is satisfied.

Two of these associations known as Egg Circles are already doing business on the Island; one in New London and another at Kensington, having between them a membership of upwards of 150 to date and applications for membership continually coming in. It is the intention as far as possible to obtain the assistance of those engaged in handling eggs in each district where these associations are to be organized, but the merchants and dealers appear to view the enterprise from varying view points. Some are opposed to it, declaring they will put up their prices for any kinds of eggs to fight the movement down and this has already been done Which is it, have these merchants been paying too little in the past, or are they losing money to keep the farmers in the old rut today, and stand in their way? It is pleasing to note, however, that other local merchants view the matter differently and are glad to cash the cheques of the associations which the farmers are offering in doing business with these merchants.

If the methods and working of the egg circles are considered without bias, and false reports which have been circulated, investigated, it will be found that nothing but good can result from this work. The merchants will be benefited more by the farmers' cash than by the eggs; and they will get the farmers' cash if they offer good quality in all departments, and there are evidences that the larger dealer will welcome anything which will improve the quality of eggs and be willing to pay in accordance with quality.

It is hoped that Mr. Benson will receive the unqualified support of all in the good work which he has been appointed by the Department of Agriculture to carry on, and which will undoubtedly result in more and better eggs on the market without increased price to the consumer, and a fair profit for the legitimate middleman.

The farmers of P. E. I. will do well to carefully consider this movement and ask themselves why there should always be strong opposition when they attempt to stand together. This is an opportunity for the building up of one of the most important farm products, and elevating the industry to such a level as wipe out the suspicion of eggs which is one of the greatest factors in curtailment of consumption. Why should the farmers' right to manage their own affairs be disputed? And why should they not stand together in this matter as they did in the question of creameries, and secure an equal or even greater advantage?

Chicken Choosing.

The procrastinating poultry producer trifles with profit, and in no way more seriously than in his neglect to sort and choose and separate his growing stock. I can, however, fully sympathise with him, knowing full well how much easier it is in the strenuous spring season to put off what is at first of trifling importance until it forces attention; and depreciation is commensurate with the period of postponement. With the addition of goslings to the pre-existent chickens and ducklings, and the present hatching of turkeys; with incubators and hens to reset, and the continual work of preparing fowls for market, how immeasurably easier it is to dump each fast-succeeding brood upon the same field, and to run round and feed the lot out of the same bucket at the same time, than it would be to separate them according to age and sex and to feed each colony for a specific purpose.

When we scamp the work of rearing in this fashion, if we do have any difference in treatment it is unconsciously in favour of the newly hatched, meanwhile running together and treating equally the birds we should have chosen for stock with those we are feeding for the higgler, and allowing the half-grown to engage in an unequal struggle with the more fully matured for an unequal share of the food. I wonder how much is annually lost in cost of food alone, not to mention loss of stamina, by such unconsidered trifling!—Mark Lane.

The Result of New Brunswick's First Egg Laying Contest.

The New Brunswick Department offered prizes to the different Poultry Associations of New Brunswick of $60 to each Association for a six months Egg Laying Contest, of ten (10) hens to each pen.

They found there was a great deal of interest taken in this, and it showed what could be done where systematic care and attention were given

40 Pure Bred Jerseys 40

At Dispersion Sale.

We will sell our entire herd of Forty Pure Bred Jerseys by Public Auction on

WEDNESDAY
OCTOBER 15, 1913
At 10 o'clock a. m.

This is a chance to buy some of the best producing and show Jerseys in Canada. Sale includes champions in the show ring and cows with official tests. Bulls and Heifers all ages.

Send for Catalogue if interested.

JOSSELYN & YOUNG

Silver Falls, St. John Co., N. B.

Teams will meet intending purchasers at Haymarket Square, St. John, N. B., for free conveyance to farm, 3 miles distant, at 9.30 a. m. on day of sale.

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—as we have learned from an experience dating back some forty years. During this long period we have helped many of them to secure SAFE investments with mutual profit and satisfaction. Therefore, we consider the MARITIME FARMER a most appropriate medium through which to announce our new Partial Payment Plan to the progressive farmers of the Maritime Provinces.

In this Partial Payment Plan we have combined a system of "investing while saving"—the advantages of which will immediately become apparent upon reading our explanatory booklet.

So we want YOU to send for a copy of this booklet and learn how you may purchase any of the high-class securities on our list with an initial deposit of as low as $20 and monthly payments of as little as $10.

You will find that your savings invested in this way will return you a considerably larger income than if allowed to remain idle, or practically so, in the savings bank. If you are really anxious to know all about this attractive and convenient plan you will mark and mail this coupon NOW. No obligation whatever incurred in doing so.

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to poultry and a correct account kept of the number of eggs received and the cost of producing them. All the Poultry Associations have spoken highly of the benefits that have been derived from this Egg Laying Contest. The results which have been obtained from Seth Jones, Poultry Superintendent, are as follows:

Westmorland County Poultry and Pet Stock Association, Twelve (12) entries.

1st prize, N. J. Govang, Moncton, R. C. White Leghorns, 1112 eggs; 2nd prize, Samuel Steeves, Sunny Brae, White Wyandottes, 1074 eggs; 3rd prize, Watson Lutz, Moncton, Barred Plymouth Rocks, 1015 eggs; 4th prize, Geo. McEacheren, Moncton, Blue Andulusians, 968 eggs.

Charlotte County Poultry and Pet Stock Association, Eight (8) entries

1st prize, C. F. McGarity, Milltown, W. F. Black Spanish, 1187 eggs; 2nd, R. W. Whittock, St. Stephen, S. C. White Leghorns, 1118 eggs; 3rd, H. D. Dinsmore, St. Stephen, S. C. Rhode Island Reds, 961 eggs; 4, F. M. McCready, St. Stephen, R. C. Rhode Island Reds, 946 eggs.

York and Sunbury Counties Poultry and Pet Stock Association, Two (2) entries.

1st prize, John Oldham, Fredericton, Black Minorcas, 984 eggs; 2nd, Ernest Pringle, Stanley, R. C. Brown Leghorns, 936 eggs.

Carleton and Victoria Counties Poultry and Pet Stock Association Thirteen (13) entries.

1st prize, Mrs. A. D. Hovey, East Brighton, White Leghorns, 1643 eggs, 2nd, Mrs. A. D. Hovey, East Brighton, White Orpingtons, 1579 eggs; 3rd Hartland Poultry Yards, Hartland, Barred P. Rocks, 1140 eggs; 4, R. A. McKay, Centreville, White Wyandottes.

Feeding to Develop Winter Layers.

The main reason why comparatively few pullets lay during fall and winter is that they are not fed properly during the warm months. To make rapid growth they must be fed a ration rich in protein. The ordinary grains grown on the farm are often deficient in this element. A very good ration for growing stock and one that has given satisfactory results is as follows: Two parts wheat bran, one part each of middlings, corn meal and beef scrap. This ration should be fed dry in hoppers, and the chicks given access to it at all times. Night and morning, grain rations, composed of two parts wheat and one part each of oats and cracked corn, should be fed. If the chicks are fed about equal amounts of the dry mash and grain mixture, are housed in open houses and kept free from lice, no difficulty will be experienced in obtaining early-laying pullets.

ON FORCING HENS TO MOULT.

Then hens intended to be held over should also receive attention at this time. Hens usually begin to moult about the middle of July, and it is necessary that the poultryman see that the old hens receive good care during this time. A nitrogenous ration, in which is included either linseed meal or sunflower seed, should be fed. Linseed meal and sunflower seed are especially valuable in the growing of a new coat of feathers.

The method recommended by some of starving the hens into a premature moult, is now generally in disfavor. Three years ago, the writer experienced some along this line. A flock of filty hens was penned, and fed nothing but green food for two weeks. The hens stopped laying and became very poor. At the end of two weeks the hens were gradually brought back to full rations. The hens completed the moult in about six weeks and began laying, but on the whole it was decided that the experiment was not successful, since the object sought—more winter eggs—was not attained. The hens allowed to moult in the natural way, laid fully as well, and were more healthy and thrifty.—T. Z. R.

Shade for Chicks.

I have always recommended shade for poultry, but it is ten times more important to have abundant shade for young chicks. These delicate creatures, unless tenderly cared for, soon die off, and it is only by giving ample shade that we can expect to rear the maximum quantity during the next few months. Very few people, even farmers who raise a large number of chicks yearly, seem to have a proper idea of giving shade for their birds. On some farms natural facilities are provided; there is any amount of long grass, bushy trees to roam beneath, and under these circumstances no artificial shelter is necessary; but, on the other hand, where these advantages cannot be obtained, some kind of shelter must be given or the chickens will die off. I have seen many cases where there have been distinct holes in the coops, and instead of them being in good condition they are exactly the opposite. It is, therefore, important to make good coops, and if these have canvas fronts, all the better for shade during the hottest part of the day.

It is equally as important when raising ducklings and goslings to have a fair amount of shelter for them. Many times have I known duck men have appalling losses to face, simply due to lack of facilities for shading during the hot summer days.

In conclusion, although it may seem a simple affair, and although some poultry-keepers may imagine we have had so little sun, it can do no harm, yet I know from past experience that unless something is done, and done quickly, they will have cause to regret it.—S.

Rattling in the Throat.

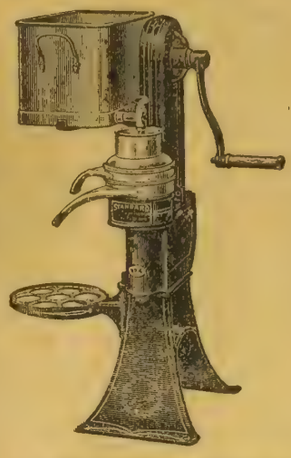
"Rattling in the throat" is a bronchial affection, the result of a cold. All afflicted fowls should be separated from the flock and given a drop of tincture of aconite in a half teaspoonful of water. In bad cases repeat every hour for five hours. Give a hot mash of at least one-half bran, the other half in middlings or bread crumbs. Another good treatment is to slightly aciduate the drinking water with 10 drops each of sulphuric and nitric acid. In place of the aconite, a teaspoonfu, of glycerine, and about two drops of whiskey added, will often allay the irritation. Repeat daily for about a week.

Constipation

is an enemy within the camp. It will undermine the strongest constitution and ruin the most vigorous health. It leads to indigestion, biliousness, impure blood, bad complexion, sick headaches, and is one of the most frequent causes of appendicitis. To neglect it is slow suicide. Dr. Morse's Indian Root Pills positively cure Constipation. They are entirely vegetable in composition and do not sicken, weaken or gripe. Preserve your health by taking

Dr. Morse's Indian Root Pills 48

Where Do We Hide Its Brains?



Said a dairyman: "Where do you hide the brains of that machine?" "Why, what do you mean?" asked our surprised agent. "Well," said the dairyman, "that Standard cream separator of yours is such a really wonderful machine; it seems to know just what to do and how best to do it; and it does some things so much better than any other separator I ever saw; that it really seems as if it must uhave brains of its own."

When you come to think of it, it does seem as that dairyman said, that the

Standard

cream separator must have brains of its own. For instance, think how intelligently it looks after the oiling. You never have to think about seeing if there is enough oil in the neck bearing or any other part. The Standard attends to the oiling of every gear and bearing itself. It also keeps the discs clean by automatically depositing the foreign matter from the milk in the space between the bowl and the disc edges. And it also automatically brings all the gears to a stop the moment you let go of the handle. But the way its gets the cream from the milk only allowing one tenth of a pound of butter fat to escape in every 1,000 pounds of milk skimmed, would do credit to the best money-making brains in the land. See this "brainy" money-making machine at our agents, or write direct for catalog and easy-payment offer.

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This Department is now being edited by a very competent lady who will be pleased to answer all inquiries. She solicits the aid of all who are interested in home making. This aid may be given in the form of short articles dealing with your experiences, questions or timely suggestions. Ladies, this department is yours. Use it to the best advantage.

David Copperfield.

By Charles Dickens.

(Continued from last issue)

I got, that Sunday, through three and-twenty miles on the straight road, though not very easily, for I was new to that kind of toil. I see myself, as evening closes in, coming over the bridge at Rochester, footsore and tired, and eating bread that I had bought for supper. One or two little houses, with the notice, "Logdings for Travellers," hanging out, had tempted me; but I was afraid of spending the few pence I had, and was even more afraid of the vicious looks of the trampers I had met or overtaken, I sought no shelter, therefore, but the sky; and toiling into Chatham,—which, in that night's aspect, is a ere dream of chalk, and drawbridges, and mastless ships in a muddy river, roofed like Noah's arks,—crept, at last, upon a sort of grass-grown battery overhanging a lane, where a sentry was walking to and fro. Here I lay down, near a cannon; and, happy in the society of the sentry's footsteps, though he knew no more of my being above him than the boys at Salem House had known of my lying by the wall, slept soundly until morning.

Very stiff and sore of foot I was in the morning, and quite dazed by the beating of drums and marching of troops which seemed to hem me in on every side when I went down towards the long narrow street. Feeling that I could go but a very little way that day, if I were to reserve my strength for getting to my journey's end, I resolved to make the sail of my jacket its principal business. Accordingly, I took the jacket off, that I might learn to do without it; and carrying it under my arm, began a tour of inspection of the various slop-shops.

It was a likely place to sell a jacket in; for the dealers in second-hand clothes were numerous, and were, generally speaking, on the look-out for customers at their shop-doors. But, as most of them had, hanging up among their stock, an officer's coat or two, epaulettes and all, I was rendered timid by the costly nature of their dealings, and walked about for a long time without offering my merchandise to any one.

This modesty of mine directed my attention to the marine-store shops, and such shops as Mr. Dolloby's, in preference to the regular dealers. At last I found one that I thought looked promising, at the corner of a dirty lane, ending in an enclosure of stinging-nettles, against the pailings of which some second-hand sailors' clothes, that seemed to have overflown the shop, were fluttering among some coats, and rasty guns, and oil-skin hats, and certain trays full of so many old rusty keys of so many sizes that they seemed various enough to open all the doors in the world.

Into this shop, which was low and small, and which was darkened rather than lighted by a little window, overhung with clothes, and was descended into by some steps, I went with a palpitating heart; which was not relieved when an ugly old man, with the lower part of his face all covered with a stubbly grey beard, rushed out of a dirty den behind it, and seized me by the hair of my head. He was a dreadful old man to look at, in a filthy flannel waistcoat, and smelling terribly of rum. His bedstead, covered with a tumbled and ragged piece of patchwork, was in the den he had come from, where another little window showed a prospect of more stinging-nettles, and a lame donkey.

"Oh, what do you want?" grinned this old man, in a fierce, monotonous whine. "Oh, my eyes and limbs, do you want? Oh, my lungs and liver, what do you want? Oh, goroo, goroo!"

I was so much dismayed by these words, and particularly by the repitition of the last unknown one, which was a kind of rattle in his throat, that I could make no answer; hereupon, the old man, still holding me by the hair, repeated:

"Oh, what do you want? Oh, my eyes and my limbs, what do you want? Oh, my lungs and my liver, what do you want? Oh, goroo!"—which he screwed out of himself, with an energy that made his eyes start in his head.

"I wanted to know," I said, trembling, "if you would buy a jacket."

"Oh, let's see the jacket!" cried the old man. "Oh, my heart on fire, show the jacket to us! Oh, my eyes and limbs, bring the jacket out!"

With that he took his trembling hands, which were like the claws of a great bird, out of my hair; and put on a pair of spectacles, not at all ornamental to his infla ed eyes.

"Oh, how much for the jacket?" cried the old man, after examining it. "Oh—goroo!—how much for the jacket?"

"Half-a-crown," I answered, recovering myself.

"Oh, my lungs and liver," cried the old man, "no! Oh, my eyes, no! Oh, my limbs, no! Eighteenpence. Goroo!"

Every time he uttered this ejaculation, his eyes seemed to be in danger of starting out; and every sentence he spoke, he delivered in a sort of tune, always exactly the same, and more like a gust of wind, which begins low, mounts up high, and falls again, than any other comparison I can find for it.

"Well," said I, glad to have closed the bargain, "I'll take eighteenpence."

Oh, my liver!" cried the old man, throwing the jacket on a shelf. "Get out of the shop! Oh, my lungs, get out of the shop! Oh, my eyes and limbs—goroo—don't ask for money; make it an exchange."

I never was so frightened in my life, before or since; but I told him humbly that I wanted money, and that nothing else was of any use to me, but that I would wait for it, as he desired, outside, and had no wish to hurry him. So I went outside, and sat down in the shade in a corner. And I sat there so many hours, that the shade became sunlight, and the sunlight became shade again, and still I sat there waiting for the money.

There never was such another drunken madman in that line of business, I hope. That he was well known in the neighborhood, and enjoyed the reputation of having sold himself to the devil, I soon understood from the visits he received from the boys, who continually came skirmishing about the shop, shouting that legend, and calling to him to bring out his gold. "You ain't poor, you know, Charley, as you pretend. Bring out your gold. Bring out some of the gold you sold yourself to the devil for. Come! It's in the lining of the mattress, Charley. Rip it open and lets have some!" This, and many offers to lend him a knife for the purpose, exasperated him to such a degree, that the whole day was a succession of rushes on his part, and flights on the part of the boys. Sometimes in his rage he would take me for one of them, and come at me, mouthing as if he were going to tear me in pieces; then, remembering me, just in time, would dive into the shop, and lie upon his bed, as I thought from the sound of his voice, yelling in a frantic way, to his own windy tune, the Death of Nelson; with an Oh! before every line, and innumerable Goroos interspersed. As if this were not bad enough for me, the boys, connecting me with the establishment, on account of the patience and perseverance with which I sat outside, half-dressed, pelted me, and used me very ill all day.

He made many attempts to induce me to consent to an exchange; at one time coming out with a fishing rod, at another with a fiddle, at another with a cocked hat, at another with a flute. But I resisted all these overtures, and sat there in desperation: each time asking him, with tears in my eyes, for my money or my jacket. At last he began to pay me in halfpence at a time; and was full two hours getting by easy stages to a shilling.

"Oh, my eyes and limbs!" he then cried, peeping hideously out of the shop after a long pause, "will you go for twopence more?"

"I can't," I said; "I shall be starved."

"Oh, my lungs and liver, will you go for threepence?"

"I would go for nothing, if I could," I said, "but I want the money badly."

"Oh, go-roo!" (it is really impossible to express how he twisted this ejaculation out of himself, as he peeked round the doorpost at me, showing nothing but his crafty old head;) will you go for fourpence?"

I was so faint and weary that I closed with this offer; and taking the money out of his claw, not without trembling, went away more hungry and thirsty than I had ever been, a little before sunset. But at an expense of threepence I soon refreshed myself completely; and, being in better spirits then, limped seven miles upon my road.

My bed at night was under another haystack, where I rested comfortably, after having washed my blistered feet in a stream, and dressed them as well as I was able, with some cool leaves. When I took the road again next morning, I found that it lay through a succession of hop-grounds and orchards. It was sufficiently late in the year for the orchards to be ruddy with ripe apples; and in a few places the hop-pickers were already at work. I thought it all extremely beautiful, and made up my mind to sleep among the hops that night: imagining some cheerful companionship in the long perspective of poles, with the graceful leaves twining round them.

The trampers were worse than ever that day, and inspired me with a dread that is quite fresh in my mind. Some of them were most ferocious looking ruffians, who stared at me as I went by; and stopped, perhaps, and called after me to come back and speak to them, and when I took to my heels, stoned me. I recollect one young fellow—a tinker, I suppose, from his wallet and brazier—who had a woman with him, and who faced about and stared at me thus; and thered to me in such a tremendous voice to come back, that I halted and looked round.

"Come here, when you're called," said the tinker, "or I'll rip your young body open."

I thought it best to go back. As I drew nearer to them, trying to propitiate the tinker by my looks, I observed that the woman had a black eye.

"Where are you going," gripping the bosom of my shirt with his blackened hand.

"I am going to Dover," I said.

"Where do you come from?" asked the tinker, giving his hand another turn in my shirt, to hold me more securely.

"I come from London," I said.

"What lay are you upon?" asked the tinker. "Are you a prig?"

"N—no," I said.

A Windsor Lady's Appeal

To all women' I will send free with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Uterine and Ovarian Tumors or growths, also Hot Flushes, Nervousness, Melancholy, Pains in the Head, Back or Bowels, Kidney and Bladder troubles, where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write teday. Address Mrs. M. Summers, Box H. 309 Windsor, Ont.

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"After I came home I saw your advertisement in the paper, and commenced taking Lydia E. Pinkham's Vegetable Compound. I took it constantly for two years, and still take it at times, and both my husband and myself claim that it was the means of saving my life. I highly recommend it to suffering women."—Mrs. ORILLA BRADLEY, 284 Johnson Ave., Winnipeg, Manitoba, Can.

Why will women take chances or drag out a sickly, half-hearted existence, missing three-fourths of the joy of living, when they can find health in Lydia E. Pinkham's Vegetable Compound?

For thirty years it has been the standard remedy for female ills, and has restored the health of thousands of women who have been troubled with such ailments as displacements, inflammation, ulceration, tumors, irregularities, etc.

If you want special advice write to Lydia E. Pinkham Medidine Co. (confidential) Lynn, Mass. Your letter will be opened, read and answered by a woman, and held in strict confidence.

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WITH A
Serious Problem.

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"Ain't you, by G—? If you make a brag of your honesty to me," said the tinker, "I'll knock your brains out."

With his disengaged hand he made a menace of striking me, and then looked at me from head to foot.

"Have you got the price of a pint of beer about you?" asked the tinker. "If you have, out with it, afore I take it away!"

I should certainly have produced it, but that I met the woman's look, and saw her very slightly shake her head, and form "No!" with her lips.

"I am very poor,.' I said, attempting to smile, "and have got no money."

"Why, what do you mean?" said the tinker, looking so sternly at me, that I almost feared he saw the money in my pocket.

"Sir," I stammered.

"What do you mean," said the tinker, "by wearing my brother's silk handkerchief? Give it over here!" And he had mine off my neck in a moment, and tossed it to the woman.

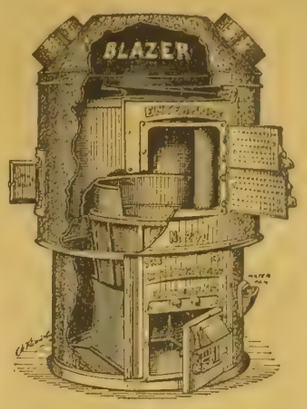
The woman burst into a fit of laughter, as if she thought this a joke, and tossed it back to me, nodded once, as slightly as before, and made the word "Go!" with her lips.

Before I could obey, however, the tinker seized the handkerchief out of my hand with a roughness that threw me away like a feather, and putting it loosely round his own neck, turned upon the woman with an oath, and knocked her down. I shall never forget seeing her fall backwards on the hard road, and lie there with her bonnet tumbled off, and her hair all whitened in the dust; nor, when I looked back from a distance, seeing her sitting on the pathway, which was a bank by the roadside, wiping the blood from her face with a corner of her shawl, while he went on ahead.

This adventure frightened me so, that, afterwards, when I saw any of these people coming, I turned back until I could find a hiding place, where I remained until they had gone out of sight; which happened so often, that I was very seriously delayed. But under this difficulty, as under all the other difficulties of my journey, I seemed to be sustained and led on by my fanciful picture of my mother in her youth, before I came into the world. It always kept me company. It was there, among the hops, when I lay down to sleep; it was with me on my waking in the morning; it went before me all day. I have associated it, ever since, with the sunny street of Canterbury, dozing as it were in the hot light; and with the sight of its old houses and gateways, and the stately, grey Cathedral, with the rooks sailing round the towers. When I came, at last, upon the bare, wide downs near Dover, it relieved the solitary aspect of the scene with hope, and not until I reached the first great aim of my journey, and actually set foot in the town itself, on the sixth day of my flight, did it desert me. But then, strange to say, when I stood with my ragged shoes, and my dusty, sunburnt, half-clothed figure, in the place so long desired, it seemed to vanish like a dream, and to leave me helpless and dispirited.

I inquired about my aunt among the boatman first, and received various answers. One said she lived in the South Foreland Light, and had singed her whiskers by doing so; another, that she was made fast to the great buoy outside the harbor, and could only be visited by half-tide; a third, that she was locked up in Maidstone Jail for child-stealing; a fourth, that she was seen to mount a broom in the last high wind, and make direct for Calais. The fly-drivers, among whom I inquired next, were equally jocose and equally disrespectful; and the shopkeepers, not liking my appearance, generally replied, without hearing what I had to say, that they had got nothing for me. I felt more miserable and destitute than I had done at any period of my running away. My money was all gone, I had nothing left to dispose of; I was hungry, thirsty, and worn out; and seemed as distant from my other places which had been mention end as if I had remained in London. The morning had worn away in these inquiries, and I was sitting on the step of an empty shop at a street corner, gear the market-place, deliberating upon wandering towards those

If a Good Sized Hole in Your Coal Bin



caused you to lose one ton of coal in seven. you'd have the hole repaired, wouldn't you—and at once?

Well, a cheap inferior heating apparatus makes a big hole in any coal bin, besides wearing the temper and wasting the time of the one who tends it. If you want to have the house "comfy" this winter, install an

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ed, when a fly-driver, coming by with his carriage, dropped a horsecloth. Something good-natured in the man's face, as I handed it up, encouraged me to ask him if he could tell me where Miss Trotwood lived; though I had asked the question so often, that it almost died upon my lips.

"Trotwood," said he. "Let me see. I know the name, too. Old lady?"

"Yes," I said, "rather."

"Pretty stiff in the back?" said he, making himself upright.

"Yes," I said. "I should think it very likely.

"Carries a bag?" said he: "bag with a good deal of roses on it; is gruffish, and comes down upon you, sharp?"

My heart sank within me as I acknowledged the undoubted accuracy of this description.

"Why then, I tell you what," said he. "If you go up there," pointing with his whip towards the heights, "and keep right on till you come to some houses facing the sea, I think you'll hear of her. My opinion is, she won't stand anything, so here's a penny for you."

I accepted the gift thankfully, and bought a loaf with it. Dispatching this refreshment by the way. I went in the direction my friend had indicated, and walked on a good distance without coming to the houses he had mentioned. At length I saw some before me; and approaching them, went into a little shop (it was what we used to call a general shop at home), and inquired if they could have the goodness to tell me where Miss Trotwood lived. I addressed myself to a man behind the counter, who was weighing some rice for a young woman; but the latter, taking the inquiry to herself, turned round quickly.

"My mistress?" she said. "What do you want with her, boy?"

"I want," I replied, "to speak to her, if you please."

"To beg of her, you mean," retorted the damsel.

"No," I said, "indeed." But suddenly remembering that in truth I came for no other purpose, I held my peace in confusion, and felt my face burn.

My aunt's handmaid, as I supposed she was from what she had said, put her rice in a little basket and walked out of the shop; telling me that I could follow her, if I wanted to know where Miss Trotwood lived. I needed no second permission; though I was by this time in such a state of consternation and agitation, that my legs shook under me. I followed the young woman, and we soon came to a very neat little cottage with cheerful bow-windows; in front of it, a small square gravelled court or garden full of flowers, carefully tended, and smelling deliciously.

"This is Miss Trotwood's," said the young woman. "Now you know; and that's all I have got to say." With which words shhe hurried into the house, as if to shave off the responsibility of my appearance; and left me standing at the garden-gate, looking disconsolately over the top of it towards the parlor-window, where a muslin curtain partly undrawn in the middle, a large round green screen or fan fastened into the window-sill, a small table, and a great chair, suggested to me that my aunt might be at that moment seated in an awful state.

My shoes were by this time in a woeful condition. The soles had shed themselves bit by bit, and the upper leathers had broken and burst until the very shape and form of shoes had departed from them. My hat (which had served me for a night-cap, too) was so crushed and bent, that no old battered handleless saucepan on a dunghill need have been ashamed to vie with it. My shirt and trousers, air and sun, were burnt to a berry-brown. From head to foot I was stained with heat, dew, grass and the Kentish soil on which I had slept — and torn besides—might have frightened the birds from my aunt's garden as I stood at the gate. My hair had powdered almost as white with chalk known no comb or brush since I left and dust, as if I had come out of a London. My face, neck, and hands, limekiln. In this plight, and with a from unaccustomed exposure to the strong consciousness of it, I waited aunt. to introduce myself to, and make my first impression on, my formidable

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Real manhood with a perfect manly strength is not only nature's own gift, but, according to my belief, may easily be within the reach of practically any man. Of course, we all know that it is the husky, vigorous, vital fellow who attracts both women and men to him, and it is he, also, who is ever sought out and who achieves the really big things of life. Sturdy, vital manhood is, without doubt, the one great, silent universal power which fascinates us all, no matter how we may argue to the contrary. Therefore, reader, I care not what may be you r age, nationality or creed, whether you are married or single, whether you are a bank president or work on the farm or in the shop, nor do I care how unstrung or nervous you m y feel, or what past acts may have left you debilitated and enervated, I say to you in all seriousness, if I can show you an easy, drugless way by which you may treat yourself with the object of bringing back full vigor to your organism, then I will show you the road to n ew hope and new manhood. A man may be small in stature, yet as strong and attractive as a giant, or he may be big in stature, yet unstrung, nervous and unmanly. It is all a question of your own vigorous strength. Therefore, let me suggest that you call or write at once, then, after reading my book, if you decide you want to try out my little vitalizer in your own case, and will write to me saying so, I will reply to your letter and guarantee to make an easy proposition which should enable you to have one of the vitalizers at once. At all events, you need the knowledge that my little book contains, whether you ever get a vitalizer or not, so please call or fill in and send the coupon

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THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was'nt "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it.

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

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The unbroken stillness of the parlor window leading me to infer, after a while, that she was not there, I lifted up my eyes to the window above it, where I saw a florid, pleasant-looking gentleman, with a grey head, who shut up one eye in a grotesque manner, nodded his head at me several times, shook it at me as often, laughed, and went away.

I had been discomposed enough before; but I was so much the more discomposed by this unexpected behaviour, that I was on the point of slinking off, to think how I had best proceed, when there came out of the house a lady with her handkerchief tied over her cap, and a pair of gardening gloves on her hands, wearing a gardening pocket like a toll-man's apron, and carrying a great knife. I knew her immediately to be Miss Betsey, for she came stalking out of the house exactly as my poor mother had so often described her stalking up our garden at Blunderstone Rookery.

"Go away!" said Miss Betsey, shaking her head and making a distant chop in the air with her knife. "Go along! No boys here!"

I watched her, with my heart at my lips, as she marched to a corner of her garden, and stopped to dig up some little roots there. Then, without a scrap of courage, but with a great deal of desperation, I went softly in and stood beside her, touching her with my finger.

"If you please, ma'am," I began.

She started and looked back.

"If you please aunt,"

"Eh?" exclaimed Miss Betsey, in a tone of amazement I have never heard approached.

"If you please, aunt, I am your nephew."

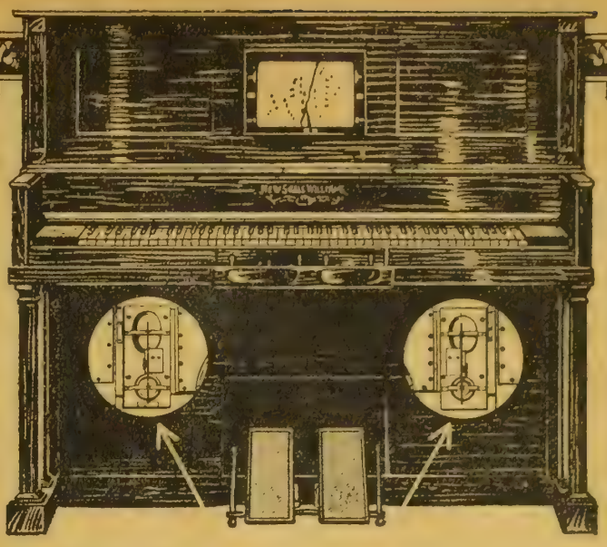
"Oh Lord," said my aunt. And sat flat down in the garden-path.

"I am David Copperfield, of Blunderstone, in Suffolk—where you came on the night when I was born, and saw my dear mamma. I have been very unhappy since she died. I have been slighted, and taught nothing, and thrown upon myself, and put to work not fit to me. It made me run away to you. I was robbed at first setting out, and have walked all the way, and have never slept in a bed since I began the journey. Here my self-support gave way all at once; and with a movement of my hands, intended to show her my ragged state and call it to witness that I had suffered something, I broke into a passion of crying, which I suppose had been pent up within me all the week.

My aunt, with every sort of expression but wonder discharged from her countenance, sat on the gravel, staring at me, until I began to cry; when she got up in a great hurry, collared me, and took me into the parlor. Her first proceeding there was to unlock a tall press, bring out several bottles and pour some of the contents of each into my mouth. I think they must have been taken out at random, for I am sure I tasted anniseed water, anchovy sauce, and salad dressing. When she had administered these restoratives, as I was quite hysterical and unable to control my sobs, she put me on the sofa, with a shawl under my head, and the handkerchief ifrom her own head under my feet, lest I should sully the cover; and then, sitting down herself behind the green fan or screen I have already mentioned, so that I could not see her face, ejaculated at intervals, "Mercy on us!" letting those exclamations off like minute guns.

After a time she rang the bell. "Janet" said my aunt, when her servant came in. "Go up stairs, give my compliments to Mr. Dick, and say I wish to speak to him."

(Continued in next issue)



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Many a busy young mother on a farm is kept uneasy by the little 2-year-old who wanders away or runs out to the horse lot or the pig pen when the mother is busy and neglects to watch him. Let me tell you what to do so you will always know when the little fellow is safe. Get a 10-cent sheep bell—the kind you can hear for some distance, yet which is not harsh and loud. Tie by a strong cord around the baby's neck. He will be greatly pleased with the pretty toy and soon will not leave the house without it. What a difference! The mother about her work will hear the merry tinkle as the little fellow runs here and there and will know by the silence when the baby is on forbidden ground. I have tried this with my baby and I know the steps it saves and the worry it avoids.

Nursing Mother.

The strain and effort required to nurse a rapidly growing child require something more than the ordinary three meals a day to retain a standard of health sufficiently great to maintain the mother's body in that healthy condition required to impart happy, robust health to her baby. She must not allow herself to run down, and as alcoholic stimulants are forbidden, so also are strong tea and coffee. She will have to restrict herself for a lunch between meals to milk, if it is tolerated, milk gruels or a cupful of one of the prepared foods made with milk and flavored with cocoa, if desired. She must take care not to drink so much as to impair her appetite for the regular meals.

How to Make a Bread Poultice.

Some skill and practice are required to make a good bread poultice, for it is apt to become heavy, lumpy, and sloppy, or dry, hard, and sticky. The best way is to get a sufficient supply of breadcrumbs, then stir them into the boiling water, stirring and beating them all the time exactly as one does linseed meal. Then cover it up with a plate or saucer, and leave it by the fire, or, better, still, over a kettle of boiling water, for about five minutes, to give it time to swell; then spread it on clean linen, dipping the knife or spatula into hot water to prevent sticking. Turn up the margin of the linen in the usual way, and apply to the inflamed part, putting the bread next the skin. A little grease spread over first will prevent stirking, because bread has a tendency to stick, and it hurts very much if dry, hard little bits have to be picked off the edges of a wound. It will save time if a sufficient supply is made for two or three poultices, as the preparation does not spoil (unless it is allowed to go sour), and it can easily be warmed afresh over a kettle of boiling water.

Clever Patching.

Sometimes a shirt that is good everywhere else will have a small hole on each side of the front, below the neckband where the points of the collar come. To mend these places almost invisibly, try this plan: Cut a piece from the lower part of the shirt and dip into the cold starch you are using for the cuffs, lay it over the holes, matching the figures carefully, and pass the iron over it. The patches must be renewed every time the shirt is washed, of course, but put on in this manner they are much less noticeable than when sewed on.

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Fairbanks-Morse Farm Engines

a durability that enables them to outlive any other engines made. Simple construction, careful workmanship, and wear-resisting materials keep Fairbanks-Morse Farm Engines chugging away cheerfully for years after the ordinary engine has outlived its usefulness.

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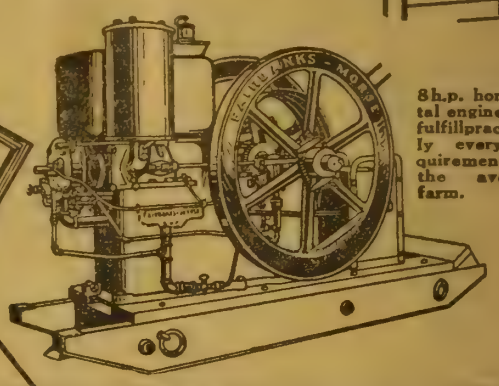

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Putting Away Clothing.

Caring for your clothes is true economy. Even the cheaper grades of clothing wear longer and look better if you take care of them. This care applies especially to the packing away of your clothing for the different seasons. It is not a costly task, and you need neither cedarchests nor moth-proof bags. Tissue paper, plenty of newspapers (moths abhor newspapers) and large pasteboard boxes are all that is needed.

The large boxes which hold underwear at the department stores are the best and most durable. Failing these use those sent out by coat and suit houses.

They will not occupy as much space as you fear. If you do not have an atic in which to store them, the boxes may be put on a shelf in the closet or they may be placed in two stacks on the floor.

It will be a great satisfaction if like articles are grouped together and the contents of the boxes marked on the outside. Anything wanted can then be easily found.

"Don'ts" for Pedestrians.

Don't cross an intersection at an angle; cross squarely. It takes a few seconds longer, but it is safer.

Don' stop in the centre of the pavement.

Don't hesitate when crossing a street. Keep going.

Don't attempt to read a newspaper when crossing a street.

Don't step abruptly off the curb, look for passing cars.

Don't step from a moving car. Wait until it stops and the motorist will stop.

Don't dodge to and fro if in danger. Stand still and the man in the auto will know which side to take.

Don't allow your children to run wild on the street. A little restraint exercised with children will avoid accidents.

Sore Throat.

At the slightest indisposition a child's throat should be examined immediately. Most mothers have some difficulty in doing this and will find the following method a help: Take a large silver spoon and hold it back of a candle with the inner surface turned toward the light. This combination placed before the open mouth of the child will enable you to reflect a strong light in the throat and ascertain its condition with absolute certainty.

How to Keep Eggs.

For family use, the most satisfactory method of preserving eggs is to pack them in a tight vessel and cover them with a 10 p. c. solution of silicate of soda or water glass. The eggs must be fresh and the shells clean, as a spoiled or dirty egg may spoil the rest.

We have found six-gallon stone jars the most satisfactory vessels to use. They will hold 18 to 20 dozen. It is unnecessary that the eggs be placed with the small end down; they may be laid in promiscuously. Set the vessel in a cool, dark place and fill it to within an inch of the top with eggs.

Water glass or silicate of soda is an amber-colored liquid that can be purchased of druggists or poultry supply dealers at 15 to 25 cents per quart. Dilute it with 10 quarts of pure water. It is better to boil and cool the water for this purpose. The eggs should be completely covered with the liquid and kept covered. They may be kept for a year by this method, and are perfectly good and wholesome at the end of this time.

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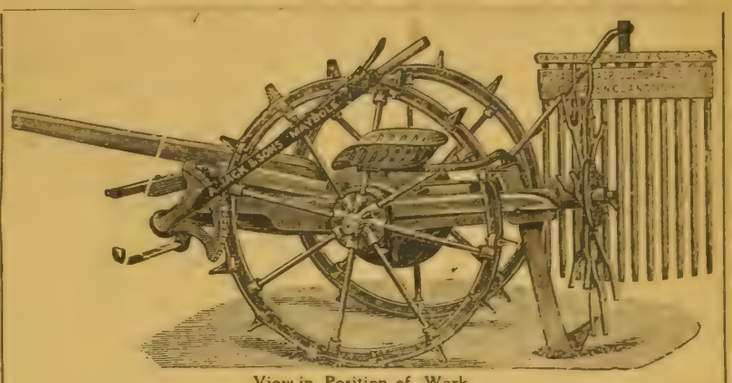

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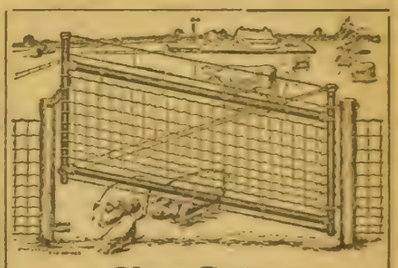

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One or a dozen "Clay" Gates sent for 60 days free trial in order that they may be tried out before being purchased. 30,000 Clay Gates were sold in 1912 on these terms.

Prize Winners at the Prince Edward Island Exhibition.

(Continued from page 859)

S. S. Hamburg Cock—1, John Tweedy; 2, T. C. Latham.

S. S. Hambug Hen—1, John Tweedy 2, T. C. Latham.

G. P. Hamburg Cock—1, A. H. Boswall.

G. P. Hamburg Hen—1, A. H. Boswall; 2, L. Boswall.

S. P. Hamburg Cock—1, J. Whitlock; 2, L. Boswall.

S. P. Hamburg Hen—1, J. Whitlock; 2, L. Boswall.

Houdan Cock—1, Louis Hayden; 2, T. C. Latham.

Houdan Hen—1, T. C. Latham; 2, L. Hayden.

Black Langshan Cock—1, Wilfred Williams.

Black Langshan Hen—1, Wilfred Williams.

S. C. White Leghorns Cock—1, J. Whitlock; 2, Geo. Chilton.

S. C. White Leghorn Hen—1, Geo. Chilton; 2, Wm. Beasley.

S. C. Brown Leghorn Cock—1, John Whitlo(k; 2 and 3, Geo. Chilton.

S. C. Brown Leghorn Hen—1 and 2, Geo. Chilton; 3, J. Whitlock.

S. C. Buff Leghorn Cock—1 Spring Park Poultry Farm; 2, T. C. Latham.

S. C. Buff Leghorn Hen—1, Geo. Chilton; 2 and 3, T. C. Latham.

R. C. Brown or White Cock—1, T. C. Latham; 2, G. L. Simmons.

R. C. Brown or White Hen—1, T. C. Latham; 2, G. L. Simmons.

Black Minorca S. C. Cock—1 and 2, W. J. Cudmore; 3, T. Mills.

Black Minorca S. C. Hen— 1 and 2, W. J. Cudmore; 3, Geo. Chilton; 4, T. Mills.

R. C. Black Minorca Cock—1 and 2, John D. Fraser.

R. C. Black Minorcas Hen—1 and 2, John D. Fraser.

S. C. White Minorca Cock—1, Chas. Rippey; 2, Byrne Bros.

S. C. White Minorca Hen—1, Chas. Rippey; 3, Byrne Bros.

Buff Orpington Cock—1, Robt Hudson; 2, J. Whitlock.

Buff Orpington Hen—1, L. A. Haszard; 2. J. Whitlock.

A. O. V. Orpington Cock—1, Henry Gurney; 2, T. C. Latham; 3, V. L. Turney.

A. O. V. Orpington Hen—1, V. L. Turney; 2, Henry Gurney.

Barred Plymouth Rock Cock—1, T. C. Latham.

Barred Plymouth Rock Hen—1 and 2, T. C. Latham.

White Plymouth Rock Cock—1, Spring Park P. Yards; 2, Mrs. A. Boswall; 3, Geo. A. Calbeck.

White Plymouth Rock Hen—1 and 2, Geo. A. Calbeck; 3, Mrs. A. Boswall; 4, Spring Park Poultry Yards.

Buff Plymouth Rock Cock—1, N. A. McKinnon; 2, T. C. Latham.

Buff Plymouth Rock Hen—1, Geo. Chilton; 2, L. A. Haszard.

S. C. Rhode Island Red Cock—1, Arthur Nelson; 2, Chas. Stewart.

S. C. Rhode Island Red Hen—1, Arthur Nelson; 2, Chas. Stewart.

R. C. Rhode Island Red Cock— 1, Arthur Nelson.

R. C. Rhode Island Red Hen — 1, Arthur Nelson.

Black Spanish Cock—1, D. W. McMillan; 2, T. C. Latham.

Black Spanish Hen—1, T. C, Latham; 2, D. W. McMillan.

Silver Wyandotte Cock—1, J. D. Fraser; 2, T. C. Latham.

Silver Wyandtte Hen—1, J. D. Fraser; 2, Robert Hudson.

White Wyandotte Cock—1, Spring Park P. Yards; 2, R. R. Day.

White Wyandotte Hen—1, J. Whitlock; 2, Spring Park P. Yards

Buff Wyandotte Cock—1, Wm. Beasley; 2, R. Hudson.

Buff Wyandotte Hen—1, R. Hudson; 2, Wm. Beasley.

A. O. V. Wyandotte Cock—1, Wm. Gregory; 2, I. L. Pickett.

A. O. V. Wyandotte Hen—1, Wm. Gregory; 2, I. L. Pickett.

CHICKENS.

Anconas Cock—1, J. Whitlock; 2, E. J. Vesey.

Anconas Hen—1, J. Whitlock; 2, E. J. Vesey.

Andalusian Cock—1, W. McNeil.

Andalusian Hen—1, W. McNeil.

Brahmas Cock—1 and 2, T. C. Latham.

Brahmas Hen—1 and 2, T. C. Latham.

Buff Cochin Cock—1 and 2, T. C. Latham.

Buff Cochin Hen—1 and 2, Thos. C. Latham.

A. O. V. Cochin Cock—1 and 2, Geo Peterson.

A. O. V. Hen—1 and 2, Geo. Peterson.

Dorking Cock—1, N. A. McKinnon; 2, J. Whitlock.

Dorking Hen—1, J. Whitlock; 2, N. A. McKinnon.

S. S. Hamburg Cock—1, John Tweedy; 2, T. C. Latham.

S. S. Hamburg Hen—1, John Tweedy; 2, T. C. Latham.

G. P. Hamburg Cock—1, E. H. Boswall; 2, A. H. Boswall.

G. P. Hamburg Hen—1, A. H. Boswall; 2, E. H. Boswall.

S. P. Hamburg Cock—1, E. Boswall; 2, A. H. Boswall.

S. P. Hamburg Hen—1, E. Boswall; 2, A. H. Boswall.

Houdan Cock—1 and 2, Wilfred Williams.

Houdan Hen—1, J. Whitlock; 2, Wilfred Williams.

Langshan Cock—1, W. Williams.

Langshans Hen—1, W. Williams.

S. C. White Leghorn Cock—1, Geo. Chilton; 2, W. Beasley.

S. C. White Leghorn Hen—1 and 2, Wm. Beasley.

S. C. Brown Leghorn Cock—1, J. Whitlock; 2, Chas. Pippy.

S. C. Brown Leghorn Hen—1, J. J. Whitlock; 2, Geo. Chilton.

S. C. Buff Leghorn Cock—1, N. Beasley; 2, K. McKinnon; 3, Geo. Chilton, non.

S. C. Buff Leghorn Hen—1, N. McKinnon; 2, W. Beasley; 3, K. McKinnon.

R. C. Leghorn Cock—1 and 2, T. C. Latham.

R. C. Leghorn Hen—1, J. Whitlock; 2, Nelson Whitlock.

S. C. Black Minorcas Cock—1 and 3, W. J. Cudmore; 2, Thos. Mills.

S. C. Black Minorcas Hen—1 and 2, W. J. Cudmore; 3, Thos. Mills.

R. C. Black Minorcas Cock—1 and 2, J. D. Fraser.

R. C. Black Minorcas Hen—1, E. A. Cudmore; 2, J. D. Fraser.

S. C. White Minorcas Cock—1, Fred Godkin; 2, Geo. Chilton.

S. C. White Minorcas Hen—1, Fred Godkin; 2, Chas. Pippey.

Buff Orpington Cock—1, L. A. Haszard; 2, T. Mills; 3, C. P. Thorne.

Buff Orpington Hen—1, L. A. Haszard; 2, T. Mills; 3, A. Nelson.

A. O. V. Orpington Cock—1 and 2, V. L. Gurney.

A. O. V. Orpington Hen—1 and 2, V. L. Gurney.

Barred Plymouth Rock Cock—1, T. C. Latham; 2, Geo. Crockett.

Barred Plymouth Rock Hen—1, Geo. Crockett; 2, T. C. Latham.

White Plymouth Rock Cock—1 and 2, G. A. Calbeck; 3, J. Whitlock.

White Plymouth Rock Hen—1, G. A. Calbeck; 2, Mrs. A. Boswall; 3, Spring Park Poultry Yards.

Buff Plymouth Rock Cock—1 and 2, L. A. Haszard.

Buff Plymouth Rock Hen—1 and 2, L. A. Maszard.

S. C. Rhode Island Red Cock—1, J. Whitlock; 2, Chas Stewart; 3, N. Whitlock.

S. C. Rhode Island Hen—1, J. Stewart; 2, A. Nelson; 3, J. Whitlock.

Silver Wyandotte Cock—1, J. Whitlock.

Silver, Wyandotte Hen—1, J. D. Fraser; 2, J. Whitlock.

White Wyandotte Cock—1, T. Mills; 2, H. Baker.

White Wyandotte Hen—1, H. Baker; 2, T. Mills.

Buff Wyandotte Cock—1, Wm. Beasley; 2, Robt. Hodgson.

Buff Wyandotte Hen—1, Wm. Beasley; 2, Robert Hodgson.

A. O. V. Wyandotte Cock—1, J. Whitlock; 2, D. McMillan.

A. O. V. Hen—1, J. Whitlock; 2, D. McMillan.

TURKEYS.

Bronze—1, Mrs. A. Boswall; 2, L. Hayden.

Bronze Chicks—1, L. Hayden.

GEESE.

Tolouse—1, G. L. Boswall; 2, Almon Boswall.

Bremen or Embden—1, Mrs. A. Boswall; 2, E. Lund.

A. O. X. Geese—1, Mrs. A. Boswall; 2, E. Lund.

1913, Tolouse—1, A. Boswall; 2, G. L. Boswall.

1913 Bremen or Embden—1 and 2, A. Boswall.

DUCKS.

Rouen—1, A. Boswall; 2, A. H. Boswall.

Pekin—1, J. Whitlock; 2, Mrs. A. Boswall.

A. O. V. Ducks—1, E. B. Boswall; 2, Chas. Pippey.

1913 Rouen—1, Robt. Hudson; 2, A.

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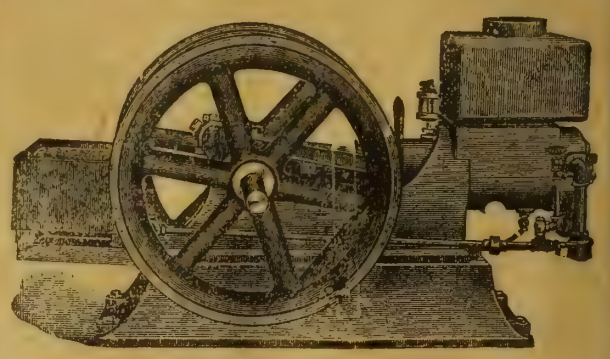

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Boswall.

1913 Pekin—1, J. Whitlock; 2, M. L. Curran.

1913 A. O. V. —1, L. Boswall; 2, A. H. Boswall.

Potato Canker Danger.

Potato Canker should not be allowed to gain a foothold in Canada. It is a disease that makes slow progress but where once broken out it has defied every known means of control. With the approach of the potato harvest all growers are particularly requested to examine their potatoes for signs of canker. A case of potato canker escaping detection forms a source of future infection.

The appearance of this disease has been well illustrated by the Farmers Circular No. 3 obtainable free of charge from the Publication Branch of the Department of Agriculture, Ottawa. Potato Canker owing to its serious nature has been made the subject to certain legislative measures under the Dominion Destructive Insect and Pest Act. In order to familiarize the farmer with the requirements of the Act their attention is called to the following extracts, and other information concerning the necessary steps to be taken in case potato canker is discovered in any locality.

(1) On discovery of any signs of potato canker farmers should immediately notify the Dominion Botanist, Experimental Farm, Ottawa, of the outbreak, at the same time submitting specimen, when an inspector will be sent to assist and advise the farmer as regards the treatment to be given.

(2) Unless prompt action is taken and the authorities are notified without delay the whole crop of potatoes, whether "apparently" sound or diseased is liable to destruction under "The Destructive Insect and Pest Act," Regulations 7 and 8, reading:

(7) If, on inspection, nursery stock or other vegetation or vegetable matter is found to be infected with any of the insects, pests or diseases hereinafter specified, it shall be destroyed to the extent deemed necessary by the inspector and in his presence. All cases, packages, and packing in which such stock has been contained shall also be destroyed in the same manner.

(8) Any inspector entering any lands, nursery or other premises where there is reason to believe that any of the insects, pests or diseases hereinafter specified are or may be present, shall give instructions for the treatment or destruction of any tree, bush, crop or any vegetation or vegetable matter or the containers thereof, which may be found or suspected to be infested with any of the insects, pests or diseases hereinafter specified, and such instructions shall be carried out by the owner or lessee of the infected or suspected vegetation, vegetable matter, or containers thereof, and such remedial treatment shall be carried out and continued until the insect, pest or disease shall be deemed by the inspector to have been exterminated."

(3) Cut off and burn all potato tops or stalks without removing them from the infested area.

(4) Dig at once all potatoes on your farm, carefully hand pick them and those already dug and separate the diseased tubers from those "apparently" or perfectly sound.

(5) Place the diseased tubers in a pile and cover with earth. The inspector will advise you regarding their disposal.

(6) All perfectly or "apparently" sound tubers may be stored in the usual way, but none must be used for any purpose whatsoever until the inspector has given permission.

(7) Allow no tubers to remain in the ground, nor any animal to have access to an infected field. The organism causing the disease is liable to be spread through the excreta of animals having eaten infected potatoes in a raw condition.

(8) No raw potatoes whether diseased, "apparently" or perfectly sound must be used for any purpose whatever. After they have been examined by the inspector, they may boiled. Boiling will absolutely destroy the disease germ. All potato parings must be burned immediately.

(9.) Under no circumstances may you dispose of, sell or receive or give away any potatoes resulting from a diseased crop, however slightly that crop may have been affected. Note Regulations 10 under the " Destructive Insect and Pest Act," reading:

"It shall be illegal to sell, offer for sale or in any way dispose of or to receive any trees, shrubs or other plants, vegetable matter or portions of the same, if the same are infested with any of the insects, pests or diseases hereinafter specified."

(10) If the quantity of potatoes permitted by the inspector to be used is considerable, you are strongly advised to keep a number of pigs and use a quantity of boiled potatoes among the usual food.

(11) The use for seed of any potatoes resulting from an infected or no matter how sound they may appear, is strictly prohibited, as the disease is entirely propogated by the use of infected seed.

12. The land on which a diseased crop has been raised is useless for the cultivation of potatoes for an indefinite number of years. It may however, be used for the growing of any other kind of crop, except potatoes.

13. All tools, implements, etc., used on infected land must be carefully cleaned by washing with an antiseptic solution (crude Carbolic Acid Sheep Dips, etc., etc.,) before removing them from such infected land. Any soil left adhering to them or to the boots of the persons working in the field, is liable to contain disease germs, and in this way may be responsible for carrying the disease to clean land.

In conclusion I must caution you to carefully carry out all these instructions. They have been devised to protect your own and the country's interests. Also kindly note paragraph "8" of "The Destructive Insect and Pest Act," reading:

(8) "Every person who contravenes any provision of this Act, or any regulation made thereunder, shall be liable, upon summary conviction to a fine not exceeding one hundred dollars, or to imprisonment for a term not exceeding six months, or to both fine and imprisonment. Further note paragraph 7 of the Destructive Insect and Pest Act:

(7) "The Minister, upon the report of any inspector setting forth a reasonable belief of the existence of any insect, pest or disease in area defined in such report, may prohibit the removal from such area or the movement therein of any vegetation, vegetable or other matter which, in his opinion is likely to result in the spread of such insect, pest or disease."

MEMO:—The potato disease referred to "as hereinafter specified" in the "Act" or "regulations" is Potato Canker, Chrysophlyctis endobiotica, Schi.—H. T. Gussow, Dominion Botanist, Central Experimental Farm Department of Agriculture, Ottawa.

N. B.—Letters and parcels of enquiry below 5 lbs.in weight, are carried by mail if addressed Dominion Botanist, Central Experimental Farm, Ottawa.

Make Your Coal Oil Lamp Burn Gas

The New "Great White Light" Burner Turns Ordinary Kerosene Illumination Into

GASLIGHT

"ASK THE USER"

"Great White Light" Burners speak for themselves, prove their worth, make friends—
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A
FAIR
TRIAL

EVERY "Great White Light" burner sold under a POSITIVE PROTECTIVE GUARANTEE not to smoke nor smell even when turned low or burned all night.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil.

THE PROBLEM OF PERFECT COMBUSTION

Air is composed of 79% Nitrogen and 21% Oxygen. The Nitrogen is entirely useless for combustion or light giving purposes, but it must go through the burner in order to utilize the oxygen. How to overcome this useless 79% of Nitrogen that **must pass** through the burner and how to **increase** the supply of Oxygen which in turn will increase the quality and size of the flame has always been the problem. The popular idea has been for some time that heat is the only medium which will accomplish this process of separation, but it has since been learned through exhaustive and comparative tests that heat plays only a small part in the operation.

WHAT THE WONDERFUL BURNER DOES

Located on both sides and in the interior of the dome of the "Great White Light" burner are the marvelous little "Radions" which are placed securely and with such absolute precision that they generate the latent gas properties in kerosene oil. The discovery of the scientific action obtained by the use of the "Radions" has opened new and unlimited opportunities for coal oil illumination.

Air will not mix with oil itself, although both are essential for **perfect** combustion and this is where the wonderful action of the "Radions" is manifest and as they gradually become heated the process of separation takes place. The "Radions" help to draw the supply of Oxygen from the flat sides of wick and force it toward the ends of the tube where it is most needed, at the same time repelling or forcing away the useless Nitrogen and creating a tremendous draught through the burner and chimney, which in turn supplies the necessary increased amount of Oxygen to form an **absolute, complete and perfect combustion.**

SIMPLICITY

Although the principle of the burner is built upon highly scientific lines and the results it produces are marvelous, still it is extremely simple in construction and any child can handle the burner with utmost safety. **UNDERSTAND THE POINT**—it makes no difference what you have ever seen, or heard of, or used as a coal oil burner the new **"GREAT WHITE LIGHT"** is entirely different, cheaper and better.

One of these burners, either small, medium or large size, will be sent to anyone, whether new or renewal subscription. When sending in money state which size you want. Send to-day.

We guarantee these burners to do as represented or money refunded.

The Maritime Farmer

SUSSEX, N. B.

We do not sell these burners but each subscriber may get two beside one we furnish free by sending 35 cents for each additional one wanted.

Cut Down Fuel Bills

If you would have a house free from drafts — whose walls will turn aside the bitterest gale and keep out the keenest frost—a house which is easy to heat and comfortable to live in—use

"Sovereign" Sheathing Felt

Trade Mark Registered

to interline the walls, floors and ceiling.

SOVEREIGN Sheathing Felt is really light-weight RU-BER-OID Roofing — a thick, waterproof, windproof, insulating blanket which keeps a house warm in winter and cool in summer. It will endure and protect as long as the building stands.

Get a sample from the nearest RU-BER-OID dealer, or write for sample and booklet to 104

Standard Paint Co. of Canada, Limited
Montreal-Winnipeg-Calgary-Vancouver

Homeseekers Excursion to Western Canada.

Every Wednesday until the 9th of October the Intercolonial Railway will sell second class, round trip tickets to Winnipeg, Brandon, Regina, Edmonton,, Saskatoon, and Calgary. These are good to return two months from date of issue and are a special inducement to those wishing a cheap trip to the West. The nearest I. C. R. ticket agent will furnish all particulars. In that ticket read via Intercolonial Railway, the only all Canadian route from the Maritime Provinces.

PILES CURED at HOME by NEW Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the new absorption treatment; and will also send some of this home treatment for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write today to Mrs. M. Summers, Box P. 309 Windsor, Ont.

Uric Acid Never Caused Rheumatism

I WANT to prove it to your satisfaction. If you have Rheumatism, acute or chronic—no matter what your condition—write today for my FREE BOOK on "RHEUMATISM—Its Cause and Cure." Thousands call it "The most wonderful book ever written." Don't send a stamp—it's ABSOLUTELY FREE.

JESSE A. CASE, Dept. 461, Brockton, Mass. U. S. A

An article that has real merit should in time become popular. That such is the case with Chamberlain's Cough Remedy has been attested by many dealers. Here is one of them. H. W. Hendrickson, Ohio Falls, Ind., writes, "Chamberlain's Cough Remedy is the best for coughs, colds and croup, and is my best seller. For sale by all dealers.

Electric Restorer for Men

Phosphonol restores every nerve in the body to its proper tension; restores vim and vitality. Premature decay and all sexual weakness averted at once. **Phosphonol** will make you a new man. Price $3 a box, or two for $5. Mailed to any address. **The Scobell Drug Co., St. Catharines, Ont.**

The Prize Winners at the Fredericton Exhibition.

(Continued from page 857)

Cow, 3 years old, dry—1, Lea & Clark; 2, W. S. Harding; 3, Harding Bros.

Cow, 2 years old—1, Lea & Clark; 2, Harding Bros.; 3, W. S. Harding.

Heifer, 2 years old—1, Lea & Clark; 2, Harding Bros.

Heifer, senior yearling—1 and 3, Lea & Clark; 2, W. S. Harding.

Heifer, junior yearling—1, W. S. Harding; 2, Lea & Clark; 3, Harding Bros.

Heifer, senior calf—1 and 3, Harding Bros.; 2, Lea & Clark.

Heifer, junior calf—1, Lea & Clark; 2 and 3, Harding Bros.

Champion Female—Harding Bros.

Reserve Champion Female—Harding Bros.

Aged herd—1, Harding Bros; 2, Lea & Clark; 3, W. S. Harding.

Breeders' young herd—1, Lea & Clark; 2, Harding Bros; 3, W. S. Harding.

Bull and 3 of his get—1, Lea & Clark; 2, Harding Bros.

Cow and 2 of her offspring—1, Harding Bros.; 2. Lea & Clark.

Three animals, get of one sire—1 and 2, Lea & Clark; 3, Harding Bros.

Two animals, progeny of one cow—1 and 3, Lea & Clark; 2, Harding Bros.

GUERNSEYS.

With the exception of 3rd prize on aged bull which went to Wallace Cook, Salem, N. S., 1st prize on senior yearling bull, which went to Fred Corbett, Fredericton and 1st prize on junior bull calf, which went to R. R. Black, Amherst, N. S., all the prizes in the Guernsey class went to H. W. Corning, Chegoggin, N. S.

JERSEYS.

With the exception of first prize on two year-old and senior yearling bulls which went to Wm. Craig, Nas-Sis, and F. W. Robinson, Fredericton, all the prizes awarded in the Jersey class went to H. S. Pipes & Son, Amherst, N. S.

DAIRY GRADES.

Cow, 4 years old and upwards—1, R. R. Black, Amherst, N. S.; 2, 3 and 4, W. B. Gilman, Fredericton.

Dry Cow, 4 years old—1 and 2, W. B. Gilman; 3, R. R. Black.

Dry Cow, 3years old—1, W. B. Gilman.

Heifer, Senior yearling—1 and 2, W. B. Gilman.

Heifer, junior yearling—1, W. B. Gilman.

Heifer, senior calf—1, Mrs. M. Atkinson, Fredericton; 2, W. B. Gilman.

Heifer, junior calf—1, J. W. Harrison, Fredericton; 2, S. J. Darcus, Fredericton.

Female, any age—Diploma, W. B. Gilman.

Four females, over 2 years, in milk—1, W. B. Gilman.

SHEEP.

COTSWOLDS.

Ram, 2 shears and over—1, A. C. Servant, Overton, N. S.; 2, Wm. Craig, Nas-sis, N. B.

Ram Lamb—1, Wm. Craig;2, A. C. Servant.

Ewe, 2 shears and over—1 and 2, A. C. Servant; 3, Wm. Craig.

Ewe, shearling—1 and 2, A. C. Servant.

Ewe, lamb—1 and 3, A. C. Servant; 2, Wm. Craig.

Pen, aged—1, A. C. Servant.

Pen, lambs—1, A. C. Servant.

LEICESTERS.

Ram, 2 shears and over—1, Albert Boswall Sr., Pownal, P. E. I.

Ram, shearling—1, S. L. Boswall, Pownal; 2, A. Boswall, Sr.

Ram, lamb—1, A. Boswall Sr.; 2, S. L. Boswall.

THIS BIG 4HP. ENGINE IS YOURS FOR

$15 DOWN AND BALANCE IN EASY PAYMENTS

IT IS EASY TO BUY the Gilson "GOES LIKE SIXTY" Engines "60-SPEED" and "100% SERVICE," on the above plan. The Gilson has over 40,000 satisfied users. It is simplest in design, staunchest in construction, unfailingly reliable, and a genuine top-notcher in every detail. We want one of our Engines in every locality, and will make you a special, big *money-saving proposition*. Now is your chance to get this famous Gilson Engine at a remarkably *low price*. A positive guarantee with every engine. You can try it and test it out yourself. Can anything be fairer? This Engine is made in Canada; therefore, you save the duty. Ask your banker about our reliability. Write for free catalogue, and let us know what work you have for an engine to do. ALL SIZES FROM 1 HP. TO 40 HP. AGENTS WANTED

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MOLASCUIT MEAL

(HUGHES' PATENT)

This Cattle Food, is a pure product of the Sugar Cane, the richest grass in the world only the digestible pith of the cane being used to absorb the molasses. 20% of this pith will absorb 80% of concentrated molasses. Molascuit is pure cane molasses, minus the water, which is dried out, and replaced by the digestible pith.

It is the most easy, practical and economical means of handling molasses, and in the best form for feeding to all stock.

When fed to cows, it will increase the quantity and quality of milk.

When fed to horses it improves their condition and working powers. Give them a handful or so with their other food when they come in tired after a day's work, reducing the oats by amount of Molascuit added.

Molascuit is extensively used in Demerara, Argentine, South Africa, Mauritius, India, Australia and of course in England.

The Canadian Farmer will not be slow to grasp its value,

Molascuit is the richest Sugar food, containing as it does over 50% of pure sugar.

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"ONLIWON" Cabinet with EDDY'S Toilet Paper ∴ ∴ ∴

Overcomes litter & waste. Delivers units of two sheets as used-ed. No moving parts --- cannot get out of order. Finished in beautiful nickel-plate. Compact --- ornamental --- economical.

SPECIAL OFFER: Sixteen thousand sheets, EDDY'S best quality chemically-purified Toilet Paper with "ONLIWON" fixture (as above), express prepaid to any point reached by railway, east of Sudbury. **$2.50**

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CARBURETOR troubles, ignition troubles, and all the other worry-makers have been done away with in the *Sta-Rite* gasoline engine, by its simplicity of construction, its high grade materials and workmanship and its eleven proven features. Its reliability, durability and low cost of operation make it an unbeatable engine. Stationary and portable models, 1½ to 16 h. p.

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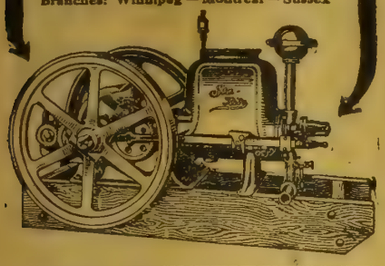

The Fall Term

—AT—

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W. J. OSBORNE PRINCIPAL.

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TUESDAY, Sept. 2nd

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W. J. OSBORNE, Principal,
Fredericton, N. B.

No Summer Vacation

We would greatly enjoy one, but as many of our students come from long distances and are anxious to be ready for situations as soon as possible, our classes will continue without interruption.

Then, St. John's cool summer weather makes study during the warmest weather just as pleasant as at any other time.

Students can enter at any time.

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FITS CURED Send for Free Book giving full particulars of TRENCH'S REMEDY, the world-famous cure for Epilepsy and Fits—Simple home treatment. 25 years' success. Testimonials from all parts of the world; over 1,000 in one year.
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The implicit confidence that many people have in Chamberlain's Colic, Cholera and Diarrhoea Remedy is founded on their experience in the use of that remedy and their knowledge of the many remarkable cures of colic, diarrhoea and dysentery that it has effected. For sale by all dealers.

Dates to be Remembered

Maritime Winter Fair, Amherst, N. S., December 8 to 11, 1913.

Fredericton Poultry Show, Fredericton, N. B., February 17 to 19, 1914.

Westmorland Poultry and Pet Stock Exhibition at Moncton, N. B., January 13th to 16th, 1914.

Ewe, 2 shears and over—1 and 2, A. Boswall Sr.; 3, S. L. Boswall.
Ewe, shearling—1 and 3, S. L. Boswall; 2, A. Boswall.
Ewe, lamb—1 and 2, A. Boswall; 3, S. L. Boswall.
Pen, aged—1, A. Boswall; 2, S. L. Boswall.
Pen lambs—1, A. Boswall.

LINCOLNS.

Ram, 2 shears and over—1, A. Boswall, French Fort, P. E. I.; 2, Almon Boswall, Marshfield, P. E. I.; 3, C. Pugsley, Barronsfield, N. S.
Ram, shearling—1, A. Boswall.
Ram, lamb—1, A. Boswall; 2, C. Pugsley.
Ewe, 2 shears and over—1, C. Pugsley; 2 and 3, A. Boswall.
Ewe, shearling—1, A. Boswall; 2, Almon Boswall; 3, C. Pugsley.
Ewe, lamb—1, A. Boswall; 2, Almon Boswall; 3, C. Pugsley.
Pen, aged—1, A. Boswall; 2, C. Pugsley.
Pen lambs—1, A. Boswall; 2, C. Pugsley.

OXFORD DOWNS.

Ram, 2 shears and over—1, J. E. Baker & Sons, Barronsfield, N. S. 2, Burder Goodwin, Baie Verte, N. B.
Ram, Shearling—1, Burder Goodwin; 2 and 3, J. E. Baker & Sons.
Ram, lamb—1 and 2, J. E. Baker & Sons; 3, Burder Goodwin.
Ewe, 2 shears and over—1 and 2, J. E. Baker & Sons; 3, Burder Goodwin.
Shearling Ewe—1, Burder Goodwin; 2 and 3, J. E. Baker & Sons.
Ewe, lamb—1 and 2, J. E. Baker & Sons; 3, B. Goodwin.
Pen, aged—1, J. E. Baker & Sons; 2, B. Goodwin.
Pen, lambs—1, J. E. Baker & Sons; 2, B. Goodwin.

SHROPSHIRES.

Ram, 2 shears and over—1, F. G. Spafford, Compton, Que.; 2, Geo. L. Boswall, French Fort, P. E. I.; 3, Cephas Nunn, Winsloe Road, P. E. I.
Ram, shearling—1, F. G. Spafford; 2 and 3, Geo. L. Boswall.
Ram, lamb—1 and 2, Geo. L. Boswall; 3, Cephas Nunn.
Ewe, 2 shears and over—1 and 2, Geo. L. Boswall; 3, Cephas Nunn.
Shearling Ewe—1 and 3, Geo. L. Boswall; 2, B. Goodwin.
Ewe lamb—1, 2 and 3, Geo. L. Boswall.
Pen, aged—1 and 2, Geo. L. Boswall.
Pen, lambs—1, Geo. L. Boswall; 2, Cephas Nunn.

SOUTH DOWNS.

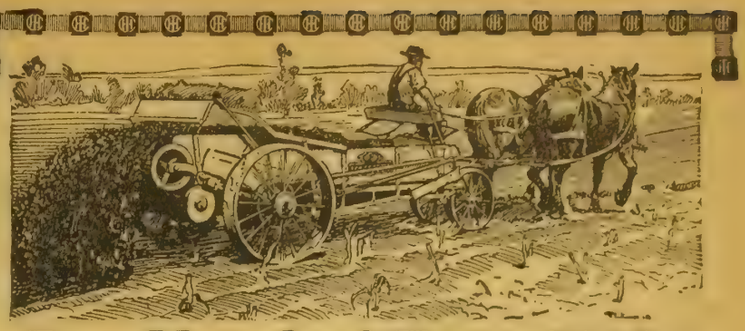
Ram, over 2 shears—1, Cephas Nunn
Ram, shearling—1, J. E. Baker & Son; 2, Cephas Nunn.
Ram, lamb—1, J. E. Baker & Son; 2, Cephas Nunn.
Ewe, 2 shears and over—1, J. E. Baker & Sons; 2 and 3, Cephas Nunn.
Ewe, shearling—1 and 3, J. E. Baker &Sons; 2, Cephas Nunn.
Aged pen—1, J. E. Baker & Sons; 2, Cephas Nunn.
Pen, lambs—1, J. E. Baker &Sons; 2, Cephas Nunn.

HAMPSHIRE DOWNS.

Ram, 2 shears and over—1, Cephas Nunn.
Ram, shearling—1, Cephas Nunn.
Ram lamb—1, Almon Boswall; 2, Cephas Nunn.
Ewe, 2 shears and over—1 and 2, Cephas Nunn.
Shearling Ewe—1, Cephas Nunn; 2 and 3, Almon Boswall.
Ewe lamb—1, 2 and 3, Cephas Nunn.
Pen, aged—1, Cephas Nunn.
Pen lambs—1, Cephas Nunn.

CHEVIOTS.

Ram, 2 shears and over—1, Cephas Nunn; 2, Chas. Symes, Minudie.
Ram, shearling—1, Cephas Nunn; 2, Geo. Symes; 3, Chas. Symes.



Best-Hated of Farm Tasks

ON the spreaderless farm the thought of the great heaps of manure piling up constantly in barn yards, stables, and stalls, is a gloomy one. Those piles mean much disagreeable and hard work. Three times every bit must be handled. It must all be loaded onto high wagons. It must be raked off in piles in the fields. Then every forkful must be shaken apart and spread.

Compare that old-fashioned method with the spreader way. You pitch the manure into the spreader box, only waist high, drive out and—the machine does all the rest.

And, far more important, if you buy an I H C spreader, one ton of manure will go as far as two tons spread by hand, with the same good effect on the soil, and it will all be spread evenly.

I H C Manure Spreaders

Deering and McCormick

are farm necessities. The man who uses one will get the price of it back in increased crops before its newness has worn off

I H C spreaders are constructed according to plans in which every detail, every feature, is made to count. They are built to do best work under all circumstances, and to stand every strain for years. They are made in all styles and sizes, for small farms and large, low and high machines, frames of braced and trussed steel. Uphill or down, or on the level, the apron drive assures even spreading, and the covering of corners is assured by rear axle differentials. In all styles the rear axle is placed so that it carries near three-fourths of the load. This, with the wide-rimmed wheels with Z-shaped lugs, makes for plenty of tractive power. Winding of the beater is prevented by large diameter and the beater teeth are long, strong and chisel pointed.

A thorough examination of the I H C spreader line, at the store of the local agent who sells them, will interest you. Have him show you all these points and many more. Study the catalogues you can get from him, or, write the

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EASTERN BRANCH HOUSES
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THINK for amoment! The money you are going to pay for that piano is **Genuine 100 cents to the dollar** money. No other kind will do. Make absolutely certain of a **100% efficient piano.** Buy a

Sherlock-Manning 20th Century Piano Style 70—Colonial

and you buy "Canada's Biggest Piano Value"— an instrument conceded to be **second to none** in **lasting tonal qualities** and **durability.**

Another important consideration: The **Sherlock-Manning** can be delivered right to you **at a saving** of **$100.00,** owing to our 20th Century way of doing business.

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London (No Street address necessary) **Canada**

Ram lamb—1, Chas. Symes; 2, Cephas Nunn; 3, Geo. Symes.
Ewe, 2 shears and over—1, Geo. Symes; 2, Cephas Nunn; 3, Chas. Symes.
Ewe, shearling—1 and 2, Cephas Nunn; 2, Chas. Symes; 3, Geo. Symes.
Pen, aged—1, Cephas Nunn; 2, Chas. Symes.
Pen, lambs—1, Geo. Symes.

DORSETS.

Ram, 2 shears and over—1, A. C. Servant; 2, Geo. L. Boswall.
Ram, shearling—1 and 2, Geo. L. Boswall.
Ram, lamb—1 and 3, Geo. L. Boswall; 2, A. C. Servant.
Ewe, 2 shears and over—1 and 2, Geo. L. Boswall; 3, A. C. Servant.
Shearling Ewe—1 and 2, Geo. L. Boswall.
Ewe, lamb—1 and 2, A. C. Servant; 3, Geo. L. Boswall.
Aged pen—1, Geo. Boswall; 2, A. C. Servant.
Pen lambs—1, Geo. Boswall; 2, A. C. Servant.

SUFFOLKS.

Ram, 2 shears and over—1, Albert Boswgll; 2, Almon Boswall.
Ram lamb—1, Albert Boswall; 2, Almon Boswall.
Ewe, 2 shears and over—1 and 2, Albert Boswall; 3, Almon Boswall.
Ewe, shearling—1 and 2, Albert Bos-Boswall; 2, Almon Boswall.
Ewe, lamb—1 and 2, Albert Boswall.
Pen lambs—1, Albert Boswall.

GRADES (LONG WOOL)

Pair Ewes—1, C. Pugsley; 2, Almon Boswall.
Pair Ewes, shearling—1, Almon Boswall; 2, Chas. Symes.
Pair lambs—1, Almon Boswall; 2, Chas. Symes.
Pen—1, Almon Boswall; 2, Chas. Symes.

GRADES (MEDIUM WOOL)

Pair Ewes—1, J. E. Baker & Sons; 2, John Jewett.
Pair Ewes, shearling—1, J. E. Baker & Sons; 2, John Jewett.
Pair lambs—1, J. E. Baker & Sons; 2, John R. Jewett.
Pen—1, J. G. Baker & Son; 2, John R. Jewett.

FAT SHEEP ANY BREED OR GRADE.

Ewe, over 1 year—1, J. E. Baker & Sons; 2, Geo. Boswall.
Ewe, lamb—1, J. E. Baker & Sons; 2, Cephas Nunn.
Wether, yearling—1, J. E. Baker & Sons; 2, Cephas Nunn.
Wether lamb—1, Cephas Nunn; 2, C. Pugsley.

SWINE.

BERKSHIRES.

Boar, over 2 years—1, Shaw Bros., Victoria, N. B.; 2, Robert Long, Keswick.
Boar, under 6 mos.—1, Shaw Bros.
Sow, over 2 years—1, H. W. Corning; 2, Robert Long.
Sow, over 6 mos.—1, Robt. Long.
Sow, under 6 mos.—1, Shaw Bros.
Breeding Sow with litter—1, Shaw Bros.

YORKSHIRES.

Boar, over 1 year—1, Fiske Bros. Florenceville, N. B.
Sow, over 1 year—1, Fiske Bros.
Sow, under 6 mos.—1, Fiske Bros.

TAMWORTHS.

Boar, over 6 mos.—1, W. J. Gibson; 2, A. McRae & Sons.
Boar, under 6 mas.—1, A. McRae & Sons; 2, W. J. Gibson.
Sow, over 1 year—1, A. McRae & Sons.
Sow, under 6 mos.—1, W. J. Gibson; 2, A. McRae & Sons.

WHITE CHESTER.

Boar, over 2 years—1, H. W. Corning; 2, B. Goodspeed.
Boar, over 1 year—1, John Day, Fredericton.
Boar, over 6 mos.—1, John R. Jewett.
Boar, under 6 mos—1, W. H. Moore, Scotch Lake; 2, B. Goodspeed; 3, J. R. Jewett.
Sow, over 1 year—1, John R. Jewett.
Sow, under 6 mos.—1, B. Goodspeed; 2, John R. Jewett.
Breeding Sow, with litter—1, John R. Jewett.

POLAND CHINAS.

Boar, over 2 years—1, A. C. Stewart; 2, Chas. Symes.
Boar, under 6 mos.—1, A. C. Stewart.
Sow, over 2 years—1, A. C. Stewart; 2, Chas. Symes.
Sow, over 1 year—1, A. C. Stewart.
Sow, over 6 mos.—1, A. C. Stewart
Sow, under 6 mos.—1, A. C. Stewart; 2. Chas. Symes.

DUROC JERSEYS.

Boar, over 1 year—1, J. E. Baker & Sons.
Sow, over 2 yrs.—1. J. E. Baker & Sons.
Sow, over 1 yr.—1, J. E. Baker & Sons.
Sow, over 6 mos.—1, J. E. Baker & Sons.

FAT PIGS.

Spring Pigs—1, B. Goodspeed.

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HALLAM'S TRAPPERS' GUIDE BOOK. 96 pages, illustrated—printed in French or English. Game Laws revised to date, tells you how, when and where to trap, bait and traps to use, and many other valuable facts concerning the Raw Fur Industry, **sent absolutely free for the asking.**

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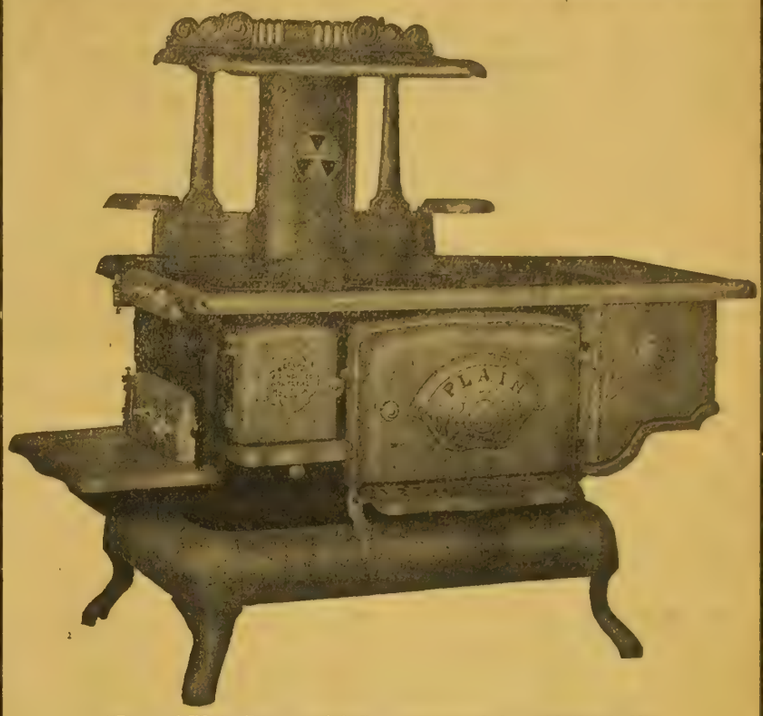

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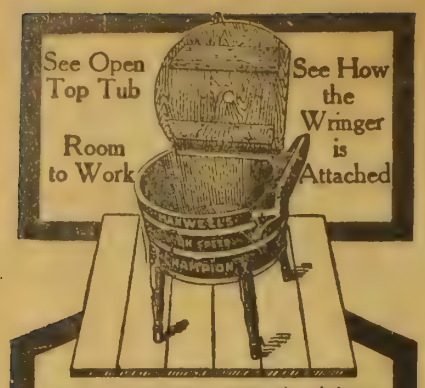

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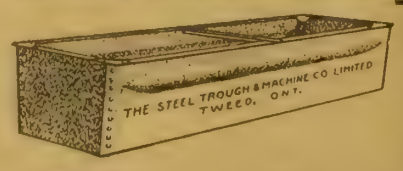

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Common White Goose—1, B. Goodspeed.

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Pekin Duck—1 and 2, Maritime Poultry & Supply Co.

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Muscovey Drake—1, A. J. Kennison, 2, Aroostock Poultry Yards.

Muscovey Duck—1 and , A. J. Kennison.

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Aylesbury Duck—1, Hartland Poultry Yards.

Common Drake—1, H. P. Yards; 2, Jas. W. Estey.

Common Duck—1, HartlandPoultry Yards; 2, Jas. W. Estey.

Wild Drake—1, W. H. Jackson; 2, Hartland Poultry Yards.

Wild Duck—1, Hartland Poultry Yards; 2, W. H. Jackson.

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WANTED—A pure bred Scotch Collie dog. State age, breeding and price. D. R. Nicholson, Coxheath. N S.

FOR SALE—One pure bred Ayershire Bull 20 months old, 5 ft. 10 in., very fine. Apply to C. R. DeLONG, New Germany, Lun. Co., N. S.

FOR SALE—Pure Bred Holstein Bull Calf, 8 months old. One imported registered clyde mare 6 years old. J. D. RIER, Sussex, N. B.

FOR SALE—Pure bred, registered Holstein bull, 4 years, of good milking strain. Fifty dollars if sold at once. KENNETH HYATT, River Philip, N. S

DRESSED PORK 100 to 250 lbs. each well fatted. Butter prints and tubs. Eggs 3 to 10 case lots, prompt returns. JOHN HOPKINS, Mfgrs. of pork products, St. John, N. B.

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FOR SALE OR EXCHANGE—One pure bred Reg. Guernsey bull, 3 years old, quiet and a sure stock getter. H. R. ROSS, West Branch, R. J. Pictou Co., N. S.

FOR SALE—Pekin Ducks, one and two years old. Also a few cockerels in buff and white Leghorns. MARITIME POULTRY & SUPPLY CO., Moncton, N. B.

FOR SALE — Pure Bred Oxford Down's, 1 shearling Ram, a few Ram Lambs, also a few breeding ewes cheap. J. R. SWEENEY, Melrose, N. B.

WANTED — Permanent local representatives, either sex, salary or commission ; can make five to ten dollars day; spare time accep ed. NICHOLS CO., LIMITED, Publishers, Toronto, Canada.

WANTED—The name and addrees of the party who mailed Postal Note No. H 998512 at Moncton, N. B., on March 15th, so we may give proper credit for same.—THE MARITIME FARMER, Sussex, N. B.

MAPLE GROVE FARM—We are offering for sale 1 pure bred Hereford Bull 13 months old and of Rupert Ingleside 4th strain. For futher particulars write L. A. WHITMAN, Maple Grove Farm, New Albany Annapolis Co., N. S.

FOR SALE—White Wyandotte Cock, third at Halifax; also a few good utility hens. Single Comb Brown Leghorn breeding pen. 1st at Halifax. WOLFVILLE POULTRY YARDS, Wolfville N. S.

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LADIES WANTED—To do plain and light sewing at home; whole or spare time; good pay; work sent any distaace; charges paid. Send stamp for full particulars. NATIONAL MANUFACTURING COMPANY, Montreal.

WE WILL PAY YOU $120.00 to distribute religious literature in your community. Sixty days' work. Experience not required. Man or woman. Opportunity for promotion. Spare time may be used. INTERNATIONAL BIBLE PRESS. 182 Spadina Ave., Toronto.

FARMS WANTED—We are now preparing to issue our fifth annual Farm Catalogue If your farm is for sale, write us at once. Our selling terms are surprisingly attractive Our business is making a healthy growth and we can sell your property to your advantage ALFRED BURLEY & CO., 46 Princess St., St John, N. B. Correspondence invited.

MEADOW BROOK FARM offers for sale at reasonable prices Ayrshires of all ages including young cows, heifers in calf, yearling heifers, bulls fit for service. bull and heifer calves. Also the best lot of Shropshire lambs ever offered for sale and one 3 year old ram that has been used in the flock for two years with good success. Correspondence cordially invited. ANDREW MacPHERSON, Ricklin, Pictou Co. N. S.

Special offering in Maple Green Farm Holsteins on account of other engagements this winter I am compelled to reduce my herd so one and two offering a number of choice young cows high official backing that are to calve pre Grand daughters of the famous 'Tidy Abbekerk some due to freshen in December. Also ber of extra choice heifer calves sired Grove Mercena Mercedes' No. 2 whose as a 2 year old gave 1266 lbs. milk butter in the Record of Performance at the head of that class in the Dominion number of years. For prices write HICKS, Dalhousie Jct., N. B.

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Consignments Butter, Eggs and all kinds country produce solicited. Prompt returns made.

Correspondence Solicited.

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Jerseys and Yorkshires for Sale

Bulls from cows in Record of Merit and Young pigs ready to ship in September.

JOSSELYN & YOUNG

Shorthorn Bulls For Sale.

We have ten Roan and Red Bulls from 10 to 14 months old, of splendid form and very desirable. Would be glad to supply Societies or private ndividuals.

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Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding The Farmers Most Profitable Cow should be sent to the Secretary of the Association.

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"IRON AGE" Potato Digger

Just what you are looking for to dig that field of potatoes with this fall. Write for booklet giving full information.

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We have for sale a six months old pure bred Holstein bull calf dam Elsie Hampton Again, a 70 lb. cow; sire, Cobequid Rory, dam Blanche LaHonda, a 60 lb. cow, three months after freshning.

We are also offering a couple of nice, pure bred Shropshire ram lambs.

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Guernsey and Ayrshire Bulls ranging from four months to twenty months old.

One Pure Bred Ayrshire Cow 5 yrs. old (Fresh milch.)

Shropshire Shearling Rams and Ram Lambs (superior lot). Prices and quality right, particulars on application.

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Advertise it in the Maritime Farmer.

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Registered Rams and Ewes bought from the Dominion Government will be sold at Sussex during the month of October.

WATCH Local Papers for notice of commencement of sale.

WRITE OR PHONE

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Holsteins, Clydesdales, Shropshires & Berkshires

LOOK AT THIS.

We have about 25 cows to freshen in the next 60 days and in order to provide room we want to sell 10 young bulls 6 to 12 months old and you will find our prices interesting. Can also offer some splendid fresh young cows and heifers, will part with a few heifer calves and yearlings. Will sell a few Clydesdale colts and fillies as soon as they are weaned, also a splendid two year old filly. Have a splendid bunch of Shrop rams (the best we have ever offered.) Young boars fit for service also fall litters.

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Rose and Single Comb R. I. Reds, Cocks, Hens, Cockerels, and Pullets.

Pure bred registered Ayrshire cow, 3 years old. Write for price.

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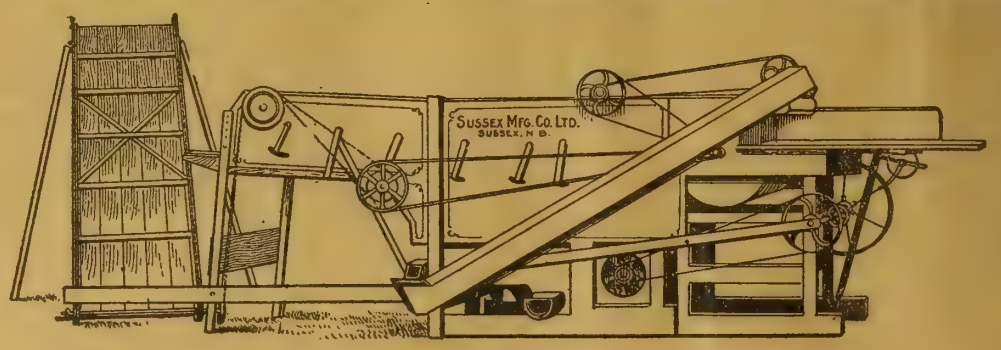
Harvest is about Completed

With the Bumper Crop You Have Had How Are Your Threshing Facilities?



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If you have a lot of grain to thresh for yourself or, if you want to "Make Money" threshing grain for other people, it will pay you to buy one of our **Little Giant Threshing Machines.**

Built in one, two, four and eight horse power sizes.

Either two, four or eight horse power machines can be supplied with or without Tailings Elevator, Straw Carrier and Bagger and equipped with Trucks. Every machine is given a thorough test before it leaves the factory and is fully guaranteed.

We have for Sale two 4 Horse Threshers and 1-2 Horse, which have been used for some time, and which will be sold at a bargain.

We have taken these in exchange for new machines.

Send for our complete Farm Machinery Catalogue which describes our Threshers, Hay Presses, Thread Powers, Wood Cutters, Grain Grinders, Feed Boilers, Root Pulpers, Rubber Belting, etc. It is free and contains a large number of testimonials from satisfied users.

The Sussex Manufacturing Company, Limited, - Sussex, N. B.

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Our charge for inserting names in this Directory is $1.00 per year for each line under each heading. Money must be paid strictly in advance. Names taken out promptly when time is up. Stamps taken.

Guernsey Cattle.

W. A. Smith, Woodward Cove, Grand Manan, N B.
John N. Chute, Berwick, N. S.
Howard W. Corning, Cheggogin, Yarmouth Co., N. S.
J. Frank Roach, Sussex, N. B.

Holstein Cattle.

F. W. C. Nase, Nerepis, N. B.
F. W. C. Nase, Nerepis Station, Kings Co., N. B.
Jos. R. Taylor, Upper Dorchester, N. B.
John B. Barton, Welsford, N. B.

Ayrshire attle.

C. A. Archibald, Truro, N. S.
John H. Hughes, Petitcodiac, N. B.
The S. H. White Co. Ltd., Forest Glen, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
J. Frank Roach, Sussex.
Fred. S. Black, Amherst, N. S.

Shorthorn Cattle.

. H. Power, Selma, Hants Co., N. S.
C. A. Archibald, Truro, N. S,
Isaac Chipman & Son. Chipmans Corner, Kings Co., N. S.

Oxford Down.

Fred S. Black, Amherst, N. S.

Yorkshires.

Stewart Bros., Alliston, P. E, I.
J.W.Callbeck & Sons, Box 386, Summerside, P.E.I.
Boyd A. Wetmore, Bloomfield Statiou, N. B.
Hon. W. Owens, 4026 Dorchester St., Montreal.
The S. H. White Co. Ltd., Forest Glen, N. B.
A. A. McBeath, Marshfield, P. E. I.
R. J. Messenger, Bridgetown, N. S.
Wm. A, Churchill, Lakeside. Yarmouth Co., N.B
Sydney J. Goodliffe, Sussex, N. B.

Chester Whites.

W. H. Moore, Scotch Lake N.B.
Howard W. Corning, Coeggogin, Yarmouth Co. N. S.

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C A. Archibald, Truro, N. S.

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Breeders of Barred Plymouth Rocks, White Wyandottes, Rhode Island Reds and Single Comb Brown Leghorns, Walter McMonagle & Son. Sussex, N. B.

Springbrook Ayrshires!

Champions in the show ring dairy tests, and winners of the Gold Watch over all dairy breeds. Animals all ages and both sexes for sale.

McIntyre Bros.,
Sussex, N. B.

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For Fall and Winter Shows

We can supply you with winners at reasonable prices.

We also have a small farm fronting on river with house and barn for only $700.00. See it.

Orchard Hill Farm, Browns Flats, N.B.

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I have a bunch of nice yearling Single Comb Rhode Island hens I am selling now for $1.00 each, will make splendid stock to start a flock, nice turkeys and some exceptionally fine grey African Geese for fall delivery.

Sarah E. Moses Smith,
Woodward's Cove, N. B.

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I have seven Guernsey bulls from cows of exceptional milking qualities. Parties wishing high class stock for dairy purposes, should write for description and prices.

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100 Acres Equipped, Only $1200

Hay, vegetables, apples, fitted firewood, extra good family cow, wagons, harnesses and farming tools all thrown in if taken befero Oct. 1st; rich machine-worked fields; spring-fed pasture for 15 cows; estimated to be 1000 cds. wood; variety fruit; good mkts., schools and advantages; mail delivered, cream sold at door; near beautiful lake; nice painted house with piazza, barn for 10 head; it's an opportunity of a lifetime as affairs must be settled at once; for traveling instructions see page 9, our "Mammoth 75-Page Farm Catalogue No. 36", beautifully illustrated and filled with a wonderful assortment of money-making farms throughout N. S. and N. E. States, many with stock ,tools and crops included; send to day for your free copy, it will save you lots of time and money. Box No. 373, Sussex, N. B.

FOR SALE!

A few choice White Leghorn Cockerels from prize stock. Eggs for hatching all breeds. Send for catalogue.

Maritime Poultry Supply Co.
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NORTHERN GROWN TREES

Apple, Pear, Plum, Cherry and Ornamental; Strawberry, Raspberry, Currant, Gooseberry and other Small Fruits in leading varities. Orders booked now for Spring delivery —no agents. Send list of your wants for prices, etc.

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FOR SALE

We have a number of choice cockerels and pullets of Barred Plymouth Rock, White Wyandotte, Single Combed Brown Leghorn and Rhode Island Reds. All will be sold at reasonable prices. Eggs for hatching $1.00 per setting. Apply to

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Stock bull, Doune Gladiator, (imp.) 79308. No superior in Maritime Provinces.

Also choice lot of heifers, best blood of the breed obtainable, with size, style and quality. Also a few high class milking grades.

Prices within reach of any farmer who wishes to improve or renew his stock.

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The genuine article fresh from the Clover fields. Ready in a few days in bulk or comb. Prices given on application.

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For immediate sale several young bulls, fit for service, will be sold reasonable to make room for other stock. Good quality and winners at the recent exhibitions. Also several young bull calves.

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For the months of June, July and August only we will sell White Wyandotte, Columbian Wyandotte and S. C. White Leghorn eggs at $1.25 per 15; $3 for 50; $5 for 100. For Light Brahma eggs $2 for 15; $3 for 30. Address,

Michael K. Boyer, Box 27,
Atlantic Co., New Jersey.

Chester White Pigs For Sale

Book your orders now for Chester White Pigs from four weeks upward. Pairs furnished that are not akin.

W. A. ERB, SUSSEX, N. B.

SPRINGVALE FARM AYRSHIRES

Prize winners in the dairy tests at Amherst 1912, bred from Show Ring stock, are in my herd.

Young Stock For Sale.

FRED S. BLACK, Amherst, N. S.

Exhibition Stock

As we will not show at any fall shows this year we offer for sale our last years Prize Winning Stock in White Wyandottes, White Orphingtons, Black Minorcas, R. I. Reds, Barred Rocks and White Leghorns.

Write for price

Kingsdale Poultry & Supply Co.
SUSSEX, N. B.

Maple Forest Yorkshires

We have the type that gives best profit. Write your wants to

S. J. GOODLIFFE, - Sussex, N. B.

WISH-TON-WISH STOCK FARM

Breeders of High Class Holstein-Friesian Cattle and Berkshire Pigs

A few good young cows that have freshened and bull and heifer Calves for sale, sired by Schuiling Sir Posch, twice grand champion Holstein bull at the Canadian National Exhibition at Toronto; also some sired by Sir Mercena LaForit Lad, who won first prize wherever shown. Can spare a good Berk sow or two ready to breed. We are also booking orders for young pigs for spring delivery.

HARDING BROS., Proprietors, WELSFORD, New Brunswick.

AYRSHIRE BULLS FOR SALE

I am offering a two-year-old bull for sale. He is out of the famous cow White Heather of St. Annes. I have also two other choice bulls that are fit for service. Correspondence solicited.

J. FRANK ROACH, - - Sussex, N. B.

BRAMPTON JERSEYS!

Champions of Canada. Champion of World.

In show ring we are champions of Canada. We have defeated the very choicest selections made in United States. We will be shipping a car of Jerseys to the Maritime Provinces early in May. Write at once.

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YOUNG HOLSTEIN BULLS!

We have lots of them, all ages, from one to six months. Show Calves from our best cows. Now is the time to get your choice. Females all ages, bred for the fall shows and dairy tests. Some excellent high grades fresh or springing. Also Three Draft Fillies rising two, three and four, and a quantity of Seed Potatoes.

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Rockview Farm, Welsford, N.B.

(Wm. S. Harding, Jr., Proprietor)

High Class Holstein Cattle. Young stock bred from heavy producing and showing ancestry for sale.

Cobequid Farm Holsteins

Present offering. One fine bull fit for service and several bull calves three or four months old, sired by Helbon Dehols Prince, and from cows that are producers. Among them one whose two nearest dams average over 26 lbs. butter in 7 days. For particulars and prices write

Samuel Dickie & Son, Central Onslow, Col. Co. N.S.

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Ayrshire and Shorthorn Cattle and Shropshire Sheep

We have a grand bunch of Rams for sale at reasonable prices. Show Stock, and Producers all our own Breeding.

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Holstein-Friesian Cattle
Clydesdale Horses

A few fresh cows for sale, some young bulls fit for service, also a few young heifers. Can part with some mares in foal and also some fillies, one and two years old.

Write for Prices. Visitors always welcome.

LOGAN BROS.
R. R. I.
Amherst, N. S.

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Clydesdale horses of the highest quality and breeding—the stud includes the noted show and breeding horse "Baron Kelvin." Every brood mare is a first prize winner at Scotch and Canadian shows. Driving horses generally on hand, Shetland ponies of the smallest type and best breeding. Polled Angus cattle of the most fashionable strains. Herd won first prize Toronto in 1906 and many other shows. Also small herd of Shorthorns from imported deep milking families.

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THE progress of the gasoline engine on the farm has been astonishing. It revolutionizes farm work. Work is done more swiftly, and in greater quantity. New work is done, and new farm enterprises are made possible, with big gains in income.

The best farm engine is the "Monarch". It not only uses gasoline, but it can run on coal oil or cheap distillate. This reduces its fuel bills—makes power cheaper.

The fuel the "Monarch" is using, whether cheap or more expensive, is made the most of for power production by the non-leaking one-piece cast iron tank, instead of a tin tank. This tank has a sight gauge, It has a sediment pocket. It is absolutely safe. The greatest actual power is obtained from the fuel by the magnificent "Monarch" carburetor. This carburetor is specially designed for the "Monarch". It is the most costly carburetor ever put on a farm engine.

What is the result of all these fuel features?

Why, that the actual "power" is obtained at lowest possible cost per hour.

That is what you are after.

If you think for a minute about it you will see that it is the POWER you want cheap, and not the ENGINE.

Cheap Power and Fuel

That is the kind of a deal we want to make with you, right now.

We want to sell you this engine that will give you cheap power, on low grade fuel, for years to come..

It takes a high-class engine to keep your fuel bills down and give you the power you need—therefore, you need a high-class engine at the very start.

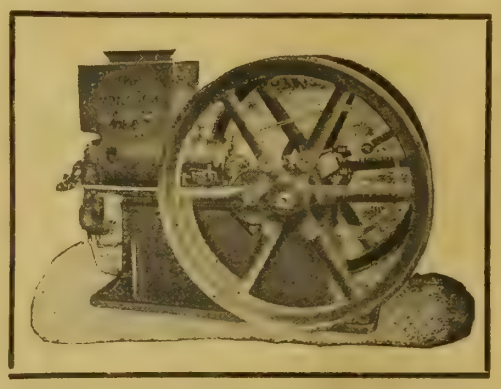
In this way, the "Monarch" saves its cost in fuel economy over and over again, and is the best engine to buy.

Do Your Own Threshing and Wood Sawing

In the Maritime Provinces, you engine buyers use your engines chiefly to thresh and to saw wood.

This is a hard service, because the amount of power wanted jumps up and down. Your threshing machine is stuffed full of straw one instant, and the next few seconds it runs almost empty.

Now, we have built the "Monarch" for just this kind of hard service. As the power is demanded the "Monarch" automatically uses MORE fuel: when the power is light, it uses LESS fuel. The engine does not stall.



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Your "Monarch" runs as steady as a clock, without a second's attention. It is built to take care of itself.

This one feature of perfect service makes the "Monarch" an ideal machine for running a threshing separator.

We have made this "Monarch" machine so it can be easily run by your wife, daughter, or son, if necessary.

Many engines are hard to start. Some will absolutely not start in zero weather. The "Monarch will start and start easily even in a blizzard.

To make absolutely sure of easy starting, we put a priming cup on the "Monarch", same as on costly automobiles.

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Far in Advance of Others

We have looked years ahead for you too. We have built the "Monarch" to LAST and to be BREAKAGE-PROOF-

As you know, piston connecting rod, crank shaft and crank shaft bearings, have very heavy service in a gas engine—much heavier than in a steam engine.

We make these OVER-STRONG, by using high-carbon steel, and OVER-SIZE as well. The connecting rod and shaft are built to last.

The bearings are big and wide. Power is so applied that there is no tendency to lift them—to tear the bearing open.

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Save Money and Work Now

We want to sell you a "Monarch" this fall, to do your work for years. The sooner you put it in, the better and easier will you get things "done" on your farm.

Despite its excellent and special features, not found on any other farm engine whatever, you can obtain a "Monarch" as easily as any ordinary gasoline engine.

Despite its low after-cost for fuel, you often actually save money from the very first by buying a "Monarch" engine at the very moderate price and easy terms asked.

Will you not investigate the engine that has earned lavish praise from thousands of farmers?

Write for catalogue, showing 1 1-2 to 35 h. p. sizes.

Write for full Description of Fittings. **Write for Prices and Terms.**

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